Competition economics and antitrust in Europe

by

Damien J. Neven

(Graduate Institute of International Studies, Geneva and CEPR)

October 2005

PRELIMINARY AND INCOMPLETE — DO NOT QUOTE

This paper is prepared for presentation at the Economic Policy Panel to be held in London on October 21st 2005.

I would like to thank a number of lawyers and in particular D. Gerardin, P. Mavroidis, Nicolas Petit, A. Sykes and W. Wils for guidance on the legal framework, B. Bishop. C. Mayer and M. Williams for their insights on the market for economic consultants, K. Metha, L.-H. Röller, S. Evenett, M. Motta and P. Seabright for useful comments and discussions, and S. Baler and H. van der Deijl for excellent research assistance.

1. Introduction

The task assigned by the Editors of this Journal is to evaluate the influence that economic analysis has had on antitrust policy in Europe[1] over the last twenty years, and to consider the role that Economic Policy, as a journal, has played in this respect.

Judge Learned Hand once observed that "Possession of unchallenged economic power deadens initiative, discourages thrift and depresses energy…Immunity from competition is a narcotic and rivalry a stimulant to industrial progress."[2] Over the last twenty years, a significant body of evidence has accumulated which confirms his intuition, indicating that competition matters for economic efficiency and in particular for productive efficiency and incentives to innovate[3]. For instance, in one of the landmark papers in this literature, Nickell (1992) considered a sample of UK firms and wondered whether their productivity growth was affected by competition. He measured the lack of competition by the importance of the profits accruing to firms. His estimates allows for a comparison of the productivity growth for firms at the 80th percentile and firms at the 20th percentile of the distribution of profits in the sample. The difference is a remarkable 4 percentage points, confirming that competition matters in providing adequate incentives to control cost and improve productivity over time. Very large effects have also been observed in transition economies that provide a natural laboratory to consider the effect of competition (see Djankov,and Murrell, 2002, for a survey). Ahn (2002) considered a

[1] We will focus on antitrust policy at the level of the European Union. Considering the antitrust policies of the member states is a book-length project which is beyond the scope of this paper.
[2] United States v. Aluminum Co. of America,148 F.2d 416, 427 (2d Cir. 1945).
[3] See Evenett, 2005, for a survey (from which Judge Learned Hand's statement is borrowed).

large sample of studies on the link between competition and innovation and concluded that competition encourages innovative activities and has a significant triage effect between efficient and less efficient firms over time.

Whether antitrust policy, as currently practiced, stimulates competition is another, possibly more controversial, matter. Much of the evidence on this issue relates to the US and relies on accounts of particular cases in which decisions have had effects on competition and others where it is has not (see for instance, Baker (2003) for a vigorous case in favor of antitrust enforcement and Crandall and Winston, (2003) for a more skeptical view). Some insights can be gained from international cartels: the effects of the Vitamin cartel for instance appear to be stronger (in terms of price increases) in those countries without antitrust enforcement (relative to those with enforcement)[4]. Exploiting cross-country differences, Connor (2003) also finds that fines have a deterrent effect on cartels (but not one that will ever be sufficient to deter all of them) and that leniency programs increase the probability that cartels will be uncovered. The record of the EU in terms of the prosecution of cartels certainly confirms that effective cartels can be harmful with long lasting and substantial increases in prices[5]. The record also suggests that leniency programs may lead to prosecutions of cartels that may otherwise have remained secret and possibly in operation but of course, the very frequency of cartel prosecution also indicates that deterrence is currently far from sufficient. With respect to mergers, Duso, Neven and Röller (2004) use stock market reactions for the merging firms and their competitors to construct a benchmark against which EU decisions can be assessed[6]. They find that the EU allows very few mergers that are anti-competitive (it makes make few type I errors) but may still fail to prohibit quite a few mergers that are anti-competitive (the frequency of type II errors may be greater)[7]. Whatever the verdict

[4] Clarke and Evenett (2003)
[5] See Connor (2003) and the Annual reports of the European Commission.
[6] The basic intuition behind this approach being that at least in some circumstances, mergers which harm consumers should benefit competitors (and vice-versa).
[7] For the first few years of merger control, Neven, Nuttal and Seabright (1994) still find significant type I errors (using case studies).

however, it is clear that more research with respect to the evaluation of competition enforcement and its improvement is warranted.

The implementation of antitrust policy in Europe also sheds some light on the design of European institutions with respect to the allocation of competences between member states and the EU, as well as the exercise of those competences. Unlike what happens in many other areas, there is no systematic shift of competence away from the member states but a more complex pattern. Competences with respect to anti-competitive agreements and the abuse of dominance were explicitly allocated by the founding treaty (respectively Art. 85 and Art. 86 of the Treaty of Rome, later renumbered as Art. 81 and Art 82) and the exercise of those competences was (rather exceptionally) delegated to the Commission (by the Council). In addition, the Council adopted procedures in which implementation was centralized; regulation 17[8] established that in order to obtain the benefit from an exemption under Art 81(3), firms had to notify their agreements to the Commission, which accordingly became a "passage oblige". Further competences for merger control were granted in 1989, through the merger regulation (ECMR), again with a centralized mechanism of implementation.

For about 20 years following the adoption of the Treaty, only Germany and the UK had significant domestic competition laws and enforcement mechanisms. This changed in the course of the 80s during which all other members states adopted a competition statute. Statutes at the level of member states are implemented in parallel with the EU framework but the allocation of jurisdiction between domestic and EU level has not been an important source of conflict. Finally, a few years ago, the Council replaced regulation 17 by a new set of rules which partly delegate the implementation of EU law to the competition authorities of the member states[9]. In this regard, the national competition authorities now also operate as a network (the ECN) with some degree of independence from the Commission. This delegation in the exercise of competence can be considered in parallel with a possible shift in the objective pursued by competition policy. In the

[8] EC Reg. 17/62 of 6 February 1962, OJ 21/02/62, pp 204-211
[9] EC Reg. 1/2003 of 16 December 2002, OJ L/1/1 of 4 January 2003.

early years, antitrust enforcement in the EU was considered to some extent as a tool of market integration. In one of its early decisions[10], the Court of Justice (ECJ) made this clear: "The treaty, whose preamble and content aim at abolishing the barriers between states,…, could not allow undertakings to reconstruct such barriers. Article 81(1) is designed to pursue this aim". The Commission in its first report on competition policy concurred[11] : "the competition policy of the Community must be directed towards the creation and proper operation of the common market". Delegation to member states is hard to imagine in this context. By contrast, recent policy pronouncements seem to take a distance from the objective of market integration. According to the XXIX Report on Competition policy (1999) "the first objective of competition policy is the maintenance of competitive markets. … The second is the single market objective". Delegation of a policy which is no longer directed at fulfilling the main objective of the treaty is arguably easier but it is nonetheless remarkable that such decentralization took place.

Hence, antitrust is a policy area in which competences are exercised in parallel by the Commission and the member states and in which the exercise of EU competences has been delegated to the member states. The experience with this delegation is currently rather short. As it accumulates, it should provide insights with respect to the EU which go beyond the implementation of a competition policy.

Most practitioners (in the legal profession and at the European Commission) as well as observers would probably agree that economics has become more important in EU antitrust policy and practice since this Journal was first published, at least in terms of the commercial presence of economists in antitrust. One of the objectives of this essay will be to move beyond impressions and attempt some quantifications of the relative importance of economic inputs in antitrust practice, in particular regarding fees. Impressions will be confirmed suggesting that the EU may be converging towards the US in terms of the relative importance of economics and law as inputs in cases, at least on the

[10] Consten and Grundig vs Commission, case 56-58/64
[11] 1st Report on Competition Policy, 1972

side of the parties. By comparison, economic resources at the level of the EU commission however remain very small.

