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GRADUATE INSTITUTE OF INTERNATIONAL AND DEVELOPMENT STUDIES

PRESUMPTIONS IN COMPETITON ENFORCEMENT

SOME COMMENTS FROM A LAW AND ECONOMICS PERSPECTIVE

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Introduction

- This presentation discusses whether and when it is appropriate to take a decision on the basis of a “general” presumption. This depends on the consequence of such decision and on the alternative.
- Define “presumption” as a prior (probability distribution) with respect to the consequence of a practice (an agreement, a unilateral conduct, a merger) that is informed by a small set of case specific information.
- For instance, there may be prior that a practice involving an explicit market sharing « agreement » which is closely monitored is very likely to lead to consumer harm. Or a prior that an exclusive dealing arrangement by a firm with market power is very likely to lead to consumer harm. Or, at the opposite, that a vertical agreement between firms with no market power is unlikely to lead to consumer harm
- Prior distributions require a characterization of practices, informed by economic theory, empirical evidence, enforcement experience and a limited set of case specific facts.
- This set of facts might include evidence that the practices has the relevant features of the category (for instance, that the unilateral conduct really involves the “text book” exclusive dealing arrangement and there are no specific features of the case which may cast doubt on the relevance of the prior formed by past experience).
- “Presumption” may not be the appropriate terminology. In terms of the taxonomy of Kalintri (2020), an “economic premise” may be more accurate.
- In particular, there is no suggestion that some prior informed by past experience lead to a change in the burden of persuasion (or even to a shift in the burden of production).

Introduction

- (in any event, it is not clear what a burden of persuasion means for an agent that does not take a decision subject to a review).
- The alternative to a decision on the basis of a prior is to acquire additional information and to update the prior and either take decision on the basis of the updated prior or decide to again acquire additional information and so on.
- Hence, a discussion of the use of presumptions can be cast in terms of defining an optimal stopping rule in a sequential acquisition of case specific information (In what follows, we will consider only two steps).
- This requires a formulation of the way in which decision are taken contingent on different information sets and a metrics of the "quality" of these decisions
- This in turn requires the formulation of the objective pursued by enforcement and the consideration of possible proxies for the extent to which the objective is fulfilled.
- We cast the discussion that follows in terms enforcement aiming a maximizing consumer welfare. But the analysis does not depend on this.
- In terms of metrics, we consider a benchmark in which the decision maker (an enforcement agency) takes decisions by considering expected customer welfare (or equivalently minimizes expected errors). This assumes that the agency knows the distribution.
- We also consider an alternative in which the agency takes decisions with respect to threshold probabilities.

Introduction

- We derive a surprisingly simple rule for deciding whether to carry out an investigation.
- When maximizing consumer welfare, it is optimal to undertake an investigation if and only if the default case on the basis of the initial information is likely to be overturned (and the cost is small). This is more likely when the investigation is sufficiently precise.
- Similarly, the choice of probability thresholds should be guided by the prospects that the default case will be overturned after the investigation. Probability thresholds can be relaxed as long as the investigation is unlikely to uncover information that would overturn the decision.
- This analytical framework seems consistent with the recent case law if one accepts that the capability standard (which applies to restrictions by object and unilateral conduct which is "tend to" be anti-competitive) is an *incremental* standard
- This presentation is structured as follows.
- Part I presents a short review of the law and economics literature on the use of presumptions/economic premises.
- Part II present a simple model of optimal information acquisition which identifies the circumstances in which it is optimal to take a decision on the basis of "presumptions".
- Part III relates the model and its findings to some recent cases.

Review of literature

- Two strands in the literature; Bayesian framework and the choice between alternative decision rules (per se vs rule of reason or per se vs effects)
- Our discussion is most closely related to Beckner and Salop (1999) and Salop (2017). These papers apply the Bayesian framework to enforcement decisions (as outlined above, see also Horowitz (1977) and Broadley (1977) for an earlier discussion).
- They emphasize in particular how insights from Bayesian updating help to determine what sort of information should be sought. With only two possible events (either the practice is anti-competitive or pro-competitive), the reliability of evidence can be assessed in terms of the likelihood ratio, namely ratio of the conditional probabilities of finding the evidence given that practice is either anti-competitive of pro-competitive.
- They consider a framework in which an investigation proceeds by allowing parties (plaintiffs and defendants) to bring evidence in turn to modify the prior into a new posterior distribution. This leads to a process of "burden shifting" in which each party attempt to shift the prior in a direction that is favorable to its case (with defendants bringing evidence such that it is more likely that the practice is pro-competitive and plaintiffs shifting the distribution in the opposite direction). See also Kaplow (2014) and Burtis, Gelbach and Kobayashi, (2017))
- In this context, they characterize the quality of evidence that is necessary to lead to a shift in the burden. This can be seen as an *incremental standard of proof* (say, starting from given probability of harm, by how much should a defendant change the probability so that the burden shifts).

