

Competition economics and antitrust in Europe

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1. INTRODUCTION

This paper aims to evaluate the influence that economic analysis has had on competition policy in Europe² over the last twenty years. It uses evidence from the involvement of economists in competition investigations, as well as from the evolving content of competition decisions, to argue that there has been a significant increase in the economic sophistication of competition enforcement. However, at a number of points enforcement has appealed to economic reasoning in flawed or speculative ways. The paper discusses procedural reasons why this may have occurred, and evaluates current and potential reforms with an eye to ensuring this occurs less often in the future.

Why does any of this matter? At the outset, it is worth emphasizing that the state of competition in a modern economy has an appreciable effect on economic efficiency – though, as we discuss below, the extent to which the state of competition can be determined by conscious policy is a matter of some debate. There is also an important constitutional issue surrounding competition policy. It is one of the few areas in which competence was ceded very early to the European institutions from the member

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² 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.

states, probably because it was considered (somewhat simplistically) to be a largely technocratic domain in which important political trade-offs were unlikely to be considered necessary. Yet in recent years there has been a tendency to delegate enforcement to the member states, largely because more and more member states have developed active and sophisticated enforcement regimes. There is no doubt that the evolution of economic reasoning in policy-making has played an important part in this interesting and unusual constitutional development.

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."³ 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 innovate⁴. For instance, in one of the early papers in this literature, Nickell (1996) considered a sample of UK firms and evaluated 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 allow 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 large sample of studies on the link between competition and innovation and concluded that competition encourages innovative activities and has a significant sorting effect between efficient and less efficient firms over time.

Whether competition 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 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)⁵. 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 prices⁶. 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 (2007) use stock market reactions for the merging firms and their competitors to construct a benchmark against which EU decisions can be assessed⁷. They find that the EU prohibits very few mergers that the stock

³ United States v. Aluminum Co. of America, 148 F.2d 416, 427 (2d Cir. 1945).

⁴ See Evenett, 2005, for a survey (from which Judge Learned Hand's statement is borrowed).

⁵ Clarke and Evenett (2003)

⁶ See Connor (2003) and the Annual reports of the European Commission.

⁷ The basic intuition behind this approach being that at least in some circumstances, mergers which harm consumers should benefit competitors (and vice-versa).

market perceives as pro-competitive (it makes few type I errors) but may still fail to prohibit quite a few mergers that the stock market perceives as anti-competitive (the frequency of type II errors may be greater)⁸.

The implementation of competition rules is a core European policy. Competences with respect to anti-competitive agreements and the abuse of dominance were explicitly allocated by the founding treaty (respectively Article 85 and Article 86 of the Treaty of Rome, later renumbered as Article 81 and Article 82). It was conceived as an essential component of the internal market and unusual powers of enforcement were granted to the Commission (by delegation from the Council). In one of its early decisions⁹, 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”. In addition, the Council adopted procedures in which implementation was centralized; regulation 17¹⁰ established that in order to obtain the benefit from an exemption under Article 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 regulation¹¹ (ECMR), again with a centralized mechanism of implementation.

Competition is also an area of in which competences are shared with the member states, which have developed their own antitrust rules. Jurisdiction is allocated by formal rules and 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 states¹². This delegation is not immune from incentives problems as member states have no clear interest in considering effects which take place outside their jurisdiction (see for instance, Neven and Mavroidis (2001)). Still, this architecture of enforcement is unusual among EU policies and as experience accumulates, its functioning may be a useful source of inspiration in other areas.

The fact that economics has become more important in EU antitrust policy and practice since this Journal was first published is hardly controversial. One of the objectives of this essay will be to attempt some quantification of the relative importance of economic inputs in antitrust practice. Focusing on the fees earned by economic consultants, we will observe that the EU may be converging towards the US in terms of the relative importance of economics and law as inputs in cases. By comparison, economic resources at the level of the EU commission remain meager, and the asymmetry in resources between the authorities and the businesses they regulate is a cause for significant concern..

Evidence that economists have been hired increasingly to provide advice is merely an indication that parties and their legal advisors have found economists useful in order to prevail. 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 decisions and judgments and the reasoning that supports them, as well as the evolution of the legal framework

⁸ For the first few years of merger control, Neven, Nuttal and Seabright (1994) still find some case of possibly anti-competitive mergers that have been allowed because of political pressure.

⁹ Consten and Grundig vs Commission, case 56-58/64

¹⁰ EC Reg. 17/62 of 6 February 1962, OJ 21/02/62, pp 204-211

¹¹ Council Regulation N° 4064/89 of 21 December 1989

¹² EC Reg. 1/2003 of 16 December 2002, OJ L/1/1 of 4 January 2003.

(including soft laws like guidelines) and policy statements. This essay will thus evaluate whether economic insights have had an effect on policy and case law and whether some insights have been neglected.

We observe that economic analysis has had a strong impact in a number of areas:

- the analysis of agreements between firms, in particular vertical agreements under Article 81, has increasingly focused on effects;
- the assessment of competition has moved away from the formal notion of dominance towards effective competition;
- the analysis of the factors that determine effective competition has become more sophisticated, in particular regarding the definition of the relevant markets, bidding markets, the proximity of competitors' position and buyer power;
- the concept of collective dominance has been progressively developed in terms of the theory of collusion in repeated interactions;
- quantitative methods have become more important.
- enforcement procedures, like the leniency programs, which find some foundation in economic analysis, have been implemented.

Both the Commission and the Courts seem to have played a role in enhancing the role of economic analysis. There are, however, two areas of concern. The first is the implementation of Article 82, on the abuse of dominant positions, which has remained rather formalistic. The Commission has however launched a debate in this area and has published a discussion paper which moves some way towards an effects based approach¹³. Hence, it may only be a matter of time for economic analysis to have a stronger impact on the implementation of Article 82. The second area is a matter of process and procedure. The process through which the concept of collective dominance has emerged has involved the annulment of a Commission decision, in which the Commission's treatment of economic theories and evidence has been criticized. Another two important merger prohibitions have been annulled¹⁴ by the CFI (*Tetra Laval/Sidel*¹⁵ and *Schneider/Legrand*¹⁶), and another one largely annulled on similar grounds (*GE/Honweywell*¹⁷). We also observe more generally that the record of the Commission in Court may not be all that impressive.