Evidence that economists have been hired increasingly to provide advice is however merely an indication that parties and their legal advisors have found economists useful in order to prevail. As such, it provides only limited evidence with respect to the role that economics, as a discipline, has played. The role that economic insights, in terms of theory and empirical evidence, have played can only be inferred from the outcome of decisions and the reasoning that supports these decisions and policy statements. This essay will thus attempt to identify a number of areas where economic insights have had an effect on policy and case law. We will find in particular that the static theory of oligopoly, the theory of coordination in repeated games, the economic analysis of vertical restraints and the dynamic theories of tying and bundling have left a strong mark on the case law.

Any attempt to measure the effect of economic insights on case law and policy should still formulate a meaningful benchmark. In particular, can something be said about observed developments relative to what would an "efficient" use of economic analysis; for instance, can we evaluate whether economic analysis has improved the quality of decision making, in terms of reducing the frequency of errors ? Could economics have been used more efficiently and do we understand why it has not fully deployed its effects? These questions are much more ambitious and this essay can only hope to provide impressionistic answers. In this spirit, we will thus attempt to identify circumstances where economics insights have been abused and other in which they have not deployed their effect.

The main forms of abuse that we detect can be referred as "theory without evidence" and "insufficient or biased evidence". These can be found in particular with respect to co-ordinated effects, the analysis of efficiencies under Art 81(3) and static theories of tying and bundling. We also observe that significant insights have been neglected, in

particular with respect to predation, price discrimination and efficiencies in merger control.

What explanations can be offered for this state of affairs? We argue that the legal framework and, in particular the procedures that are used to implement the statutes may have something to do with it. We attempt to identify relevant dimensions of a legal framework towards antitrust, namely the scope of decisions, the system of proof taking, the standard of proof, the delineation of per se rules and the standard of review. We characterize the EU framework along those dimensions. The analysis of these characteristics, which borrows insights from the law and economics literature, finds that paradoxically the current framework features both some in-build conservatism and significant scope for abuse. We conclude that the reforms implemented by Commissioner Monti, while going in the right direction, may not go far enough. We argue, in particular, that a full-fledged adversarial procedure may be desirable.

This short introduction should convince any reader that the task assigned by the editors is one that no sensible economist should have accepted on purely professional grounds. I can thus only hope that this essay will be perceived as no more than an risky attempt to provide a first answer to difficult questions but also as a personal tribute to Economic Policy as a venture that has changed the role of economics and economists in Europe.

The paper is organized as follows. Section 2 attempts to provide some quantitative measure of the role that economists have played in European Antitrust. Section 3 discusses the economic insights that have had an effect on case law and policy as well as those that have been abused and those that have been neglected. Section 4 provides a framework to think about the relevant dimensions of the legal framework. Section 5 characterizes the EU framework in terms of these dimensions and discusses it in light of the law and economics literature. Section 6 tries to put the pieces together in order to assess how economics could be used more efficiently. Section 7 concludes.

2. Economic inputs

Economic advice has been marginal in antitrust proceedings up until the late eighties. It was undertaken mostly by individual academics (one can indeed find references to some of them in early decisions like *Soda/Ash*, *Wood Pulp* or *IBM*). With the implementation of the merger regulation in 1990, demand for economic advice seems to have risen. NERA opened an office in London in 1984 and London Economics was set up in 1986. Lexecon (Ltd) was set up in January 1991 and up until the mid nineties, Lexecon, London Economics and NERA were the main suppliers with a total amount of fees around 2.5 £ million in 1995. This turnover corresponds to EU related competition work but also to competition work in national jurisdictions. UK related work accounts for the vast majority of the latter. The market for EU related advice grew rapidly in the late nineties, as the number of merger notifications (as well as other types of cases) grew but also following the preparation and implementation of the notice on market definition. This notice, inspired by the US practice, used economic concepts explicitly. The fact that a quantitative analysis was used for market definition in the high profile acquisition of Perrier by Nestlé in 1992 may also have been significant in alerting legal advisors to the potential of economic analysis in this regard. As indicated by figure 1 [12], for the following ten years, total turnover grew[13] at some 25-30% per year, reaching about 24 £ million in 2004[14].

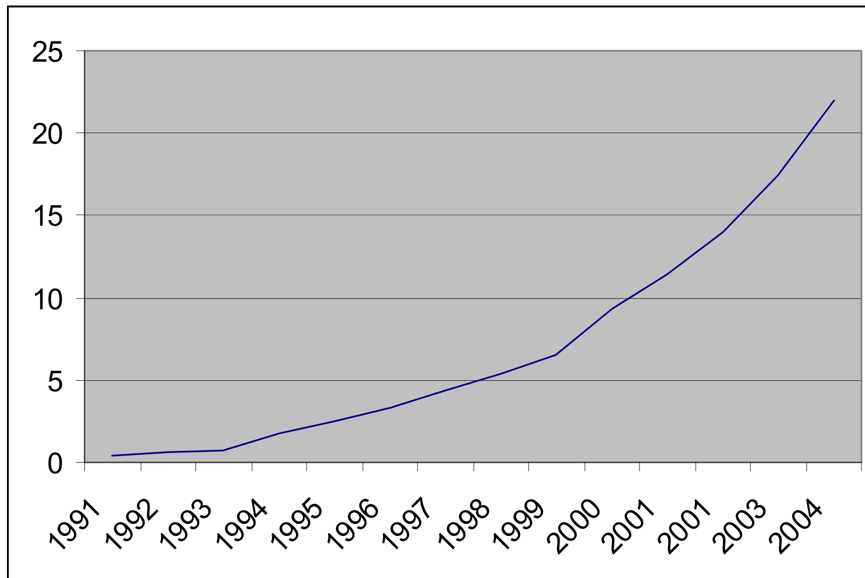
[12] The aggregate turnover has been obtained by adding the antitrust turnover of Lexecon, NERA, London Economics, Frontier, OXERA, RBB Economics, LBE, CRA and LECG. Figures for some individual firms are confidential and cannot be reported individually. Others have been estimated on the basis of the number of staff. Some of the figures have been intrapolated on the basis of a constant growth. Independent consultancy firms on the continent, which have remained small over the period, have not been considered. The turnover of independent academics, which was probably significant in the earlier years relative to the turnover of commercial firms has not been considered. Traces of the role played by these academics (in particular B. Yamey, G. Yarrow and D. Morris) can be found in some UK cases, like the GEC/Plasey, GEC/Siemens or the beer inquiry.

[13] This rapid growth is to some extent a consequence of the fact that different parties in a competition case often have different interests – or in other words "where a single economist starves, two will make a living".

[14] This growth gives a biased estimate of the growth of competition work in Europe as some firms (like Lexecon) started to generate very substantial fees from work outside Europe (in particular South Africa).

It is also interesting to consider the turnover of economic consultancy relative to the turnover for legal advice. Lexecon Ltd estimated that economic consultancy amounted to about 5 % of the total amount of fees (legal and economic) in 1995[15].

Figure 1. Turnover of economic consultancy firms (current £ million)



If one assumes that legal fees have increased at the same pace as the number of cases (the annual flow of cases has increased by a factor of about 2.5) in the last ten years, economic consultancy would now amount to about 15 % of the total amount of fees. This is only a rough guest, which however seems in line with the perception of some key players in the market. Interestingly, it would mean that the European market has converged with the US in this respect as 15 % appears to be a commonly accepted figure in the US[16].