Review of literature

- In this framework, even if the standard of proof does not change as the evidence accumulates, the “incremental standard” changes at each iteration.
- « There is generally no categorical line to be drawn between restraints that give rise to intuitively obvious inference of anti-competitive effect and those that call for a more detailed treatment. What is required, rather, is an enquiry meet for the case, looking a the circumstances, details, and logic of a restraint » *California Dental Association*.
- This framework fits with US procedures (and in particular private enforcement with adversarial – as opposed to prosecutorial – procedures)
- This approach does *not provide a normative* framework to define the optimal number of shifts in the burden or more generally the optimal set of facts that should be gathered.
- We attempt to develop a normative analysis in a framework which fits better with the European environment (with prosecutorial procedures in which an authority gathers the evidence and takes a first decision).

Review of literature

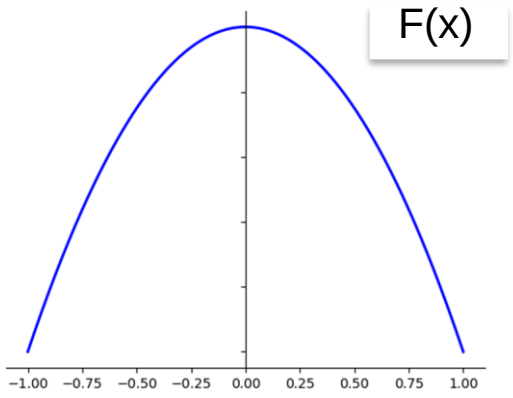
- The standard error cost framework assumes that there is a population of pro and anti-competitive conducts and considers alternative rules to sort them out between lawful and unlawful practice (so that there 4 possible frequencies/joint probabilities, AC/L, AC/UL, C/L,C/UL). See Padilla, J. and D. Evans, (2005), Hylton, K. and M. Salinger, (2001).
- Instead of considering a population of cases, the analysis applies to a conduct picked up randomly (knowing the probability that a case is AC).
- Katsoulacos and Ulph (2009) develop a model of optimal decisions rules, as a choice between per se prohibitions (or clearance) and discriminating rules (or effects based analysis).
- Firms can operate either in a Competitive or Anti-competitive environment. The base line probability of harm is the proportion of harmful environments. Conduct is presumptively legal (illegal) depending on whether the baseline probability of harm exceeds $^1/_2$. The agency can either clear (prohibit) per se if the conduct is presumptively legal (illegal) or undertake an analysis of effects. The strength of the presumption is the ratio of the proportions of C and AC environments (it measure how far the environment is from what triggers the per se decision).
- The quality of the investigation, when the default is to clear, is measured as the probability to classify as AC, actions that are genuinely AC divided by the probability to classify as AC actions that are genuinely C.
- It is thus a measure of the investigation's ability to identify truly AC conduct.

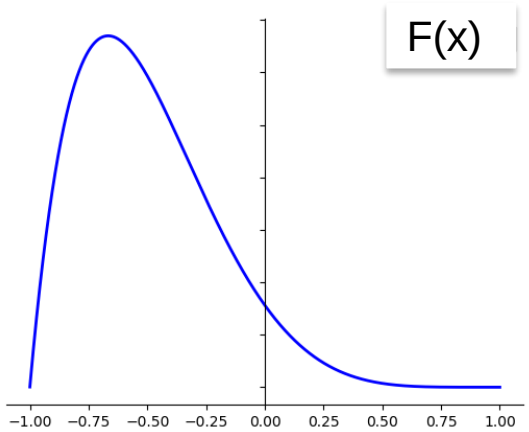
Review of literature

- An investigation is better than per se clearance when the quality is higher than the strength of the presumption. (Note that it is better in terms of errors but also in terms of welfare – this is equivalent in a model in which harm is binary)
- Their model can be interpreted as a comparison between prohibition, clearance and investigation (like ours). We model the acquisition of information as a Bayesian updating whereas in their model, the information available after the investigation is unrelated to the initial information (and we allow for more a continuum of possible outcome).
- Overall, our approach thus combines the Bayesian framework (as in Salop) with a normative assessment (as in Kastoulacos and Ulph).