The way in which the Commission develops and uses economic analysis therefore deserves attention. We develop a framework to think about antitrust procedures and identify the factors that will influence how theories and evidence are handled. We identify the system of proof taking implemented by the Commission, which is mostly inquisitorial with a prosecutorial bias, and discuss this system of proof-taking at greater length in light of the literature. We observe that the reforms implemented by the Commission go in the right direction, suggest some additional reforms and discuss the implementation of an alternative, adversarial, regime of proof taking.

¹³ DG Comp discussion Paper on the application of Art. 82 or the Treaty to exclusionary abuses, December 2005, available from http://ec.europa.eu/comm/competition/antitrust/others/Article_82_review.html#14062006

¹⁴ In what follows, we will give references of the decisions and judgments only when they appear in the discussion for the first time.

¹⁵ Case COMP/M2416 and judgments Case T-5/02 at the CFI and Case C-12/03 P at the Court of Justice

¹⁶ Case M 2283 and judgment C 380/01

¹⁷ Case COMP/M2220 and judgment Case T-210/01

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. Section 4 provides a framework to analyze anti-trust proceedings along five dimensions: namely, the scope of the decision (what has to be proven?), the system of proof taking (how is the proof gathered?), the standard of proof (what should be the degree of confidence in the proof?), the type of evidence which is deemed sufficient to meet the standard of proof (what elements of proofs should be considered as sufficiently telling to conclude that the required degree of confidence is reached?) and the standard of review (how is the proof assessed in case of appeal¹⁸?). Section 5 characterizes EU procedures in terms of these dimensions. Section 6 discusses in more detail the system of proof taking in light of the law and economic literature. Section 7 summarizes our findings and discusses the scope for further reforms. Section 8 concludes¹⁹.

2. ECONOMIC INPUTS

Economic advice was marginal in antitrust proceedings up until the late eighties. It was undertaken mostly by individual academics (there are references to some of them in early decisions like *Soda/Ash*²⁰ or *Wood Pulp*²¹). 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 notice²², inspired by the US practice, used economic concepts explicitly²³. As indicated by figure 1²⁴, for the following ten years, total turnover grew²⁵ at some 25-30% per year, reaching about £ 24 million in 2004²⁶.

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 1995²⁷.

¹⁸ Appeal is somewhat of an abuse of language as EU courts formally only exercise a judicial review. In what follows we will still use "appeal" for ease of reference.

¹⁹ I have been involved in a number of cases discussed in the Paper and in Particular *Volvo/Scania*, *Airtours/First Choice*, *EMI/Time Warner*, *TotalFina/Elf* and *Tetra Laval/Sidel*. My discussion of these cases relies on public information only.

²⁰ Case T36/91

²¹ 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.

²² Notice on the definition of the relevant market for the purposes of Community competition law. *OJ C 372 on 9/12/1997*

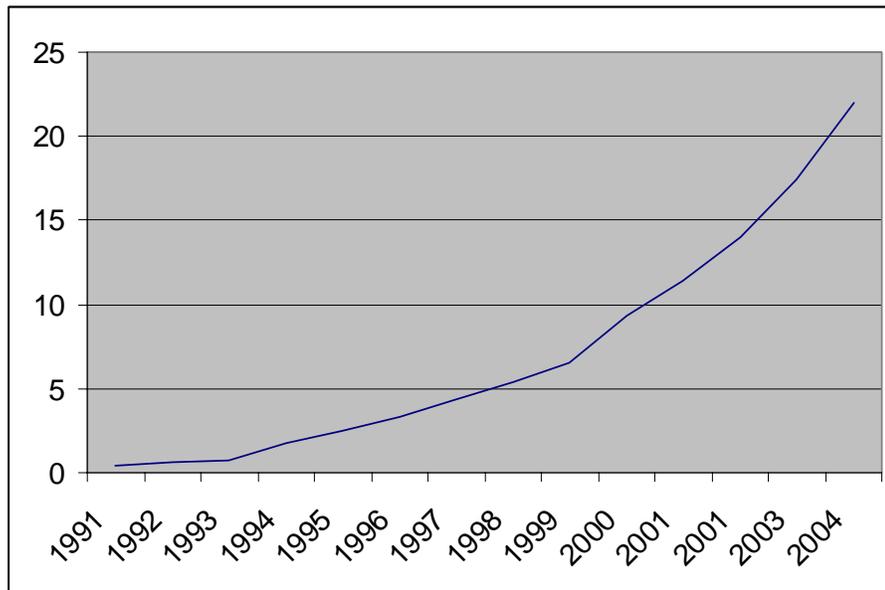
²³ The fact that a quantitative analysis was used for market definition in the high profile acquisition of Perrier by Nestlé in 1992 may also have been significant in alerting legal advisors to the potential of economic analysis in this regard.

²⁴ 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 interpolated 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.

²⁵ 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".

²⁶ 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).

²⁷ 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

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

Source: see text

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 guess, 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 US²⁸.

Some evidence on the relative importance of economic and legal fees can also be gathered from the records of the *Airtours* case²⁹. *Airtours*, which attempted to acquire First Choice and was prevented from doing so by the Commission, succeeded in its appeal in front of the CFI³⁰ 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 public³¹. The following amounts were spent by *Airtours* and claimed to the Commission (second column)³².

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

fees relate mostly to UK and European work (which was performed mostly from London at the time). However, it does not consider the 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.

²⁸ Source : Lexecon, Inc.

²⁹ Case IV/M 1524

³⁰ T-342/99

³¹ The amount that the Commission spent on external economic advice is not publicly available.

³² See § 32 of the decision – Case T-342/99 DEP

	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	

Source: Case T-342/99 DEP

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 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.

A survey by PriceWaterhouseCoopers³³ for the International Bar Association lends some further support to this estimate. The study which focuses on the cost of mergers and acquisitions found that about 20 % of the amount of legal fees was paid to other types of advisors. These presumably include lobbyists as well as economists but one can presume that the bulk of external fees went to economists.

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 smaller³⁴. 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) operations³⁵. 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 jurisdictions³⁶.

³³ <http://archive.ibanet.org/news/Newsitem.asp?newsID=99>

³⁴ 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.

³⁵ RBB Economics has a cooperation agreement with Competition Policy Associates (the consulting operation set up by Ordovery and Willig) in the US so that Frontier Economics is only firm with a domestic focus at the moment..

³⁶ Cross border deals may not be numerous but they generate fees in excess of the average.