[15] The turnover of legal advice was estimated as follows: at the time, law firms in the UK had to obtain insurance from a common industry scheme. They had to publish their turnover for this purpose. In order to obtain the fees related to antitrust, it was assumed that each partner would generate the same amount of fees (an assumption which was validated with law firms) and partners undertaking mostly antitrust work were identified). These fees relate mostly to UK and European work (which was performed mostly from London at the time). However, it does not consider to turnover of Brussels's based law firm which were performing European work at the time (in particular the traditional Belgian law firms and the Belgian operations of US law firms). From this perspective, the figure of 5 % for economic fees is probably an upper bound.

[16] Source : Lexecon, Inc.

Some evidence on the relative importance of economic and legal fees can also be gathered from the records of the *Airtours* case. Airtours, which attempted to acquire First choice and was prevented from doing so by the Commission, succeeded in its appeal in front of the CFI and the Commission was ordered to pay the cost that Airtours had incurred for the procedure. The Commission refused to pay the amounts that Airtours requested, claiming that they were exaggerated. Airtours asked the CFI to order to Commission to pay and the Court had to rule on the amount that the Commission should repay. Accordingly legal and economic fees became public[17]. The following amounts were spent by Airtours and claimed to the Commission (second column)[18].

Table 1. Legal and economic fees in Airtours (£)

	Claimed	Accepted
Barrister	279 375,00	170 000
Solicitors (expenses)	850 000,00 (19 509,18)	250 000
Economic consultancy	281 051,52	30 000
Academic economists	33 885,35	19 485
Legal fees in Luxemburg	620,00	
Total	1 464 441,55	

Fees charged by economists thus amount to about 21% of the total. The Court considered the various categories of fees. Economic fees account for about 10% of the fees eventually reimbursed by the Commission.

The amount of economic input into the Airtours case is probably unusual (as the case revolved around some conceptual economic issues). On the other hand, one would

[17] The amount that the Commission spent on external economic advice is not publicly available. The editors of the Journal may wish to come forward with relevant information in this regard.
[18] See § 32 of the decision – Case T-342/99 DEP

expect economic fees to be lower in a Court case than in the initial administrative procedure (in which evidence is gathered). This particular case may thus confirm that a figure of 15% is not unrealistic.

The market structure has also changed over the last 15 years. Lexecon had a market share that could be referred to as "dominant" at some point in mid nineties. Entry by US firms (LECG and CRAI), domestic entry and split-ups increased the number of significant players over time. Currently, the industry appears to be more fragmented with comparable markets shares (in the 20s) for CRA International (which took over Lexecon in the summer of 2005), LECG, RBB Economics, with Frontier and NERA being somewhat smaller[19]. This fragmentation has also been observed in the US market and from this perspective the two markets seem to have converged as well. The market structure is also characterized by the presence of three firms with global (or at least transatlantic) operations[20]. In this respect, economic consultancy seems to have followed the same path as legal advice, both moves being triggered by clients with operations and antitrust filings across jurisdictions[21].

A more qualitative estimate of the importance of economics in antitrust can be obtained by considering the proportion of decisions in which explicit reference is made to economic advice. Table 2 shows the number of Phase II decisions taken every year since the implementation of the merger regulation and the number of published decisions in which reference is made to economic advice[22]. There is a positive trend (five years averages do increase for instance) but there are also some important variations around the trend. A closer look at the cases in which economic advice is referred to reveals that economists are involved in the more important cases (those involving new issues, delicate competitive situations and large transactions). As the frequency of such cases varies

[19] RBB economics was set up by former NERA consultants. LECG also grew markedly in 2004 as a number of consultants joined the firm from NERA.

[20] RBB Economics has a cooperation agreement with Competition Policy Associates (the consulting operation set up by Ordover and Willig) in the US so that Frontier Economics is only firm with a domestic focus at the moment..

[21] Cross border deals may not be numerous but they generate fees in excess of the average.

[22] This evidence was gathered by searching for key words (generic words, like economic advice, economic consultancy, economic studies as well as the name of the main economic consultancy firms)

from year to year (even among phase II cases), it may explain the variance of economic advice around the trend. It also suggest however that the nature of competition among economic consultants differs from that among legal advisers. By comparison with lawyers, economists tend to compete for bigger but less numerous cases. This should enhance rivalry.

Table 2. References to economic reports in phase II cases

Year	Phase II decisions (A)	Phase II decisions with econ. (B)	B/(A-D)	Unpublished phase II (D)
2005	4	0	0.00	3
2004	7	5	0.71	0
2003	7	2	0.29	0
2002	6	1	0.17	0
2001	20	10	0.50	0
2000	17	2	0.12	0
1999	9	2	0.22	0
1998	8	1	0.13	0
1997	9	1	0.11	0
1996	6	3	0.50	0
1995	7	2	0.18	4
1994	5	1	0.17	1
1993	3	1	0.25	1
1992	4	1	0.25	0
1991	5	1	0.20	0
TOTAL	118	34	0.27	9

The amount of resources that competition agencies mobilize for economic analysis can also be roughly assessed. As indicated by Röller (2005), there are about 200 civil servants with a background in economics at DG Comp (if economics includes related

disciplines like accounting) but most of them do not undertake technical economic analysis. Only 20 have a PhD in economics and no less than 10 have a PhD with a specialization in industrial organization. The position of Chief Economist was only created in 2003 and his team consists of 10 economists. This can be compared with the (roughly) 150 professionals currently working in the economic consultancy firms considered above. Even if assumes that only haft of the time of those professionals is devoted to European work, the discrepancy between the resources invested by the parties and those invested by the EU is very large.

3. Economic input in the case law and policy

The fact that economists have been hired in procedures is only a signal that economics as a discipline may have had an impact on the case law. This section attempts to gather some further evidence that economics has affected the case law and EU policy. In order to do so, we have considered the main issues that antitrust authorities consider and tried to identify whether economic insights (in terms of theory, empirical evidence and methodologies) have been used and whether some of them may have been abused. We have also tried to identify whether significant developments in competition economics have been neglected.

This exercise requires a broad knowledge of the case law and involves a large amount of judgment. My knowledge of the case law is certainly incomplete and undoubtedly not free of biases. The fact that I have been involved in some cases is for instance clearly a source of bias[23]. Hence, I attempted to confront my views with those of other competition economists. I obtained substantial comments and suggestions from four of them[24]. The outcome of the exercise is presented in table 3[25].

---

[23] Among the cases discussed in this section, I have been involved in Volvo/Scania, Airtours, EMI/Time Warner, TotalFina/Elf and Tetra Laval/Sidel. My discussion of these cases only relies on public information.

[24] I posted a survey on my website and sent an email to the 45 European competition economists that appear in the list of top 100 competition economists compiled by the Global Competition Review, asking them to fill in the survey. I obtained only 4 substantial contributions.

[25] The question marks that appear in the table identify some issues on which there is apparent disagreement among the five economists involved in gathering this evidence.

Each item in this table could be discussed at length. Such a discussion would however be of interest only for a very specialized audience. In what follows, we will focus on some key developments.

First, there are four areas in which economic theory has affected case law and policy. (i) Static oligopoly theory is providing guidance to analyze the relevant markets and assess market power. (ii) The theory of collusion in repeated games has become an essential component of coordinated effects in merger control. (iii) The policy toward vertical agreements has been affected by the economic theory of vertical restraints, in so far as it highlights some necessary conditions for these practices to be anti-competitive. (iv) The Commission's approach towards tying and bundling practices has been affected by dynamic theories of anti-competitive effects arising from those practices (in the presence of network effects for instance).