Sequential acquisition of information – model

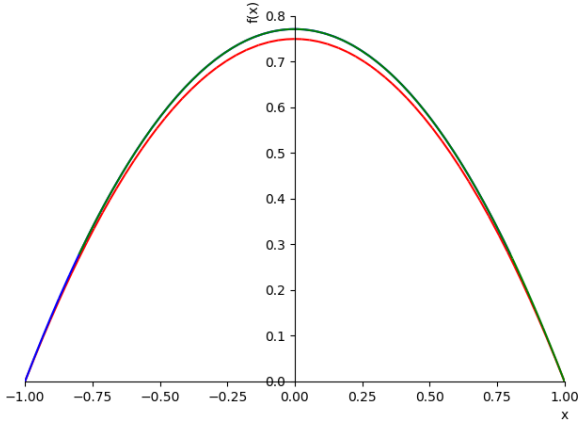
- At the beginning of the investigation, the authority has a prior cumulative distribution $F(x)$ over the possible consequences of the practice in terms of consumer welfare (x) (or whatever metrics is relevant for its decision) $[-1,1]$
- The prior reflects both a prior distribution based on theory, empirical evidence, and enforcement experience as well as evidence collected in a preliminary assessment.
- This preliminary assessment might for instance involve evidence that the practice has the features commonly identified past experience (for instance, an arrangement involves exclusive dealing, or that the companies involved do not have market power).
- On the basis of this prior, the authority can (i) close the investigation, (ii) prohibit the practice (adopt an infringement decision) or (iii) continue the investigation.
- For simplicity, we assume that there is a single process of information acquisition so that when the information has been collected, the agency will either prohibit the practice or close the case.
- We model the process of acquiring additional information by assuming that the authority obtains a pair of signals: $l \in \{-1,1\}$ and $s \in [0,1]$
- With good news, the distribution shifts over the support $[-s, 1]$. With bad news, over the support $[-1, s]$
- l indicates the signal direction (that is, whether additional evidence indicates worse or better outcome relative to the authority's prior) and s indicates the quality of the evidence (the precision with which the authority can establish the consequence of the practice).

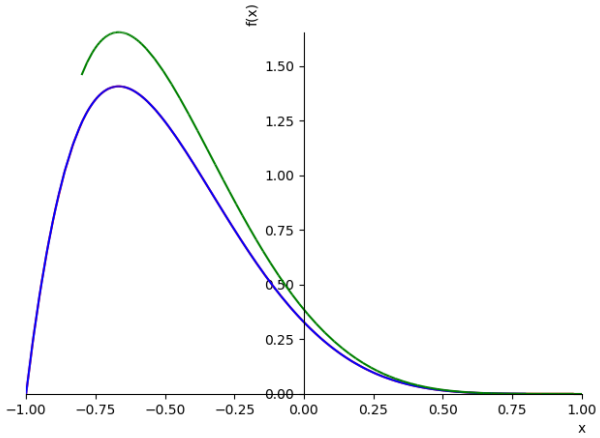




$s = 0.8$

G(x)

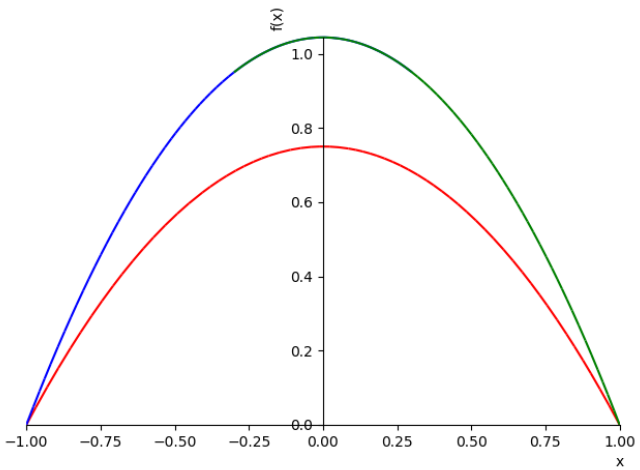


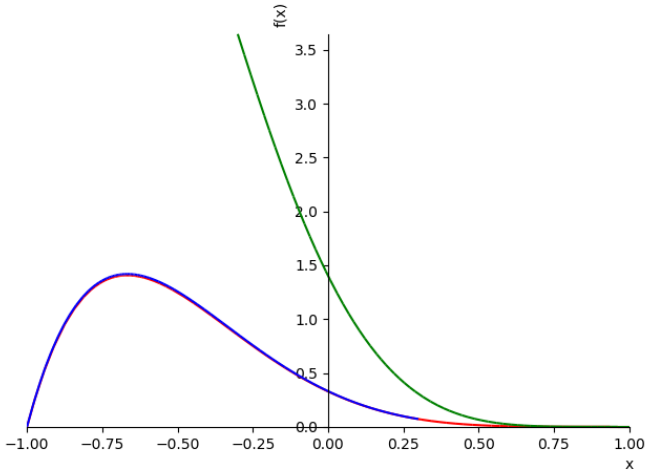


Blue = bad news
Green = good news

- Bad news does not matter at all
- Imprecise good news hardly does

$s = 0.3$





Both bad and good news are decisive

- Precise bad news does not matter
- Precise good news has potential

Investigation and updating

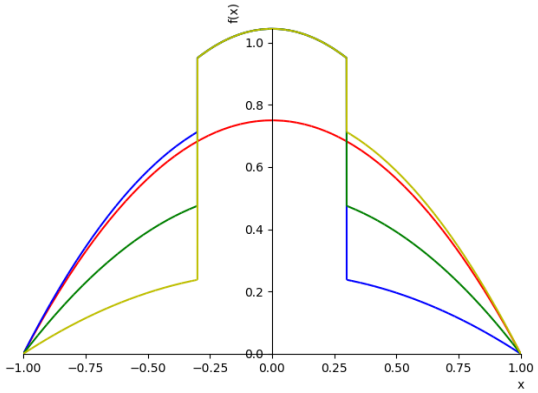
- The cost of the signal is an increasing and convex function of its precision $k(s)$
- The authorities then incorporate signals (additional evidence) to update the prior distribution of the possible outcomes.
- That is, given the pair $\{l, s\}$, it leads to the posterior distribution $\mathrm{G}(x)$