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 advice³⁷. There is a positive trend (five-year averages 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 from year to year (even among phase II cases), it may explain the variance of economic advice around the trend. It also suggests 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

Source : DG Comp and own calculations

³⁷ 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)

The amount of resources that DG Comp mobilizes for economic analysis can also be roughly assessed. There are currently 83 professionals with a background in economics at DG Comp³⁸ and 184 with a background in law (hence roughly a ratio of 1 to 2). The ratio of economists to lawyer has increased greatly over time; according to Wilks and McGowan (1996), the ratio was 1 to 7 in the early 1990s. Still, as indicated by Röller (2005), most economists 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 Competition 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 one assumes that only half 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. The team of the Chief Competition Economist can also be compared with the economists working at comparable agencies in the US. The Antitrust division of the US department of justice and the US Federal Trade Commission have together well over 100 professional economists³⁹.

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 neglected.

In order to document the influence of economic analysis, we have considered the evolution of the legal framework including soft laws like guidelines and notices. The main developments are presented in table 3. The economic insights that these new soft laws have taken on board will be discussed further below together with the evolution of the case law.

Table 3. Main development in the legal framework

Article 81	Article 82	Merger control
Notice on the definition of the relevant market for the purposes of Community competition law. <i>OJ C 372 on 9/12/1997</i>		
Regulation (EC) No 2790/1999 on vertical agreements	Discussion Paper on the application of Art. 82 of the treaty to exclusionary abuses, December 2005	Merger regulation Reg 4064/89
Guidelines on vertical restraints <i>OJ C 291, 13.10.2000</i>	Regulation 1/2003 (modernization) <i>OJ L 1, 04.01.2003</i>	Council Regulation (EC) No 139/2004
Guidelines on the application of Art 81(3) <i>OJ C 101, 27.04.2004,</i>		Horizontal guidelines <i>OJ C 31, 05.02.2004</i>

³⁸ See www.euroPa.eu.int/comp/dgs/competition

³⁹ See www.oecd.org/dataoecd/53/15/2406946.pdf

Leniency notice I <i>OJ C 207, 18.07.1996</i>		
Leniency notice II <i>OJ C 45, 19.02.2003</i>		
Regulation (EC) No 772/2004 on technology transfer agreements		
Guidelines on technology licensing agreements <i>OJ C 101, 27.04.2004</i>		
Regulations 2658-9/2000 on the application of Art 81(3) to specialization and R&D agreements		
Guidelines on the application of Art 81 to horizontal cooperation agreements <i>OJ C 3 of 06.01.2001</i>		
Regulation 1/2003 <i>OJ L 1, 04.01.2003</i>		

Source : DG Comp

The evolution of the case law is harder to trace in a systematic manner. We have relied on two complementary sources. First, we have compiled a list of the cases that have been the subject of a specific commentary by the economic consultancy firms reviewed above (see Table 4). This source is certainly not free of biases; in particular, the decision whether to publish a comment is presumably dependent on whether the firm prevailed. This may not matter if two firms were involved on opposite sides but we have no control on the proportion of cases in which this occurred⁴⁰.

Table 4. Cases subject to a specific commentary by economic consultancy firms

⁴⁰ The list of cases appearing in table 4 has also been compared to the list of cases that have been subject to a focused article in the European Competition Law Review (since 1995). The second list is broader but includes many articles dealing with legal issues only. Considering only the articles with an economic focus, it does not appear that the list in table 4 has significant omissions.

First, there is a striking evolution over time with respect to the analysis of competitive positions. Early on in the period, firm's competitive position was considered with a focus on dominance and dominance was often related to structural indicators like market shares; this prevailed in the implementation of Art 82 but also to a lesser extent in the implementation of the merger regulation. Relevant markets were sometimes defined excessively narrowly without much consideration for competitive constraints. Early commentaries (like Lexecon/CRA's competition memo of April 1995, citing decisions like *Boosey and Hawkes* or *Sealink/B&I* or the discussion in Neven et al (1994)) are quite telling in this respect. Over time, the definition of the relevant market has been clarified; it emphasizes economic principles and recommends the use of the SSNIP (Small but Significant Non transitory Increase in Price by a hypothetical monopolist) test in line with the US practice. The analysis of the competitive constraints faced by firms has also become much more sophisticated, considering for instance the role of bidding markets, durability, strategic barriers to entry, potential competition or buyer power. More sophisticated quantitative techniques have been implemented (for market definition and simulations of unilateral effects in mergers). The prospect for the coordination of behavior ("collective dominance") has been clarified and firmly rooted in the theory of repeated games. Interestingly however, the major shift in policy in this area came through a Court judgment (*Airtours/First Choice*) which annulled a Commission' decision, on the grounds that the Commission theory of coordination was unclear and that the evidence presented by the Commission was insufficient and used in a manner which was sometimes contradictory.

Of course, commentators may sometimes have disagreed about particular applications (as reflected in the table) but overall the trend towards a more sophisticated analysis of effective horizontal competition is impressive. In the area of merger control, this has been accompanied by new soft law, in particular the merger guidelines and a change in the wording of the substantive criteria which gives less prominence to the concept of dominance⁴³. Progress with respect to the analysis of competitive constraints under Article 82 has however been much less clear. The recent discussion Paper on the reform of Article 82 however proposes to (re-)interpret the classical definition dominance (the "power to behave to an appreciable extent independently of its competitors, its customers and ultimately of the consumers"⁴⁴) in terms of market power⁴⁵.

Second, the analysis of vertical agreements has shifted markedly at the turn of the century, from a focus on form towards a focus on effects, which explicitly recognizes the efficiency rationale of many vertical agreements. Arguably the shift could have been even more pronounced - for instance, with a recognition of the pro competitive effects of some vertical agreements. But here again, the evolution is remarkable.

Third, the application of exclusionary theories (foreclosure) is an area in which less progress has been made. With respect to Article 82, the Commission and the Courts have focused mostly on form instead of effects. The pro-competitive element of some practices as well as the efficiency benefits that may stem from them has been largely ignored. As mentioned earlier, the Commission has still recently launched a debate on the application of Article 82; the discussion Paper that it has published goes some

⁴³ The wording of the substantive criteria has changed from concentration which "create or strengthen a dominant position as a result of which effective competition is impeded" to concentration which "significantly impede effective competition, in Part.icular as the result of the creation or strengthening of a dominant position" (Art. 2, Council regulation 139/2004).