Second, there is no consistent treatment of efficiencies across instruments. With respect to Art 81, the efficiency benefits from vertical agreements that are widely recognized in the economic literature have not had a strong impact on policy. Economic theories which highlight the benefit from cooperation towards R&D have been recognized but there is also a perception that unconvincing efficiency gains have been accepted by the Commission with respect to horizontal as well as vertical agreements. With respect to the merger regulation, possible sources of efficiency gains have been mostly neglected or abused. However, they have been abused in a way which is the opposite of what is observed for Art 81. Rather than accepting unconvincing efficiency gains, the Commission has turned efficiency gains into competition offences.

Third, economic theory has been largely neglected with respect to predation, pricing abuses and the exclusion from essential facilities, despite the fact that at least some of these theories can potentially be applied empirically (in particular with respect to predation, non linear pricing schemes and some exclusionary contracts).

Fourth, both economic theory and empirical evidence have been abused. Static theory of anti-competitive effects associated with tying/bundling has been used out of context in the analysis of conglomerate effects. In the analysis of co-ordinated effects, the robustness of some theoretical results has been overestimated. In both instances, theory has been used as if anti-competitive effects could be presumed and claims of such effects have not been supported by convincing evidence.

The treatment of collusion in Art 81 is a different matter: in the *Wood Pulp* judgment, the Court indicated that evidence with respect to the behavior of firms in the market (in particular, parallel conduct) could only be considered as revealing of coordination if it could be shown that there is no alternative explanation for this conduct (in terms of competitive interactions which do not involve coordination). This ruling expresses a "but for" test, such that the evidence should not be observed but for the presence of coordination. This type of test may be an appropriate way of establishing a standard of proof[26]. However, in the circumstances, the test is almost impossible to meet, as creative economists can presumably come up with a competitive explanation for almost any type of behavior which could be associated with coordination. One can wonder whether the Court fully appreciated the extent to which economic theory can rationalize behavior. Hence we may be confronted with a different type of abuse; a lack of understanding of economic theory as a methodological tool may have led to Court to establish a standard of proof which possibly goes beyond what it had intended to achieve.

If quantitative methods have been encouraged and increasingly used by the Commission (a welcome development), quantitative evidence may also have been abused in so far as the Commission may have given too much importance to particular pieces of evidence that were unreliable.

Overall, the evidence is thus mixed. Economics theory and empirical methods have affected case law and policy but they have sometimes been abused. They have not affected some areas in which arguably they could have done so. This state of affairs

[26] The standard of proof will be discussed further in section 5.

naturally calls for an explanation. Can the factors which have triggered or contributed to these developments be identified? We will argue that the characteristics of the legal framework, both the statutes and the procedures can provide useful insights into this question. Section 4 first attempts to identify the relevant characteristics of the legal framework.

Table 3. An assessment of economic inputs

1. Market power	
Market definition/ assessment of dominance	
Important development	Notice on relevant market Use of quantitative methods (*Nestlé/Perrier*)
Abused	Concept of bidding markets
Neglected	
Unilateral effect in MC	
Important development	Horizontal guidelines Merger simulations (*Volvo/Scania* [27], *Lagardère/Natexis/VUP*[28])
Abused	Over-reliance on unreliable econometric evidence
Neglected	Impact of non-price issues of importance to consumers, i.e. quality, variety, and convenience; which may off-set or add to anti-competitive pricing effects
2. Collusion	
Art 81	
Important developments	Incentives on parties to act as whistleblower to undermine collusive agreements (?)
Abused	Excessive confidence on the identification of behavior form economic models (*Wood Pulp* , Court decision[29], *standard of proof ?*)
Neglected	Structural econometric models to test for effects
Co-ordinated Effects	
Important developments	Theory of collusion in repeated games (*Airtours* – Court decision[30])
Abused	- Conflating joint dominance with oligopolistic dominance (*Airtours* – commission decision[31]) - Link between collusion and the degree of asymmetry in market share or capacity - Robustness of check list for supporting post-merger co-ordinated effects
Neglected	Developing empirical tools to consider likelihood of co-ordinated effects arising post-merger

[27] Comp M1672
[28] Comp M 2978
[29] Joined cases C-89/85, C-104/85, C-114/85, C-116/85, C-117/85 and C-125/85 to C-129/85
[30] T-342/99
[31] Case IV/M 1524

3. Horizontal Agreement	
Important developments	Economic effects-based Assessment (*Wouters*[32], preliminary ruling by the CFI) Recognition of pro-competitive effects of most agreements involving small firms
Abused	
Neglected	Insufficient differentiation between co-operative agreements for selling and buying
4. Vertical Restraints	
Important developments	Effects-based Block Exemptions rather than form-based (*Volkswagen II*[33], Court judgment)
Abused	Market Integration criteria used in assessment of VRs, particularly in relation to exclusive territories *(but internal market objective)*
Neglected	- RPM like all other VRs should be assessed on a case-by-case basis - Pro-competitive motives (incentives for retailers)
5. Two sided markets	
Important developments	
Abused	
Neglected	The entire theory has been neglected so far (?)
6. Efficiencies	
Art. 81(3)	
Important developments	Benefits of R&D agreements (Block exemption)
Abused	Too much credence given to efficiency justifications for firms with market power (*standard of proof ?)*
Neglected	Failure to take broad market picture and see importance of establishing level-playing fields, so that small firms can continue to compete with large firms
Merger regulation	
Important developments	
Abused	Value-destroying aspects of partial divestiture Efficiency offence (*Guinness/Grand Med*[34])
Neglected	Efficiencies in non horizontal mergers (pricing efficiencies, contractual efficiencies)

[32] C-309/99.
[33] Case T-208/01
[34] Case COM M938

7. Tying / Bundling	
Art 82	
Important developments	Dynamic models of tying (*Microsoft* [35], Commission decision)
Abused	
Neglected	Failure to recognize genuine efficiency and competition benefits
Merger regulation	
Important development	Dynamic models of tying (*Aol/Time Warner*[36])
Abused	Models of anticompetitive foreclosure through tying have been used out of context and without proper evidence[37] (*Tetra Laval/Sidel*[38], *GE/Honeywell*[39])
Neglected	
8. Essential Facilities	
Important developments	
Abused	
Neglected	New theory of foreclosure
9. Predation	
Important developments	
Abused	
Neglected	- Financial predation - Alternative explanations for pricing below cots (two-sided markets, learning by doing)
10. Other pricing abuses	
Important developments	
Abused	
Neglected	-Literature on exclusive contacts (and non linear pricing) which identify necessary conditions for anti-competitive effects - Failing to recognize that discriminatory pricing in oligopoly may not be anti-competitive. (*Michelin II* [40], Commission and Court decisions)

[35] Case COMP/C-3/37.792
[36] Case COMP M1845
[37] See also Alborhn, Evans and Padilla (2003), Grant and Neven (2005), Neven (2006)
[38] Case COMP/M2416
[39] Case COMP/M2220
[40] Case T-203/01

4. A Law and economics hotchpotch

Five important features of the legal framework towards competition enforcement can be highlighted, namely, the scope of the decision, the system of proof taking, the standard of proof, the type of evidence which is deemed sufficient to meet the standard of proof and the standard of review[41].

First, the legal framework will typically specify the scope of the decision that has to be made (or the scope of the findings that have to be made in order to trigger a decision). In particular, the legal framework will indicate whether decisions should take the form of prohibitions (negative decisions), authorizations (positive decisions) or both. The scope of decisions is related at least in part to the screening mechanism that is used to detect illegal conduct. A notification system will naturally require both positive and negative decisions. By contrast, a legal system with direct effect may only require negative decisions. The choice of a screening mechanism and associated types of decisions also expresses some "presumption" regarding the likelihood that the conduct at stake is unlawful. A system of direct effect and negative decisions may for instance express the expectation that the conduct is less likely to be harmful than a system of notification involving both positive and negative decisions.