$$G(x) = \begin{cases} \frac{F(x)-F(-s)}{1-F(-s)}, & l = 1; \\ \frac{F(x)}{F(s)}, & l = -1. \end{cases}$$

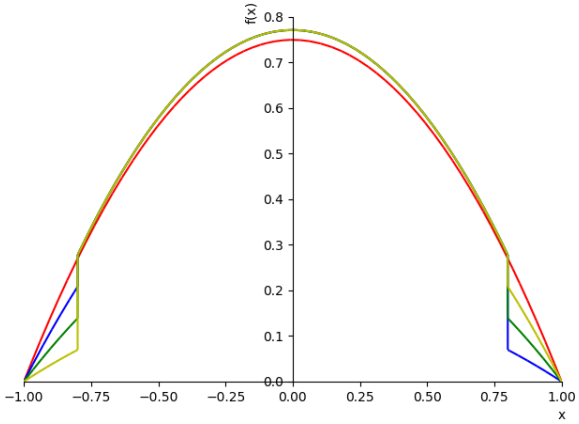
- The expected value is shifted in the direction of the signal – so that good (bad) news increases (decreases) the expected welfare and the posterior distribution has a lower variance than the prior.
- In addition, the agency will have beliefs about the evidence that is likely to be uncovered from an additional investigation.
- We assume that agency assigns a probability b that the investigation will uncover some good news.

$$B(x) = \begin{cases} (1-b)\frac{F(x)}{F(s)}, & x \in [-1, -s); \\ (1-b)\frac{F(x)}{F(s)} + b\frac{F(x)-F(-s)}{1-F(-s)}, & x \in [-s, s); \\ 1-b+b\frac{F(x)-F(-s)}{1-F(-s)}, & x \in [s, 1]. \end{cases}$$