⁴⁴ From judgments on *United Brands* (case 27/76) and *Hoffmann-La Roche* (case 85/76)

⁴⁵ See Paragraph 23, DG Comp discussion Paper on the application of Art. 82 or the Treaty to exclusionary abuses, December 2005.

way toward an effects based enforcement and recent cases like *Microsoft*⁴⁶ focus on effects and considers sophisticated theories of foreclosure. With respect to merger control, the Court has annulled the Commission's analysis of foreclosure (in *Tetra Laval/Sidel* and *GE/Honeywell*). In both instances, the Court failed to be convinced by the exclusionary theories and the elements of proofs that the Commission had put forward.

Fourth, the analysis of efficiencies is also an area in which less progress has been made. There has been some suspicion early in the period that Article 81(3) may have been used in some instances in order to promote industrial policies, so that arguments regarding efficiencies may have been taken at face value⁴⁷. The Commission has recently published a notice on the application of Article 81(3) which however fails to make sufficient distinctions between horizontal and vertical agreements and does not provide a framework to consider the sources of efficiencies. With respect to merger control, the policy has evolved: early in the implementation of the merger regulation, it was not clear whether efficiencies could be taken into consideration, and even then, efficiencies were sometimes considered as an offence rather than as making a merger more acceptable. The revision of the merger regulation in 2004 has made it clear that efficiencies could be taken into account. The Commission has been considering them, even in the context of non horizontal mergers.

Overall, two conclusions emerge. First, economic insights, theories and evidence are increasingly used by the Commission, even if progress is more impressive in some areas than others. The Commission has also been pro-active in these developments, in terms of decisions, soft laws and reforms of the statute. Second, the Court has exposed at least four instances (*Airtours*, *Tetra Laval/Sidel*, *GE/Honeywell* and *Schneider/Legrand*) in which the Commission has mishandled economic theory and evidence.

⁴⁶ Case 37/792

⁴⁷ See for instance, Neven et al. (1998)

Table 5. Development of economic analysis in the legal framework and case law

1. Market power / effective competition
Market definition
<p>The notice on relevant market focuses on competitive constraints and adopts the SSNIP test. The definition of the geographic market (which emphasized the conditions of competition) market is however different from that of the products market (which emphasizes demand/supply substitution). This may lead to excessively narrow geographic markets.</p> <p>Quantitative methods are increasingly used (first in <i>Nestlé/Perrier</i> in the early 90s and then routinely)</p> <p><i>Implementation</i> : captive sale (sales within firms) tend to be excluded from the relevant market. This approach may be overly mechanistic (<i>Shell/DEA</i>)</p>
Unilateral effect in merger control
<p>The horizontal merger guidelines (2004) provide a clear framework to analyze unilateral effects. The guidelines make a direct reference to economic models (Cournot and Bertrand). This may however be misleading to the extent that it may suggest that any market can be neatly characterized in terms of one or the other model.</p> <p>Merger simulations techniques have used both by parties and the Commission (for instance in <i>Volvo/Scania</i>⁴⁸, <i>Philip Morris/ Papastratos</i>⁴⁹, <i>Lagardère/Natexis/VUP</i>⁵⁰, <i>Oracle/People Soft</i>⁵¹)</p> <p><i>Implementation</i> : the procedure may not always have allowed for a proper validation of the simulation models when they were introduced (<i>Volvo/Scania</i>) . A more balanced evaluation of the models (allowing for some cross-examination) has been organized in later proceedings (<i>Oracle/People Soft</i>).</p>
Competitive analysis
<p>The early case law relied on dominance and dominance was often assessed in terms of market shares. Over time, the analysis of effective has become much more sophisticated. In particular :</p> <ul style="list-style-type: none"> - The competition induced by tendering for contracts (bidding markets) has been introduced. It was neglected in <i>Boeing/Mc Donnell</i>, but soon after integrated in <i>Pirelli/BICC</i>⁵² and widely used thereafter. - The competitive pressure exercised by the stock of service embodied in durable goods on new products has been considered (<i>Boeing/Mc Donnell</i>⁵³ and <i>New Holland/Case</i>⁵⁴) - The pattern of substitution and the competitive relationship between products has been considered in details (<i>GE/Instrumentarium</i>⁵⁵, <i>Piaggio/Aprilia</i>⁵⁶) - Dynamic aspects of competition have been increasingly considered (for instance in <i>Hoffman La Roche/Boehringer Mannheim</i>⁵⁷) - The analysis of entry includes potential competition (<i>Air Liquide/Boc</i>, <i>Tetra Laval/Sidel</i>). Developments of entry in new markets has been anticipated taking into account potential barriers (for instance network effects in <i>Microsoft/Liberty Media/Telewest</i>⁵⁸) - Assessment of exit conditions and the failing firm defense has involved a careful examination of the competitive counterfactual (<i>News Corp/Telepiu</i>⁵⁹ and <i>Andersen/EY</i>⁶⁰) <p><i>Implementation</i> :</p> <ul style="list-style-type: none"> - The fact that firms may have “dominant” positions across several geographic markets (<i>Volvo/Scania</i>⁶¹, <i>Schneider/Legrand</i>) has been emphasized without clear justification. - The importance of the rivalry induced by bidding markets may have been exaggerated. For instance the significance of credible bidders may have been overplayed (<i>PW/Coopers</i>⁶²)? - The competitive pressure from entry (in the absence of barriers) in new markets may have been underestimated in <i>Vodafone/Mannesman</i>⁶³ - 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) may have been neglected

⁴⁸ Comp M1672⁴⁹ Comp M 3191⁵⁰ Comp M 2978⁵¹ Comp M 3216⁵² Comp M 1882⁵³ Commission decision 97/816/EC⁵⁴ Comp M 1571⁵⁵ Commission decision 2004/322/EC⁵⁶ Comp M 3570⁵⁷ Comp M 950⁵⁸ Notification withdrawn – investigation discussed in Lexecon Competition Memo, September 2000⁵⁹ Comp M 2876⁶⁰ Comp M 2816⁶¹ Comp M 1672⁶² Comp M 1016