Second, the procedures will specify how evidence is gathered. In this respect, the law and economics literature distinguishes between two alternative systems of proof taking, namely the inquisitorial and adversarial systems[42]. In the inquisitorial system, the entity (whether a person or an institution) which takes the decision is also responsible for

[41] To the best of our knowledge, there is no encompassing model of competition decisions in the law and economics literature. Even if most of the elements discussed here have been analyzed separately, either in law or economics and sometimes in formal models, their interactions have (to our surprise) not been extensively discussed. What follows is indeed no more than a "disorderly mixture" (the Oxford dictionary definition of a hotchpotch). This title is, I confess, somewhat of a plagiarism of one of John Vickers' recent speeches, which rather more elegantly considered the "Law and economics bundle".

[42] The US system uses an adversarial procedure (in which the antitrust authority acts as a public prosecutor). Adversarial procedures can however be used in different institutional arrangements (see section 6).

gathering the evidence. This entity is meant to gather all relevant facts and analysis, in favor and against the decision that it is taking. In the adversarial system, proof taking is delegated to opposing parties (typically, a prosecutor and a defense lawyer). The entity making decisions does not take initiative with respect to evidence and takes a decision on the basis of the evidence presented by both parties. These alternative systems of proof taking (an economic construct) are closely associated with the allocation of the burden of proof (a legal concept); of course, the entity taking the decision (typically an administrative unit in the inquisitorial system and a judge in an adversarial system) bears the burden of proof for their findings in case of appeal. In other words, they are responsible for their findings in both instances (despite the fact that the evidence on which they base their decision is gathered in different ways). Still, in the case of an adversarial system, each party bears the burden of proving the findings that it advances, respectively for or against a particular decision. In the inquisitorial system, the parties involved bear no burden of proof.

Third, the legal system will specify the standard of proof. This can be though of as the degree of confidence that is required in order to make a finding. Various standards are used in legal proceedings. The standard of a "balance of probability" is often used in civil proceedings. It suggests that a finding can be made if it is correct in expected terms (i.e. if the probability that it is right is higher than the probability that is wrong). The alternative standard such that a finding should be right "beyond reasonable doubt" is associated with a much greater degree of confidence and it is typical of criminal proceedings. In the antitrust field, the standard is however typically not specified in the statutes but emerges from the case law.

The combination between the scope of decisions that have to be made and the standard of proof determine the weight that is given to both types of errors. For instance, a system of negative decisions with a standard of proof such that the probability that the decision is right at 0.7 allows type I errors with a probability of 0.3. A system of authorization with the same standard allows type II errors with the same probability.

Of course, the statement of a particular standard of proof, however important, begs the really difficult question, namely the question of what particular body of evidence can be considered to be sufficient to consider that it meets the required standard. Most legal systems in the field of antitrust further specify the type of evidence that can be considered sufficient to meet a particular standard of proof, at least in a restricted number of areas. This is the fourth characteristics. The (legal) concept of a *per se* rule can be considered in those terms. A *per se* rule is effectively a threshold on the amount of evidence that is required, such that the mere observation of a particular set of (easily identifiable) facts can be considered (ex ante) as sufficient evidence to meet the standard of proof that is required to make a finding. The alternative of a "rule of reason" is effectively the recognition that there is a priori no set of easily identifiable observations that are sufficient to meet the required standard of proof. The truncated rule of reason that was recently developed by the Supreme Court in the US[43], can be thought of as a contingent rule; according to this approach, facts that are normally considered to be sufficient to meet the required standard of proof (*per se*) can be considered are insufficient if another set of facts is observed. If those other facts are observed, a full rule of reason will apply.

Fifth, the legal system will specify a standard of review, to be applied by the institution which will make a decision in case of appeal. This fifth dimension is of course essential in order to provide adequate incentives for the entity making the initial decision to meet the standard of proof that it is meant to observe, i.e. to take its decision with the required amount of confidence. The threat of a meaningful review is an important mechanism to ensure that the entity making the initial decision will not be easily captured.

The role of economic analysis in this framework is easy to identify. It is with respect to the evidence that can be gathered in order to meet the required standard of proof, evidence being understood both in terms of a theory of anti-competitive effect and empirical evidence which validates the theory. As discussed above, some economic theories of anti-competitive effect have been properly used in the case law and others have been abused or neglected and empirical evidence has sometimes been inadequate.

[43] *California Dentists Association*, S. Ct. 1999

In the next section, we will characterise the EU legal framework along the five dimensions just identified and discuss (in light of the literature) whether particular features of this framework might help understand why economic analysis has been abused or neglected. This section will also try to identify, more generally, the strengths and weakness of the EU legal framework.

5. An economic perspective on the EU legal framework

This section discusses the legal framework from an economic perspective. We characterize the main EU instruments, namely Art 81 ECT, Art 82 ECT and the merger regulation in terms of the five characteristics outlined above and discuss whether these characteristics are adequate from the perspective of handling economic evidence. Key characteristics are summarized in table 4. Our discussion focuses on the most important elements.

Table 4. Some key characteristics of EU procedures

	Art 81	Art 82	ECMR
Scope	- Finding that an agreement restricts competition - Finding that an agreement does or does not entail efficiency benefit	Finding that a firms has a dominant position and abuses it	Finding that a concentration does or does not restrict effective competition
Proof taking	Inquisitorial for 81 (1) – with different procedures for the two sides Mixed for 81(3)	Inquisitorial with different procedures for the two sides	Inquisitorial with different procedures for the two sides
Standard of proof	No less than ECMR	No less than ECMR	More than balance of probabilities
Set of sufficient facts (per se)	Horizontal price fixing, market sharing cartel	Dominant position with MS > 60 (?) % Pricing below avoidable cost	No
Standard of review	Id ?	Id ?	Manifest error Facts, reasoning and inferences

5.1. Standard of proof and review

As discussed by Vesterdorf (2004), what standard should be applied in competition cases has not been considered at great length by the Court until recent cases.

In *Tetra Laval/Sidel*, the CFI held that the Commission should prove that the merger will have anti-competitive effects "in all likelihood". The CFI further insisted that the evidence brought forward by the Commission should be "convincing". These pronouncements suggest that the standard of proof may be stricter than a mere balance of probabilities (see Vesterdorf (2004)). The Commission appealed this judgment partly on the ground that the CFI had raised the standards. The Court however confirmed the approach of the CFI[44]. One can wonder whether the standard established in this merger case can be applied in Art 81 or Art 82 cases. Given the latter are ex post and the former ex ante, it would seem that the standard of proof cannot by any lower[45].

The standard of review has not been discussed much either, which is surprising given the importance that this standard has in order to provide adequate incentives to the Commission. The CFI and the Court have recently indicated that the scope of their review should not be restricted to mere factual issues but should also include an examination of the Commission's reasoning (including economic reasoning) and its inferences. This naturally raises the accountability that the Commission is subject to and enhances the credibility of the standard of proof that it is meant to respect[46].

---

[44] At § 45 of the judgment : "The Court of First Instance did not err in law when it set out the tests to be applied in the exercise of its power of judicial review or when it specified the quality of the evidence which the Commission is required to produce in order to demonstrate that the requirements of Article 2(3) of the Regulation are satisfied."

[45] According to Legal (2005), § 39 of the decision is also drafted in such a way that the Court's statement on the burden of proof applies to all competition cases.

[46] The Court indicated at § 39 : "Whilst the Court recognises that the Commission has a margin of discretion with regard to economic matters, that does not mean that the Community Courts must refrain from reviewing the Commission's interpretation of information of an economic nature. Not only must the Community Courts, inter alia, establish whether the evidence relied on is factually accurate, reliable and consistent but also whether that evidence contains all the information which must be taken into account in order to assess a complex situation and whether it is capable of substantiating the conclusions drawn from it.