$\mathrm{B(x)}, \mathrm{s} = 0.3, b = O, 25\ (blue); 0.5(green); 0.75(yellow)$



$\mathrm{s} = 0.8$



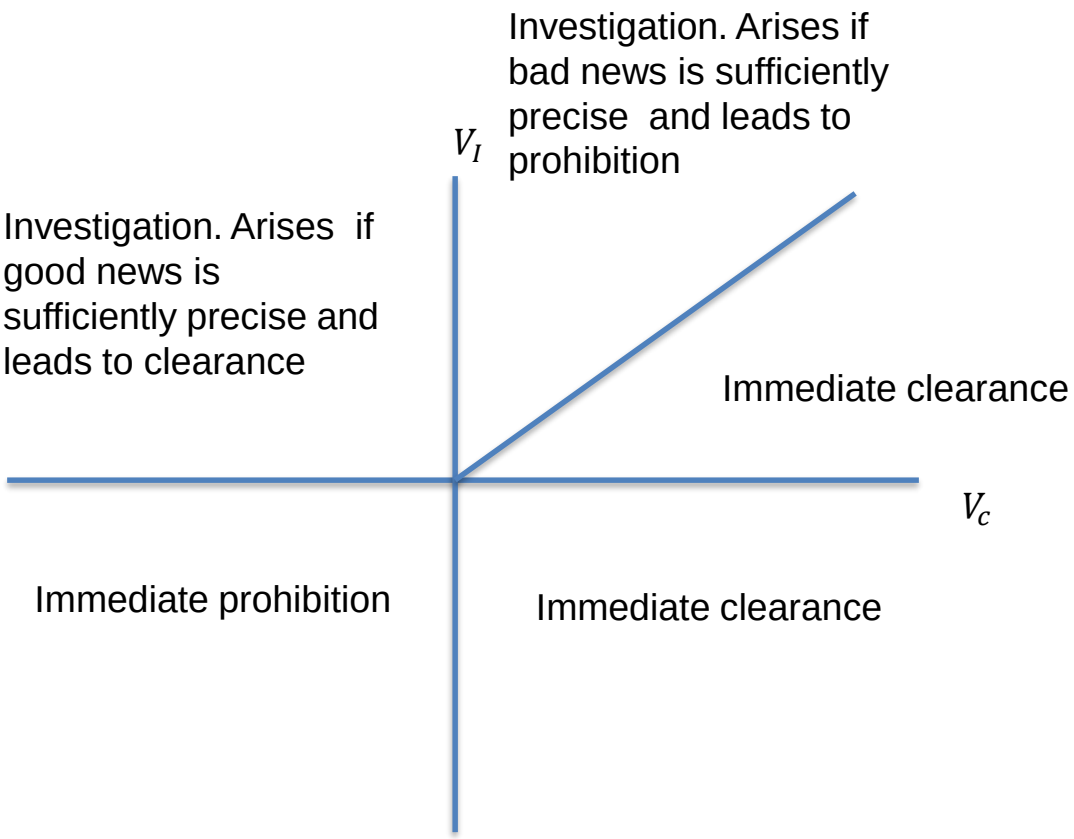
Sequential acquisition of information

- The agency thus decides whether to prohibit, clear of the case or continue the investigation anticipating what decisions it would take if the information is acquired (backward induction).
- We first assume that the agency maximizes expected consumer welfare. We subsequently consider an alternative framework in which the takes decisions on the of trigger probabilities.
- The expected consumer welfare from the practice before the acquisition of information $(B(x))$ is a weighted average of the expected welfare in the good and bad news scenarios
- In turn, the expected value of the investigation is a weighted average of the expected welfare that will be obtained with good and bad signal when it has been revealed and optimal decisions have been taken on the basis of the signal
- An investigation is valuable because the revelation of the signal allows for a better decision.
- Hence, if the signal that you expect would not change the decision, there is no point incurring the cost of the investigation (the value after having received the signal and taken optimal decisions is equal to the expected value).

Sequential acquisition of information

- Specifically, if the expected consumer welfare before the acquisition of the information (V_c) is negative, the default case is a prohibition.
  - A negative signal would also lead to a prohibition (has to be worse). But a positive signal could yield a clearance with positive expected welfare.
  - Hence, an investigation is only attractive when a good news leads to a clearance.
  - This occurs when it is sufficiently likely and precise.

- If the expected consumer welfare before the acquisition of the information (V_c) is positive, the default case is a clearance.
  - A positive signal will necessarily lead to a clearance and higher expected welfare than the average.
  - A negative signal might also lead to a clearance. In which case, the expected welfare after the investigation is equal to expected welfare before. There is no point incurring cost
  - However, if a bad signal leads to prohibition, the expected welfare after the investigation is higher (as the case is only cleared in good instances).


Investigation. Arises if bad news is sufficiently precise and leads to prohibition
V_I
Investigation. Arises if good news is sufficiently precise and leads to clearance
Immediate clearance
V_c
Immediate prohibition
Immediate clearance