<p>Buyer power</p> <p>The analysis of buyer power has rightly focused on the mechanism that will allow buyers to inflict damages on suppliers (<i>Enzo/Stora</i>⁶⁴)</p> <p><i>Implementation</i> : The Commission has appealed to a “Spiralling effect” in <i>Carrefour/Promodes</i>⁶⁵ such that buyer power is self-reinforcing which may not have been properly validated. (?)</p>
<p>2. Collusion</p> <p>Article 81</p> <p>The Court has imposed a very high standard of proof with respect to the inference of collusion from firms’ behavior. This may be interpreted as stemming from excessive confidence on the identification of behavior from economic models (<i>Wood Pulp</i>, Court decision⁶⁶). This standard still prevails.</p> <p>The Commission has introduced incentives for parties to act as whistleblower to undermine collusive agreements (leniency notices – see table 3). These schemes are supported by economic analysis (even if in economic models, leniency mostly reduces the incentive to collude and should not be observed in equilibrium)</p> <p>Quantitative methods have been largely neglected as tools to test for the presence of collusion effects and evaluate damages</p>
<p>Co-ordinated effects in merger control</p> <p>The early case law was not firmly grounded in the theory of coordination. Some emphasis was given to the presence of structural links among firms (<i>Kali/Salz</i>⁶⁷, <i>Gencor/Lonrho</i>⁶⁸). The CFI has clarified that structural links were not necessary.</p> <p>The Commission introduced some confusion in <i>Airtours</i>, using language suggesting that joint dominance was not clearly associated with co-ordination but rather with general oligopolistic coordination.</p> <p>The theory of collusion in repeated games was affirmed by the Court in <i>Airtours</i>.</p> <p>The approach was refined in the horizontal merger guidelines. The guidelines may however put an excessive emphasis on the characteristics of the market, relative to the effect of the merger, for assessing the likelihood of coordination. The list of factors, discussed by the guidelines, which may favor coordination may not also not be very robust.</p> <p><i>Implementation</i> : The Commission has become sophisticated in its discussion of coordination. For instance regarding the discussion of capacity coordination (<i>UPM-Kymmene/Haindl</i>⁶⁹ and <i>Norske/Skog/Parenco/Walsum</i>⁷⁰)</p> <p>The link between collusion and the degree of asymmetry in market share or capacity has however been neglected (<i>Nestlé/Perrier</i>⁷¹, <i>EMI/Time Warner</i>⁷²)</p> <p>There has been no development of empirical tools to consider the likelihood of co-ordinated effects arising post-merger</p>
<p>3. Agreements</p> <p>Horizontal</p> <p>There has been a progressive (but slow) move away from a formalistic approach toward an economic effects-based assessment of Article 81 (1) (<i>Wouters</i>⁷³, preliminary ruling by the CFI) and a recognition of the pro-competitive effects of agreements involving small firms</p> <p>The modernization regulation has introduced a direct effect for Article 81.</p>
<p>Vertical</p> <p>The Commission has introduced a new block exemptions regulation (1999) and guidelines (2000), which emphasize effects rather than form. The guidelines emphasize market power as a necessary condition for anti-competitive effects but rely on arbitrary thresholds to clear some agreements or introduce strong presumptions of illegality. The guidelines may not recognize sufficiently the free-rider rationale for territorial protection and imposes a harsh treatment on restrictions to intra brand competition when inter brand competition is weak. If the guidelines recognize efficiency benefits stemming from vertical agreement, they fail to acknowledge that such agreements may also be pro-competitive. The residual reliance on form implies that different vertical restraints with similar effects are treated differently.</p>

⁶³ Comp M 1795

⁶⁴ Comp M 1225

⁶⁵ Comp M 1684

⁶⁶ 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

⁶⁷ Case Comp M 308 and Court cases C-68/94 & C-30/95

⁶⁸ Case Comp M 619 and judgment T 102/96

⁶⁹ Comp M 2498

⁷⁰ Comp M 2499

⁷¹ Comp M 190

⁷² Comp M 1852

⁷³ C-309/99.

Two sided markets
Insights from theory have not had much influence (<i>Visa I and II</i>)
4. Efficiencies
Article 81(3)
The Commission has introduced a new block exemption for R&D agreements and a notice on the application of 81(3). The latter may not make sufficient distinctions between vertical and horizontal agreements and does not provide guidance on some issues (hold up/free rider problems). <i>Implementation</i> : too much credence may have been given to efficiency justifications (possibly in the early case law – see e.g. <i>Ford/VW</i> ⁷⁴ , <i>Night Services</i> ⁷⁵)
Merger regulation
Initially it was unclear whether there is an efficiency defense and there are even some cases of efficiency offences in the early case law (see e.g. <i>ATT/NCR</i> ⁷⁶) but also later (<i>Guinness/Grand Med</i> ⁷⁷) The revision of the merger regulation (2004 – see table 3) has however clarified that efficiencies can be taken into account. <i>Implementation</i> : In imposing partial divestitures, the Commission may have failed to recognize their consequences for the realization of efficiencies. Efficiencies in non horizontal mergers (pricing and contractual efficiencies) have sometimes been ignored – e.g. <i>Aol/Time Warner</i> ⁷⁸ especially in the earlier case law. They have been extensively considered in some recent cases like <i>PG/Gillette</i> ⁷⁹
5. Exclusion
Art 82
With respect to tying, the early case law relied on form. In <i>Microsoft</i> , the Commission has developed more sophisticated dynamic theories (which emphasize network effects for instance). More generally, until the discussion Paper on the reform of Art 82 (2005 – see table 3), there is an emphasis on form rather than effects and a failure to recognize genuine efficiency and competition benefits from practices that can have exclusionary effects. For instance, both the Commission and the Court have failed to recognize that discriminatory pricing and rebates in oligopoly may not be anti-competitive. (<i>Michelin II</i> ⁸⁰ , <i>BA/Virgin</i> ⁸¹) With respect to predation, the literature on financial predation has been largely neglected
Merger regulation
Dynamic models of tying have been developed (<i>Aol/Time Warner</i> ⁸²) <i>Implementation</i> : According to CFI judgments, models of anticompetitive foreclosure through tying have been used out of context and without proper evidence ⁸³ (<i>Tetra Laval/Sidel</i> , <i>GE/Honeywell</i>)

This second observation reveals that anti-competitive theories and evidence had not been properly evaluated at the time of the decisions, which suggests that procedures to ensure this evaluation may not have been adequate at the time. This was indeed the reaction of many observers at the time of these decisions⁸⁴. This observation should also be considered in a wider perspective. In the early eighties, there was some concern that decisions, in particular merger control decisions, could be affected by outside pressures from the companies involved and the member states (possibly acting as agents for the

⁷⁴ Case IV/33.814

⁷⁵ Case IV/34.600

⁷⁶ Case IV/ M0050

⁷⁷ Case COM M938

⁷⁸ Case M 1845

⁷⁹ Case M 3732

⁸⁰ Case T-203/01

⁸¹ Commission Decision 2000/74/EC and Court judgment T 219/99

⁸² Case COMP M1845

⁸³ See also Alborhn, Evans and Padilla (2003), Grant and Neven (2005), Neven (2006)

⁸⁴ See for instance Ahlborn (2002).

companies). This is documented for instance in Neven et al (1994) (see also Lexecon Competition Memo – April 1995). Procedures at the time were thus not immune to capture by corporate interests.