Importantly, the Commission challenged the formulation of the standard of review adopted by the CFI and lost. This suggests that the Commission has been operating with an expectation about the standard of review which was biased downwards.

This development may explain in part why economic evidence has sometimes been abused; the Commission seems to have misjudged both the standard of proof that it had meet and the standard of review that would apply in case of appeal. Accordingly, it may have satisfied itself with unduly low standards of proof.

5.1. Scope of decisions and proof taking

5.1.1. Art 81

Since the reform of the implementation measures[47], the Commission takes only negative decisions with respect to Art 81 (1) ECT. If the Commission does not observe that an agreement falls under the conditions laid out in § 1, it will not take a decision and the agreement will be lawful[48].

With respect to Art 81(3) ECT, the matter is different. Its provisions are formulated as an exception of the prohibition expressed by 81(1), so that there is no "presumption" that agreements entail efficiency benefits. The Commission takes also positive as well as negative decisions with respect to the application of this provision but it does not have to take positive decisions (the exception applies directly)[49].

The system of proof taking with respect to Art 81 would appear to be inquisitorial, in so far as the Commission investigates and takes a decision. The parties to which proof

---

Such a review is all the more necessary in the case of a prospective analysis required when examining a planned merger with conglomerate effect."

[47] Regulation 1/2003 – which as discussed above replaced regulation 17/1961.

[48] Note that before the reform of the implementation regulation, matters were less clear. In order to obtain the benefit of Art 81(3), agreements had to be notified and the Commission did grant quasi positive decision with respect to Art 81(1), in the form of comfort letters.

[49] Interestingly however, only the Commission (and Courts) can take both positive and negative decisions. Relevant authorities in member states can only take negative decisions.

taking is delegated are respectively the firms involved and the parties that may be affected (including complainants and parties identified by the Commission). Their procedural rights are however not balanced (with the former being endowed with more extensive rights).

In addition, the new implementation regulation (which crystallizes past practice in this respect[50]) also makes it clear that parties bear the burden of proof with respect to Art 81(3)[51]. This is not consistent with an inquisitorial system of proof taking in which, as discussed above, the parties bear no burden of proof and merely respond to the requests for information from the authority in charge.

Hence, the implementation of Art 81 does not fully correspond to an inquisitorial system. The role of the Commission is truly inquisitorial with respect to Art. 81(1). However, the implementation of Art 81(3) borrows features from both systems: the Commission plays the role which is that of a "judge" in an adversarial system in so far as it delegates proof taking and does not seek to assemble evidence. However, it is not a truly adversarial system either to the extent that only one side of the argument is formally represented. There is no delegation of proof taking to a party seeking to show that efficiency benefits are limited (there is no prosecutor).

This imbalance would suggest that there is a bias in the procedure in favor of a finding that efficiency benefits prevail (and justify an exemption of Art 81(1)).

This conclusion resonates with the observation made above that unconvincing efficiency claims have been accepted under Art 81(3). The imbalance of this procedure in terms of proof taking may thus be one reason behind this apparent abuse.

---

[50] See Wils, 2004

[51] Article 2 of regulation 1/2003 reads as follows :
"In any national or community proceedings for application of Article 81 or Article 82 of the Treaty, the burden of proving an infringement of Article 81(1) or of Article 82 of the Treaty shall rest on the party of the authority alleging the infringement. The undertaking or association of undertaking claiming the benefit of Article 81(3) of the Treaty shall bear the burden of proving that the conditions of that paragraph are fulfilled".

Of course, one could make the argument that the Commission itself act as a prosecutor with respect to 81(3) – and thereby assumes two roles[52]. Whatever the merit of this argument, it is clear that the system of proof taking with respect to Art 81(3) could be improved upon; if the Commission does effectively assume two roles, the ensuing conflicts of interests could be avoided. If it does not, the system of proof taking is unbalanced.

5.1.2. The ECMR

The implementation of the merger regulation involves a system of notification and the Commission has to take either a positive or a negative decision. That is, the Commission needs to find that the proposed concentration is compatible with the common market (possibly with amendments) and allow it or find that it is not compatible and prohibit it. By comparison with the legal framework of Art 81, this arrangement suggests that the expectations ex ante that mergers will be lawful are perceived to be lower (by the Community) than the expectations that agreements will be lawful.

As discussed above, the standard of proof that applies probably goes beyond the mere balance of probabilities, so that a decision can only be taken if the probability that it is right is above some benchmark in excess of 50%. The combination of such a standard with the obligation to take either positive or negative decisions is a little odd and raises an issue of consistency[53]. Indeed, there may be instances where there is no decision that the Commission can take while abiding with the required standard. Assume for the sake of argument that the balance of probability is 70 %. All mergers which impede effective competition with a probability which is higher than 70% should be prohibited and all mergers which impede effective competition with a probability which is less than 30 % should be allowed. What about those for which the probability falls in between? The

[52] The criticism that the Commission assumes several roles is often made in general (see for instance, Burrnside, 2002) and can be understood as a criticism of the inquisitorial system. In the context of our framework (in which functions are defined more precisely), it is only with respect to 81(3) that a conflict of interest may arise from the dual role that the Commission would appear to assume.
[53] See Vesterforf (2004).

Commission can simply not take one of the decisions that it is supposed to take towards those cases while meeting the required standard of proof[54].

The system of proof taking with respect to the merger regulation appears to be inquisitorial in so far as the Commission investigates and takes a decision. Proof taking is delegated to the merging parties and other interested parties with, again a preponderance of procedural right for the former. Importantly, unlike what happens with Art 81(3), the system of proof taking and the allocation of the burden of proof are not modified when an efficiency defense is considered. Even if it is often argued informally that the parties should bear the burden of proof with respect to efficiencies (see for instance, Roeller, Stennek and Verboven, 200?), there is no explicit shift in the burden of proof in the merger regulation[55].

This feature is important and may be a factor which helps explaining why the efficiency defense has not been abused in the same way in the ECMR as in Art 81(3). As discussed above, there is no perception that unconvincing efficiency claims have been accepted under the ECMR (to the contrary, the Commission may have neglected important efficiency benefits). The fact that the burden of proof is not explicitly shifted to the parties under the ECMR, so that the inquisitorial procedure remains balanced may help explaining this difference. Of course, the fact that the status of the efficiency defense was not entirely clear until 2004 has probably also played a role.

[54] This issue does also arise, to some extent, with respect to the implementation of Art 81(3), for which the Commission takes both positive and negative decisions (but in that case that Commission does not *have to* take positive decision).

[55] In the recent (21 September 2005) judgment on EDP/Gaz Natural (Case T-87/05), the CFI further discussed the allocation of the burden proof with respect to remedies. Despite the fact that the notice on remedies stipulates that it is for the parties to show that proposed commitment meet the competition concern, the Court held that the burden of proof rests with the Commission.

5.2.3. Adversarial vs inquisitorial

The relative merits of the adversarial and inquisitorial systems have long been discussed informally in the law and economics literature. Dewatripont and Tirole (1999) and Shin (1998) explicitly model these alternatives[56].

(i) In the model of Dewatripont-Tirole (DT), an inquisitor can look for reasons to support either side of the argument and incurs a fixed cost of searching for each side. He obtains evidence with some probability and he can make a finding in favor of either side or choose the status quo. His payoff is lowest is case of the status quo. In an adversarial system, both parties can incur a cost of searching.