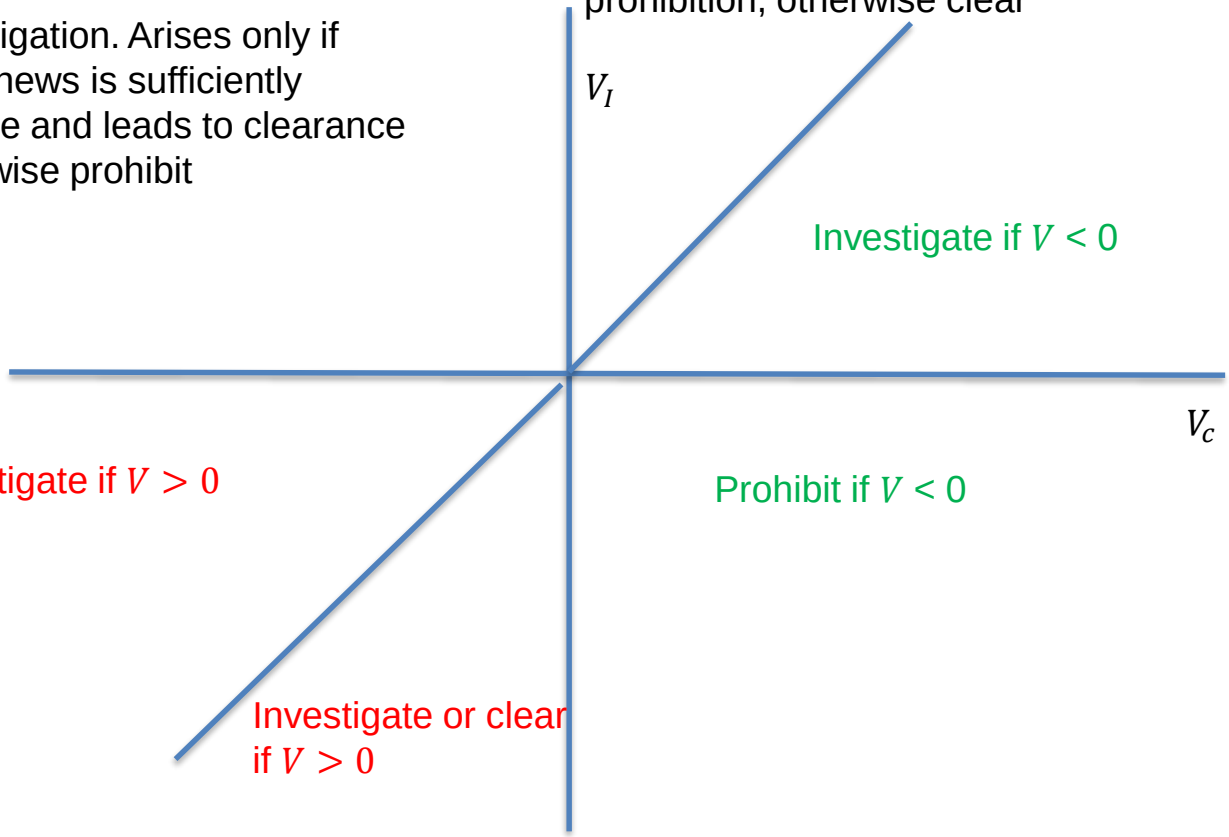
Verifiable information

- So far we have assume that the agency can take a prohibition decision or a clearance decision on the basis of the prior $B(x)$ which take into account its belief with respect to what the investigation would uncover.
- However, if such decision can be challenged, the argument can be made that only verifiable information can be used to motivate this decision (see Langus, Lipatov, Neven, 2018 for a discussion)
- In this case, initial decisions have to be made with respect to $F(x)$, leading to an expected welfare V
- Assume that only decisions to clear or prohibit can be challenged
- As the decision to undertake an investigation cannot be challenged, the circumstances in which an investigation were optimal before are not constrained.
- But otherwise optimal prohibition and clearances might be constrained.
- This leads to more investigation
- But also prohibition when clearance would be optimal and vice-versa (when an investigation is unlikely to be revealing).

Verifiable information

Investigation. Arises only if bad news is sufficiently precise and lead to prohibition, otherwise clear

Investigation. Arises only if good news is sufficiently precise and leads to clearance otherwise prohibit



Immediate prohibition if $V < 0$

Immediate clearance If $V > 0$

Threshold probabilities

- Consider an enforcement system in which the agency can prohibit if the probability that the practice is anti-competitive is high enough, $B(0) > \alpha$. At the opposite, the agency will close the case if $B(0) < \beta$.
- With this decision rule, all practice for which $\alpha > B(0) > \beta$ will lead to a further acquisition of information. We assume that after the acquisition of information, the decision (as before) is either to clear or to prohibit and this decision is made according standard γ such that the practice is prohibited if $G(0) > \gamma$. After the acquisition of information, the balance of probability is a natural candidate so that $\gamma = {}^{1}/_{2}$.
- One would also expect these threshold probabilities ($(1-\alpha)$ and β) to be rather small, thus leading to a high standard of proof (so that for instance, a practice is cleared without further investigation only when the probability that it is harmful is less than, say 10% or that a practice is prohibited without further investigation only when the probability that it is not harmful is less than 10%).
- This formulation also reveals that the standard for a clearance and the standard for a prohibition before the investigation *cannot both be identical* to the standard that applies respectively for a clearance and for a prohibition after the investigation. If it were the case, no investigation would ever be undertaken.
- Consider the properties of this enforcement system in terms of expected errors.
- Consider a practice with a given assessment $B(0)$that it is anti-competitive. A prohibition will lead to type I errors $(1 - B(0))$. If in case of good news, it is still optimal to prohibit, in case of good news type I errors increase, but in case of bad news they fall by the same amount. Expected errors do not change.

Optimal acquisition of information

- By contrast, if the practice is no longer prohibited after the reception of good news the overall errors will fall. In this case, there is a type II error after the investigation when good news has been received
- Hence, a prohibition without investigation will only be dominated by an investigation in terms of expected errors if in the case of good news the practice is allowed.
- This observation has implications for the choice of standard for a prohibition without investigation α. The lower is standard, the larger is the range of distributions for which a prohibition will be mandated. Prohibitions will thus be mandated for distributions such that the overall probability that the practice is anti-competitive is lower. Hence, it is more likely that for such distributions in case of good news the practice would be allowed following an investigation and hence it is more likely that decisions under the standard would be dominated by an investigation.
- Similarly, an investigation will dominate a clearance according to the standard if and only if in case of bad news the practice is prohibited.
- Furthermore, as the standard is relaxed, the range of distributions for which a clearance is mandated will increase and involve distributions for which the probability that the practice is pro-competitive falls. Accordingly, it will become more likely that in case of bad news, it would be optimal after an investigation to prohibit the practice and hence it will be more likely that decisions under the standard would be dominated by an investigation.

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Optimal acquisition of information

- Intuitions for the maximization of consumer welfare and the analysis of an enforcement systems based on probability thresholds are similar.
- When maximizing consumer welfare, it is optimal to undertake an investigation if and only if the default case is likely to be overturned (and the cost is small). This is more likely when investigation is sufficiently precise
- Similarly, the choice of probability thresholds should be guided by the prospects that the default case will be overturned after the investigation. Probability thresholds can be relaxed as long as the investigation is unlikely to uncover information that would overturn the decision.