To avoid any bias arising from the consideration of just a few cases, it may be useful to consider a wider sample such as the record of the Court’s rulings on Commissions’ decisions that have been appealed. Montag (1996) considered the 29 decisions imposing fines in excess of 3 million ECU since Regulation 17 came into force until 1996. He found that 24 decisions had been appealed, of which 18 had been judged at the time of his study. Out of those, 4 four were upheld, 12 were annulled or fines were reduced (sometimes annulled) for all companies. In two cases, fines were reduced for some companies only. He interpreted this finding as providing “remarkable evidence of the Commission’s poor record in reaching decisions imposing fines”. Neven et al. (1998) observe that the reduction in fines is very often associated with the imposition of a higher standard of proof (such that the CFI finds that the Commission’s evidence is insufficient to justify the fines that it has imposed). Wils (2004) suggests that the high frequency of annulment in this period is also associated with the imposition of stricter procedural requirements (like rights of access to files).

In order to complement the evidence of Montag (1996), we considered all cases that have been appealed to the CFI since 1994 and computed the proportion of cases in which the Commission prevailed. In a number of cases, in particular regarding Art 81, the evaluation of whether the Commission prevailed involves a fair amount of judgment and the results should be considered as indicative⁸⁵. Results are presented in table 6.

Table 6. The Commission’s record at the CFI

	Success rate
Article 81.	0.75
Article 82.	0.98
Merger regulation	0.58

Source: Court case law and own calculations

The Commission’s record with respect to Article 82 is striking in absolute terms but also relative to the other provisions. The difference can possibly be related to the nature of the evidence brought forward in these procedures: as discussed above, Article 82 has remained focused on form, whereas the merger regulation and increasingly Article 81 (at least with respect to vertical agreements) are focusing on effects, which involves the development of economic theories and evidence. Such differences in success rates are consistent with the view that the scope for disagreement is greater when economic theory and evidence are important. This is probably the most important insight from table 6, as there is otherwise no clear benchmark to evaluate the absolute level of the success rate with respect to the merger regulation and Article 81; given the deference that the Court gives to the Commission’s analysis (as discussed below), one would expect the Commission to prevail in most “marginal cases”⁸⁶. Hence, the success rate of the Commission in (infra-marginal) cases in which the parties believe that the

⁸⁵ The same applies to some extent with respect to the ECMR. For instance, GE/Honeywell was classified as a case where the Commission did not prevail, despite the fact that the prohibition was affirmed, because most of Commission’s analysis was annulled.

⁸⁶ Of course, the proportion of such marginal case may not be all that high as the parties will anticipate this and may prefer not to appeal.

Commission's analysis was biased possibly as a result of a systemic problem is likely to be lower than those observed in table 6. Seen in this light, a success rate around 60 % may not impress, but this remains highly judgmental.

The next section thus attempts to provide a framework to think about the relevant characteristics of procedure from a law and economic perspective in order to investigate the potential weakness of EU procedures.

4. THE PROCEDURE – A PERSPECTIVE FROM LAW AND ECONOMICS

Five important features of the legal framework towards competition enforcement can be highlighted, namely the scope of the decision (what has to be proven?), the system of proof taking (how is the proof gathered?), the standard of proof (what should be degree of confidence in the proof?), the type of evidence which is deemed sufficient to meet the standard of proof (what elements of proofs should be considered as sufficiently telling to conclude that the required degree of confidence is reached?) and the standard of review (how is the proof assessed in case of appeal?)⁸⁷.

(i) What has to be proven?

First, the legal framework will typically specify the scope of the decision that has to be made, in other words what needs to be proven. 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 potentially 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 "prior" 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.

(ii) How is the evidence gathered?

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. In the inquisitorial system, the entity (whether a person or an institution) which takes the decision is also responsible for 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.

⁸⁷ 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 not been extensively discussed.

The dichotomy between adversarial and inquisitorial systems may be excessively sharp. As suggested by Parisi (2001), one can think of procedures in a continuum from adversarial to inquisitorial in terms of the (decreasing) degree of control that the parties have over the procedure. This insight will be useful to characterize EU procedures.

More generally, one can wonder about the relevance of the distinction between inquisitorial and adversarial systems with respect to antitrust proceedings. The framework in which these polar models are discussed involves two parties that have opposing interest (a plaintiff and defendant) and sufficient incentives to defend these interests. In the field of antitrust, the party that would play the role of plaintiff may not be easy to identify; they may also be numerous (as in the case of final consumers) and they may face serious free-rider problems in engaging in collective action. Accordingly, a truly inquisitorial system in which the antitrust agency plays the role of an impartial but active judge seeking evidence is hardly feasible. It is thus probably inevitable that the antitrust agency as decision maker will make up for the relative absence of well organized plaintiffs and act to some extent as a prosecutor. We will refer to this as the inquisitorial model with prosecutorial bias. By contrast, the opposite polar model of adversarial proceedings, in which the antitrust agency acts as a plaintiff in front of a passive judge, is entirely feasible. This is the model adopted in the US in the context of proceedings handled by the Department of Justice, which needs to act as plaintiff in front of a federal court (which takes the enforcement decisions)⁸⁸.

(iii) What degree of confidence in the proof?

Third, the legal system will specify the standard of proof. This can be thought 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” (or “preponderance of the evidence”) is often used in civil proceedings. The requirement that a finding should be right “beyond reasonable doubt” is associated with a much greater degree of confidence and 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 determines 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 is 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 probability⁸⁹.

The alternative systems of evidence-gathering (an economic construct) are closely associated with the allocation of the burden of proof (a legal concept); in a formal sense, a burden of proof only takes effects with respect to outside review and the entity taking the decision bears the burden of proof for its findings in case of appeal. In other words, the “judge” is responsible for its findings in both systems (despite the fact that the evidence on which he will base its decision is gathered in different ways) and

⁸⁸ Procedures handled by the Federal Trade Commission are also adversarial but also involve a combination of prosecutorial and decision making roles for the FTC Commission (this is further discussed below).