Assuming that evidence cannot be manipulated, the adversarial system dominates. This arises because the inquisitor may not actually look for both sides of the argument. When the probability of finding evidence is high enough, he actually focuses on one side of the argument; indeed, he is afraid that by looking for evidence on both sides, his evidence will not be conclusive and that he will have to choose the status quo. By contrast, in the adversarial system, the parties will always search and there is full information collection.

When evidence can be manipulated, a party can suppress evidence, either by not reporting information that he has or suppressing information which is not helpful to his case, if he has conflicting information. The authors show that an inquisitor will choose not to reveal information which would lead to status quo. Errors in decision making take the form of "extremism", such that one side of the argument is endorsed when the status quo would be appropriate. By contrast, in the adversarial system, an advocate might suppress conflicting evidence: if the opposite party has positive evidence, this will lead to the status quo when decision in favor of the opposite case would be favorable. The error takes the form on inertia. However, when the opposite party has no evidence, it will lead

[56] See also Palumbo (2001) who extends the work of Dewatripont-Tirole by assuming that the effort is continuous. She shows that an excessive amount of proof taking can take place (as agents invest in information partly because of the scope for additional manipulation that it allows for). She also shows that the adversarial system fares relatively less well than the inquisitorial system in this environment.

to a decision in favor of the party suppressing evidence. The error takes the form of extremism.

Hence, an adversarial system generates inertia in addition to extremism and accordingly it will tend to dominate the inquisitorial system when the cost of inertia is "much" less than the cost of extremism. The authors also show that the adversarial system is more attractive when the parties have a high probability of finding evidence in favor of their case, if it exists.

The tendency towards extremism in the EU is also probably reinforced by the inconsistency between the standard of proof and the scope of the decisions mentioned above, at least with respect to the implementation of the merger regulation. Indeed, when evidence is not very conclusive, the Commission cannot meet the required standard of proof with either decision. In those circumstances, it will have a further incentive to shift towards extreme outcomes (by suppressing evidence or failing to fully consider some alternatives).

The conclusion that an inquisitor might not invest in seeking evidence towards both sides of the argument (when evidence is hard to manipulate) or might suppress conflicting evidence[57] may help explain why empirical evidence has sometimes been abused in the EU, in particular with respect to collusion and conglomerate effects, and more generally with respect to alternative theories and with respect to quantitative evidence. In other words, the procedure implemented in the EU may be partly responsible for the apparent abuse which is made of economic evidence. This interpretation is congruent with some of the criticism that has been formulated toward merger control in the EU from direct observations of the procedures. For instance, Kühn (2002) describes what he refers to as a "self confirming" bias in the Commission' analysis, such that the Commission takes a view on cases early on and subsequently focuses on findings which supports that view.

[57] The Court decisions on *Airtours/First Choice*, *Tetra Laval/Sidel* and *Schneider/Legrand* illustrate this vividly. In those decisions, the Court explicitly criticized the Commission for not pursuing arguments and for suppressing (or misinterpreting) evidence.

It is tempting to associate extreme decisions with high fines and clearance and the status quo with moderate fines (with respect to collusion under 81). From this perspective, it is interesting to note that the Court almost invariably reduces the fines imposed by the Commission. This is consistent with the view that the Commission suffers from the extremism that can be expected in inquisitorial procedures.

The fact that the Commission has neglected some economic theories can also be interpreted as another form of extremism. Conservatism is indeed another (very common) form of extremism, whereby a set of arguments is ignored. Of course, other factors have played an important role, in particular with respect to predation and pricing abuses, for which the Courts have arguably not encouraged innovation.

It is also worth considering the nature of the economic evidence in the context of this framework. As emphasized above, the economic theories of anti-competitive effect are easy to develop and evidence which appears (superficially) supportive of the theory is easy to assemble. This may suggest that with respect to economic evidence, if there is evidence, it is very likely that parties will find it, a feature which enhances the superiority of an adversarial procedure.

(ii) The analysis of Shin (1998) provides some further insights. He considers a framework in which the parties do not have to search for information but in which there is uncertainty about the extent to which the parties are well informed. In those circumstances, not all information will be revealed, as a party may not have the information which is in its favor. It may also have the information which is not in its favor and will not reveal it. In this framework, the choice between inquisitorial and adversarial systems boils down to the choice between one piece of unbiased information and two pieces of biased information. The author shows that an adversarial procedure then always dominates and its superiority stems from the scope for adjusting the standard of proof that applies to each party. In essence, if the arbitrator can observe some asymmetry in the information to which the parties have access (which may be associated with the amount of effort that each party has spent on uncovering information), it will be

able to increase the standard of proof for the party with superior information. The arbitrator effectively tells the informed party that if his claims are correct, he should able to come up with convincing evidence. If he does not, the arbitrator should conclude that, other things being equal, the underlying facts of the case do not favor his claim.

Antitrust is an area in which there is often a significant asymmetry of information between parties. It would thus appear that there is scope for adjusting the standard of proof, which adds to the attraction of an adversarial procedure.

(iii) The models of DT and Shin both make the simplifying assumption that evidence, whenever it exists and is revealed can be interpreted without a margin of error. Economic evidence can hardly be considered in those terms. Evidence which is not subject to rigorous scrutiny can be easily abused ; key assumptions in theoretical reasoning can be disguised as innocuous and empirical result that are not robust can be disguised a such. Even if the presentation of evidence is not distorted, investigating its robustness is more effectively undertaken by several parties with different perspectives. That is to say that evidence needs to be scrutinized and validated to play a role in decision making. This validation may be best undertaken through an adversarial procedure because it allows for cross-examination and direct confrontation. The inquisitorial procedure is particularly poor in this respect, as it does not allow for even a right of response[58]. As the US experience suggests, validation in an adversarial procedure is also helped by a clear set of rules which forces the economic experts to state "fully and in a timely manner" the economic reasoning and the facts on which they rely[59].

Of course, the EU procedure would also appear particularly deficient in light of the current imbalance in resources observed above. Inquisitorial procedures may not be best

[58] This is easy to illustrate with the proceedings of the Volvo Scania case. Marc Ivaldi and Frank Verboven undertook a merger simulation for the EU. The parties and their econometrician (J. Hausman) criticized their analysis at the hearing. These authors however felt that some of the criticisms was misplaced but had no way to defend themselves. A non confidential version of the study, as well the criticism of Hausman, and a proper reply by the authors have now been published (see Ivaldi and Verboven, (2005a) and (2005b) and Hausman and Leonard (2005)).
[59] See Werden (2005) and Breyer (2004)

suited to distill and improve economic evidence, but such a procedure without adequate resources for the inquisitor would seem particular prone to abuse.

6. Remedies?

To sum up, the following conclusions emerge:

(i) The system of proof taking with respect to Art 81(3) is unbalanced and possible abuses of the efficiency defense may be related to this feature. As a corollary, shifting the burden of proof towards the parties with respect to efficiencies in merger control may be misplaced.

(ii) The inquisitorial system of proof taking enforced in the EU features both built-in conservatism and significant scope for abuse. The observations that the Commission may decide early on cases and search for selective evidence or that theories are neglected are consistent with the incentives generated by this type of procedure.

(iii) There is some inconsistency between the scope of the decisions enforced under the merger regulation and the standard of proof that the Commission is supposed to meet. This inconsistency reinforces the biases of the inquisitorial systems towards extremes.

(iv) The nature of economic evidence, which needs to be validated, may be such that it best handled by an adversarial system of proof taking.

(v) The imbalance in resources between the Commission and the parties is an impediment to a proper validation of economic evidence. Whatever the system of proof taking, a set of rules on handling of economic evidence (like the Reference Manual on scientific evidence used by Federal Courts in the US) would prove useful.