Mapping with the case law

- There are different probability thresholds in the case law (Ibanez (2020)) :
  - Capability : this is a plausibility threshold.
    - It applies to restrictions by object under 101 (T-Mobile, Bananas)
    - But also to some unilateral conducts which "tend to" restrict competition (Post Denmark I, Hoffman La Roche, Michelin I, BA, Intel)
    - Analysis of plausibility requires to evaluate the practice in its legal and economic context (see Intel, Cartes Bancaires, but Dole …)
  - Likelihood : this corresponds to balance of probabilities and applies when effects have been analyzed
    - Under 101 (Delimitis)
    - And 102 (Post Denmark II, Deutsche Telekom, Telia Sonera)
    - And merger control (GE/Honeywell, Tetra/Sidel)
    - Full fledged analysis of effects
  - Quasi certainty (?) only in refusal to deal so far
- Mapping with the framework above
  - For practices (agreement, unilateral conducts) for which there is a strong presumption that effects are anti-competitive (horizontal agreements, rebates contingent on exclusivity), that is when $B(0) > \alpha$, only limited additional evidence is required for a prohibition decision : capability
  - If $B(0) < \alpha$, or the evidence does not confirm the presumption, a full fledged analysis is required, for which the balance of probability ($\gamma = {}^{1}/_{2}$) : likelihood

Mapping with the case law

- What are the necessary assumptions for this mapping
  - Object restriction can be interpreted as restrictions involving a high probability of substantial harm. This is what Cartes Bancaire says :
    - (56) "*Only conduct whose harmful nature is proven and easily identifiable, in the light of experience and economics, should therefore be regarded as a restriction of competition by object, and not agreements which, having regard to their context, have ambivalent effects on the market …"*
    - (58) *"This concept should relate only to agreements which inherently, that is to say without the need to evaluate their actual or potential effects, have a degree of seriousness or harm such that their negative impact on competition seems highly likely"*.
  - Capability needs to be interpreted as an *incremental* standard of proof (but any other interpretation would seem odd – why require less confidence that a practice is anti-competitive if it is highly likely to be anti-competitive on the basis of past experience).
- Explicit mapping in Intel AG
  - *"The assessment of capability as concerns presumptively unlawful behaviour must be understood as seeking to ascertain that, having regard to all circumstances, the behaviour in question does not just have ambivalent effects on the market,…, but that its presumed restrictive effects are in fact confirmed. Absent such a confirmation, a fully-fledged analysis has to be performed" (§ 120).*
  - *"In a somewhat similar fashion to the enforcement shortcut concerning restrictions by object under Art 101 TFEU, the assessment of all circumstances under Art 102 TFEU involves examining the context of the impugned conduct to ascertain whether it can be confirmed to have an anti-competitive effect. (§ 135)*

Conclusion

- Merger control is different
  - There is no presumption to start with
  - Unlike what happens with 101 and 102, cases cannot be prohibited before searching for additional information
  - The MR establishes a high threshold for a clearance in phase I (the absence of serious doubt)
- Further insight from the Bayesian framework
  - Consideration of whether the evidence could lead to a shift from the default case (in deciding whether to open/continue an investigation) and cognitive dissonance
  - Identification of the evidence in terms of the likelihood ratio
  - Determination of the threshold probabilities
  - Verifiability of the evidence for decisions before the investigation
  - Incremental standard; determination of shift in the prior required to switch from the default case
  - Enforcement of the investigation as the agency may have an incentive to slack (incentive to pretend to do an investigation and prohibit a case under a lower standard) and role of the Courts (standard of review)

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Back up slides

Sequential acquisition of information

- The expected consumer welfare from the practice before the acquisition of information is given by

$$V_c = \int_{-1}^{1} x dB(x).$$

- The expected welfare from undertaking a further investigation, assuming that an optimal decision is taken on the basis of the information obtained is given by

$$\begin{aligned} V_I &= b\mathbb{I}\left(\int_{-s}^{1} x dG(x) > 0\right) \int_{-s}^{1} \frac{x dF(x)}{1 - F(-s)} \\ &\quad + (1-b)\,\mathbb{I}\left(\int_{-1}^{s} x dGx > 0\right) \int_{-1}^{s} \frac{x dF(x)}{F(s)} - k(s), \end{aligned}$$

- Where $\mathbb{I}$ is an indicator function takes the value 1 if the term is brackets in positive and 0 otherwise. Hence, the first term if the expected welfare from the practice (gross of investigation cost) if it is allowed after a good new and the second term in the expected welfare (gross of cost) it is allowed after a bad news.
- Note that if the agency expects only good news ($b = 1$) or only bad news ($b = 0$) it will never undertake an investigation even if it costless.