⁸⁹ Instead of specifying the scope of decisions as well a degree of confidence, the evaluation of any particular practice could be undertaken in terms of its expected value; for instance, the expected value of a merger could be seen as the probability that is uncompetitive multiplied by welfare that would obtain if it is, plus the probability that it not multiplied by the welfare that is obtained if it is not. This alternative framework (discussed in Heyer (2005)) has the advantage of considering the value of outcomes and not only the probability that that is attached to them.

the institution in charge of appeal will consider whether the judge has met the standard of proof. More generally, the investigation of a case may be structured in terms of sequential findings (so that for instance, the investigation first considers the presence or absence of effective competition before considering the effect of particular practices). In the case of an adversarial system, each party bears the burden of proving the findings that it advances. The judge will then decide whether the parties have met the standard of proof with respect to the findings that they advance. Such “burden of proof” is however loose in the sense it is never formally evaluated. It is the evaluation, by the judge, of whether the parties have met the standard of proof that will be considered in the case of appeal. In a purely inquisitorial system, the parties involved merely respond to the request and bear no burden of proof. But as mentioned above, a purely inquisitorial system is a bit of an abstraction and parties often have some control over the procedure. To the extent that this involves making particular claims, parties will naturally bear the burden of proving their assertions.

(iv) What evidence will ensure the required degree of confidence?

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 US⁹⁰, 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 insufficient if another set of facts is observed. If those other facts are observed, a full rule of reason will apply.

A richer set of contingent decisions could also be considered in the form of structured rules of reasons and have sometimes been advocated (for instance, Evans and Padilla, 2004, or Neven (2005)). For instance, the conglomerate effects could be considered as neutral unless effective competition is substantially reduced in one market. If effective competition is absent, a full rule of reasons may be dependent on other factors like the extent to which additional markets can be foreclosed.

Of course, the amount and quality of evidence that needs to be adduced in order to make a finding will depend on priors that are informed by economic principles and accumulated evidence. As Lord Hoffman famously said in *Rehnam*, “more convincing evidence is required to conclude that it was more likely than not that the sighting of an animal in a Park was a lion than that it would satisfy the same standard of probability that the animal was a dog”. For instance, evidence to make a finding that unilateral effects are pro-competitive will have to be more convincing than the evidence necessary to make a finding that the conglomerate effects are pro-competitive.

⁹⁰ *California Dentists Association*, S. Ct. 1999

(v) How is the proof evaluated on appeal?

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.

In the next section, we will characterise the EU legal framework along the five dimensions just identified and discuss (in the light of the literature) whether particular features of this framework might help understand why the Court has found that economic theories and evidence were inadequate in Commission's decision. Some potential effects are easy to identify in principle given the role of economic analysis; for instance a failure in the system of proof taking or a strengthening of the standard of proof or standard of review may lead to such outcomes. Particular features of economic analysis are also worth mentioning in this respect⁹¹; unlike the mere analysis of facts, economic analysis of effects involves the construction of a theory of the case and a validation of this theory. Many alternative theories can be constructed and may involve sophisticated and involved reasoning, so that their internal consistency can be hard to verify without a formal model. Besides their internal consistency, the validation of these theories involves the evaluation of their robustness to slight changes in assumption and most importantly an evaluation of whether they fit with the facts of the case and an evaluation of the magnitude of the effect that they predict. Both the construction and evaluation of the theory and the evidence may involve sophisticated techniques (mostly borrowed from the fields of applied game theory and econometrics). These methods impose a strong disciplines on the professional economists using them but the scope for presenting misleading analysis, whether by neglect or design, should not be underestimated. That is also to say that whatever economic analysis is presented in a case should be closely checked and evaluated.

This section will also try to identify, more generally, some of the strengths and weaknesses of the EU framework.

5. AN ECONOMIC PERSPECTIVE ON THE EU LEGAL FRAMEWORK

In this section, 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 7. Our discussion focuses on the most important elements.

Table 7. Some key characteristics of EU procedures

	Article 81	Article 82	Merger control

⁹¹ See Röller (2005)

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 system with prosecutorial bias and a degree of political control Odd allocation of the burden of proof with respect to 81(3)	Inquisitorial system with prosecutorial bias and a degree of political control	Inquisitorial system with prosecutorial bias and a degree of political control Greater degree of control for the merging parties
Standard of proof	No less than for mergers	No less than for mergers	More than balance of probabilities
Set of sufficient facts (per se)	Horizontal price fixing, market sharing cartel	Dominant position with market share > 50% 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 cases⁹².

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 suggesting that the economic developments should be “plausible”⁹³. One can wonder whether the standard established in this merger case can be applied in Article 81 or Article 82 cases. Given the latter are ex post and the former ex ante, it would seem that the standard of proof cannot be any lower⁹⁴.

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 respect⁹⁵. Importantly, the Commission

⁹² See also Bailey (2003) for a discussion of the standard of proof with respect to mergers.

⁹³ 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 Art 2(3) of the Regulation are satisfied.”

⁹⁴ According to Legal (2005), § 39 of the judgment is also drafted in such a way that the Court’s statement on the burden of proof applies to all competition cases.

⁹⁵ 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

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 considered by the court as having been mishandled; the Commission seems to have misjudged both the standard of proof that it had to 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.

5.2. Scope of decisions and proof taking

5.2.1. Article 81

Since the reform of the implementation measures⁹⁶, the Commission takes only negative decisions with respect to Article 81 §1. If the Commission does not observe that an agreement falls under the conditions laid out in § 1, it will not take a decision⁹⁷ and the agreement will be lawful⁹⁸.

With respect to Art. 81§ 3, the matter is different. Its provisions are formulated as an exception of the prohibition expressed by Art. 81 §1, so that there is no “presumption” that agreements entail efficiency benefits. The Commission also takes 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)⁹⁹.

The system of proof taking with respect to Article 81 involves the following elements. The case team (supervised by its hierarchy within DG Competition) has a large degree of control over the investigation of the case. From that perspective, it would correspond to what has been described above as an inquisitorial system with a (inevitable) prosecutorial bias. However, there are at least two important qualifications. First, the system is also not purely inquisitorial to the extent that firms involved can exert some control over the procedure: for instance, they can request meetings with the case team and submit documents making particular claims. Second, the ultimate decision is not taken by the case team (supervised by its hierarchy). The ultimate decision is taken by the college of Commissioners, upon recommendation from the Commissioner in charge of competition. This body has no particular competence in competition matters; one would expect the Commissioners to refrain from interfering with the decisions proposed by their colleagues in specialized areas (as they would anticipate that they may be the subject of interference with respect to their own portfolios). This equilibrium of mutual deterrence ensures that Commissioners maintain control over their areas of competence. Interference is

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

⁹⁶ Regulation 1/2003, which as discussed above replaced Regulation 17/1961.