(vi) Both the standard of proof and the standard of review have remained surprisingly vague until recent cases. The Commission did probably not fully appreciate the standard of proof that it would be expected to meet and the

standard of review that would be applied to its decisions. Recent decisions by the Court should significantly reduce the scope for abuse.

(vii) A strengthening of the standard of review cannot, by itself, fully correct the incentives provided by an inquisitorial procedure. The Commission can hardly be made accountable for the effort that it does not exert in pursuing some argument.

On the whole, it would appear that procedures could be improved. Besides adjustments in the burden of proof, the standard of proof, and the scope of decisions (which may still require legislative changes) and an increase in resources, the implementation of an adversarial system would involve a deep institutional change. As part of his reforms, Commissioner Monti instituted a review of the analysis of the case team at a late stage of the procedure by a set of different Commission officials. This institution, commonly referred to as the "fresh pair of eyes" is arguably well targeted at the main bias of the inquisitorial procedure, namely its tendency to suppress information or to fail to look for it. Whether it intervenes at sufficiently early stage in the procedure and whether the fresh pairs of eyes have the right incentives with respect to their colleagues (who may turn out to be the fresh pair of eyes on other cases) is unclear[60].

From this perspective, it is worth considering what the implementation of an adversarial procedure would entail. There are at least two possible institutional arrangements. First, the case team could become a public prosecutor (as in the US system). The office of a "judge" would have to be created. Presumably, the "judge" and his office could belong to the Commission but it should be separated in a credible way from the institution to which the case team belongs. Such a separation between prosecutors and judge is enforced in many judicial systems and seems therefore feasible. This institutional arrangement would effectively involve the establishment of an administrative tribunal within the Commission. Importantly, it would imply that the "judge" within the Commission, and no longer the College of Commissioners, takes the final decision.

[60] The merger between EDP and Gaz Natural which presumably was subject to a fresh pair of eyes (and benefited from the input of the chief economist) was prohibited and challenged in court, partly on the basis that the Commission made an error of assessment. The Commission prevailed (Case T-87/05).

Alternatively, the case team could become the "judge". The procedural rights of the third parties should then be reinforced so that they effectively become the prosecutor. The role of the case team should also be changed relative to the current situation as they would no longer take initiative with respect to the investigations but merely confront the arguments of the parties. The main difficulty with this arrangement probably rests with the effective organization of the prosecution. Competitors are not always the best prosecutors, for obvious incentive reasons and the final consumers may suffer from problems of collective action. In any event, third parties would have to be provided with strong incentives (possibly a share of fines in ex post cases).

7. Conclusion

Confronted with the conclusion of this paper, many observers may feel disappointed. Having argued for long that Commission procedures are inadequate, they may only perceive the present paper as their own views dressed up in economic jargon.

It is still striking that concerns over EU procedures have shifted over time. In the early nineties, the scope for capture by corporate interests and the member states was the main area of concern[61]. What we have described in this paper is another form of bureaucratic capture, in which procedures distort the incentives of civil servants in particular directions. One cannot help wondering what underlies this shift of focus. Clearly, the tenure of Commissionner Monti matters in this respect, in so far as he has established very high standards of independence towards corporate interests[62] and member states. But it may very well be that increased reliance on economic evidence has something to do with it. As argued in this paper, the procedures implemented by the EU are more prone to abuse when economic evidence is used, given the nature of this evidence. Bureaucratic capture at the European Commission may be a lasting contribution of the dismal science.

[61] See Neven and Seabright (1994).
[62] The biography of J. Welch provides an amusing illustration of this (Welch and Byrne, 2001)

References

Ahlborn, C., D. Evans and J. Padilla, (2003), The Antitrust economics: a farewell to per se illegality, *Antitrust Bulletin*,

Ahn, S., (2002), Competition, Innovation and Productivity Growth: A Review of Theory and Evidence, Economics Department Working papers No. 37, OECD. Document number ECO/WKP(2002)3.

Baker, J., (2003), The case for antitrust enforcement, *The Journal of Economics Perspective*, vol 17(4), p27-50

Breyer, S., (2004), *Economic reasoning and judicial review*, AEI-Brookings Joint Center 2003 Distinguished Lecture, Brookings, Washington D.C.

Burnside, A., (2002), Comments on "Reforming European merger review : targeting problem areas in policy outcomes", *Journal of Industry, Competition and Trade*, 2(4), pp 365-378

Clarke, J. and S. Evenett, (2003), The deterrent effect of national anti-cartel laws : evidence from the international vitamins cartels, *Antitrust Bulletin*, Vol. 48 (3), p689-726, 38p;

Connor, J., (2003), International price fixing, resurgence and deterrence, mimeo, Purdue

Crandall, R. and C. Winston, (2003), Does Antitrust Policy Improve Consumer Welfare? Assessing the Evidence, *Journal of Economic Perspectives*, vol 17(4), 3-26

Dewatripont, M. and J. Tirole, (1999), Adovcates, *The Journal of Political Economy*, 107(1), pp1-39

Djankov and Murrell, (2002), Enterprise Restructuring in Transition: A Quantitive Survey, *Journal of Economic Literature*,

Duso, T., Neven D. and L.-H. Röller , (2004), The political economy of European merger control: evidence using stock market data, April, Mimeo .

Evenett, S., (2005), What is the Relationship between Competition Law and Policy and Economic Development?, University of Oxford, mimeo

Grant J. and D. Neven, (2005), The attempted merger between General Electrics and Honeywell. A case study of transatlantic conflict, *Journal of Competition Law and Economics,* forthcoming

Hausman, J., (2005), Using Merger Simulation Models: Testing the Underlying Assumptions, *International Journal of Industrial Organization*, forthcoming

Ivaldi, M. and F. Verboven, (2005a), Quantifying the Effects from Horizontal Mergers in European Competition Policy, *International Journal of Industrial Organization*, forthcoming

Ivaldi, M. and F. Verboven, (2005b), Using Merger Simulation Models: Comments on the Underlying Assumptions, *International Journal of Industrial Organization*, forthcoming

Kühn, K.-U, (2002), Reforming European merger review : targeting problem areas in policy outcomes, *Journal of Industry, Competition and Trade*, 2(4), pp 311-364

Legal, H., (2005), Standards of proofs and standards of judicial review in EU competition law, Fordham Annual conference on international antitrust law and policy

Neven, D., (2006), The analysis of conglomerate effects in merger control, in "*Advances in the economics of competition law*", P. Buccirossi (ed), MIT Press, forthcoming

Neven, D. and P. Seabright, (1994), *Merger in daylight. The Economics and Politics of EU Merger Control*, CEPR, London

Nickell (1996), Competition and Corporate Performance, *Journal of Political Economy* 104, p.724-746

Palumbo, G., (2001), Trial procedures and optimal limits on proof-taking, *International Review of Law and Economics*, 21, pp 309-327

Röller, L.-H., (2005), Using Economic analysis to strengthen competition policy enforcement in Europe, mimeo,

Röller, L.-H., J. Stennek and F. Verboven, (200?), Efficiency gains from mergers,

Shin, H.-S, (1998), Adversarial and inquisitorial procedures in arbitration, *Rand Journal of Economics*, 29(2), pp378-405

Vesterdorf, B., (2004) Standard of proof in merger cases: reflections in the light of recent case law of the Community Courts, Third Annual Merger Control Conference, BIICL, mimeo

Welch, J. and J. Byrne (2001) "Jack: What I've Learned Leading a Great Company and Great People", Headline Books, London.

Werden, G., (2005), Making Economics More Useful in Competition Cases : Procedural

Rules Governing Expert Opinions, Fordham Annual conference on international antitrust law and policy