Optimal acquisition of information

- The optimal choice of the agency can be analyzed as follows :
- If $V_c < 0$, so that before the investigation the practice is expected to be anti-competitive, the expected consumer welfare in the case of bad news can only be worse (the second term in V_I is zero). Hence, an investigation will only preferable to an immediate prohibition when (i) the expected welfare following a good news is positive and (ii) the expected welfare arising from the identification of the circumstances in which the conduct from the practice is pro-competitive exceeds the investigation cost.
- If $V_c > 0$, the firm term in V_I will always be positive and larger than V_c. This is because good news can only increase the expected welfare. The second could be negative (so that the indicator function is zero). The investigation leads to higher expected welfare because it allows the identify the circumstances in which the conduct leads to negative welfare and prohibits them, and identifies the circumstances in which the conducts lead to positive welfare (the first term increases) and allow it.
- The expected welfare could however remain positive in case of bad news (so the indicator function in front of the second term is also equal to 1). However, in this case the expected consumer surplus from a clearance (before the investigation) is equal to expected value from the investigation net of the cost (it is easy to check $V_I + k(s) = V_c$). That is also to say that an investigation that brings additional information that is not expected to change any decision is not attractive.

Optimal acquisition of information

- Overall, there are thus three possible cases :
- First, $V_c < 0, V_I < 0$, so that an immediate prohibition is optimal. In this case, it may well be that even in the case of good news the practice is prohibited. There will some instances however in which the practice is allowed in case of good news (so that that first term in V_I is positive but such that it is negative on the whole because of the cost of the investigation).
- Second, $V_c < 0, V_I > 0$. In this case, the default case is an immediate prohibition. A further investigation is better and justified by the possibility of a positive signal if only and only if the signal is expected to be sufficiently precise. The additional information allows the practice to be allowed thereby leading to a positive expected welfare. Further bad news which confirms the initial assessment will not improve the expected welfare from the decision (as they also lead to a prohibition).
- Third, $V_c > 0$. In this case the default case is an immediate clearance. A further investigation will be attractive ($V_I > V_c$) when in case of bad news, the practice will be prohibited. If the investigation does not sharpen the evaluation enough, so that even in case of bad new the practice will be allowed, it is better to immediately allow the practice.

Verifiable information

- So far we have assume that the agency can take a prohibition decision or a clearance decision on the basis of the prior $B(x)$ which take into account its belief with respect to what the investigation would uncover.
- However, if such decision can be challenged, the argument can be made that only verifiable information can be used to motivate this decision (see Langus, Lipatov, Neven, 2018 for a discussion)
- In this case, initial decisions have to be made with respect to $F(x)$, leading to an expected welfare V
- Assume that only decisions to clear or prohibit can be challenged
- Assume first that $V_c < 0, V_I < 0, V < 0$. In this case, the practice can be immediately prohibited on the basis of verifiable evidence; it would be prohibited if expectations could be taken into account and undertaking an investigation does not lead to positive welfare. In this case, the constraint on evidence is not binding and the case is prohibited.
- Next, assume that $V_c < 0, V_I < 0, V > 0$. This will arise when the agency expects that the investigation is likely to bring a bad signal. In this instance, the case should be cleared on the basis of verifiable evidence but should be prohibited if expectations are taken into account and the investigation does not lead to positive expected welfare. The (second best) is either to continue the investigation or clear depending on whether $|V - V_c| < |V_I - V_c|$
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Verifiable information

- That is, either the immediate clearance or the pursuit of the investigation involves a reduction in expected welfare and the optimal solution involves the least cost.
- Furthermore, if $V_c < 0, V_I < 0$, $V_c < V_I$ $(\text{and } V > 0)$, it will be preferable to undertake an investigation than clearing the case on the basis of verifiable evidence. In this case there is a prospect that if the signal is good, the practice will be allowed but the cost of the investigation does not compensate for the benefit.
- When $V_c < 0, V_I > 0, V > 0$, then it is best for the agency for continue the investigation even tough it could actually clear the case of on the basis of verifiable evidence (assuming that a decision not to clear when it is possible on the basis of verifiable evidence cannot be challenged, the constraint is not binding). If $V < 0$, best to continue the investigation.
- If $V_c > 0, V_I > 0, V_c < V_I, V > 0$, the agency continue the investigation despite the fact that I could have cleared the case. If $V < 0$, the agency continues the investigation.
- If $V_c > 0, V_I > 0, V_c > V_I, V > 0$, the case is cleared. If $V < 0,$ best to continue the investigation even if it leads to lower expected welfare than clearance.
- If $V_c > 0, V_I < 0, V < 0$, the agency will prohibit the case (as an investigation would lead to lower welfare).
- Overall, the constraint leads to more investigations when either clearance or prohibition would have been appropriate but also prohibition when clerance would have been appropriate and vice versa (when the investigation are costly).