⁹⁷ In addition, the decision not to open a case with respect to anti-competitive practices cannot be effectively challenged in Court (*Auto Mec*, T-2490, ECR 92, p II-22501992, *Bemin* T-11492 ECR 95, p II-150). In other words, the Commission cannot be forced to show that a practice is not anti-competitive.

⁹⁸ 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.

⁹⁹ Interestingly however, only the Commission (and Courts) can take both positive and negative decisions. Relevant authorities in member states can only take negative decisions (see Art. 5 or regulation 1/2003).

however a matter of degree (so that mild pressure could be exercised) and the equilibrium may also break down when particularly important issues are at stake. As discussed above, recommendations from the Commissioner in charge of competition have sometimes not been followed by the College. These instances may be rare and the threat of being overturned may not be sufficiently strong to affect the behavior of the inquisitors significantly (at least in the field of antitrust, state aids being possibly different). Still, from that perspective, the system of proof taking is not formally inquisitorial; it is best characterized as inquisitorial with a degree of political control.

The system of proof taking with respect to Article 81 §3 deserves particular attention. The new implementation regulation (which crystallizes past practice in this respect¹⁰⁰) makes it clear that parties bear the burden of proof with respect to Article 81 §3¹⁰¹. This is a bit surprising; it suggests that the Commission gives up the control of the procedure when it comes to the evaluation of Article 81§3 and acts as a “passive” judge which merely examines whether the efficiency claims made by the parties deserve an exemption. The Commission thus 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, in the sense 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 Article 81(1)). This conclusion resonates with the observation made above that unconvincing efficiency claims have been accepted under Article 81(3). The imbalance of this procedure in terms of proof taking may thus be one reason behind this apparent overextension.

5.2.2. Merger control

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 to find that it is not compatible and prohibit it. By comparison with the legal framework of Article 81, there is less of a presumption that mergers will be than 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 consistency¹⁰². 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

¹⁰⁰ See Wils, 2004

¹⁰¹ Art. 2 of regulation 1/2003 reads as follows :

“In any national or community proceedings for application of Art 81 or Art 82 of the Treaty, the burden of proving an infringement of Art 81(1) or of Art 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 Art 81(3) of the Treaty shall bear the burden of proving that the conditions of that paragraph are fulfilled”.

¹⁰² See Vesterforf (2004).

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 Commission can simply not take one of the decisions that it is supposed to take towards those cases while meeting the required standard of proof¹⁰³.

The system of proof taking with respect to the merger regulation appears to be inquisitorial with a prosecutorial bias and a degree of political control (as in the case of Articles 81/ and 82). However, parties may exert a greater degree of control over the procedure than in the context of Articles 81 and 82. They can submit documents but can also request “state of play” meetings with the case team as well as “triangular” meetings (with the case team and third parties)¹⁰⁴. 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, Röller, Stennek and Verboven, 2006), there is no explicit shift in the burden of proof in the merger regulation¹⁰⁵.

This feature is important and may be a factor which helps explaining why the efficiency defense has not been overextended in the same way in merger control as in Article 81(3). As discussed above, there is no perception that unconvincing efficiency claims have been accepted under the merger regulation (on 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 merger regulation, so that the procedure remains consistent and 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.

Given the unusual features of the system of evidence gathering in the EU and its importance for the processing of economic evidence, the following section will discuss it more fully in light the existing literature.

6. THE SYSTEM OF EVIDENCE GATHERING

As discussed above the EU procedure can be seen as inquisitorial, with a prosecutorial bias and some degree of political control. The relative merits of the adversarial and inquisitorial systems have long been considered in the law and economics literature and we will discuss the main insights from this literature. The significance of a prosecutorial bias has also been discussed. We take both issues in turn and start with the latter.

6.1. Prosecutorial bias

¹⁰³ 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).

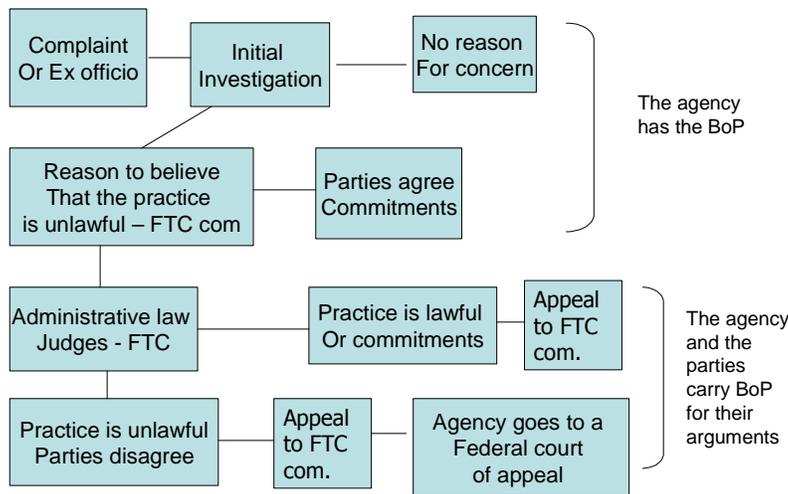
¹⁰⁴ See DG Competition best practices on the conduct of merger control proceedings, available at <http://ec.europa.eu/comm/competition/mergers/legislation/bp1.htm>

¹⁰⁵ 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.

The fact that the Commission is a decision maker which takes responsibility for uncovering the evidence that would normally be brought forward by plaintiffs may introduce some biases, which are discussed in Wils (2004). He observes that officials may be the victim of “hindsight” bias, namely the “tendency for people with the benefit of hindsight to falsely believe that they could have predicted the outcome of an event”. For instance, if it is found in the course of a phase II investigation that there is no competition concern, officials will tend to believe that they should have known this at the time when they wrote the statement of objection which led to a phase II. This hindsight will lead to a problem of cognitive dissonance, which might call into question the confidence that officials have in their judgment, and they will naturally try to avoid this dissonance. The consequence would be that officials would tend to concentrate on evidence that confirms their own judgment¹⁰⁶. The symptom is a “self confirming bias” which some commentators claim to observe in fact (see Kühn, 2002). Burnside (2001) for instance observes: “The frequent opinion of industry is that a view, once entrenched in the Commission’s thinking, cannot be dislodged: “I have made up my mind. Do not try to confuse me with the facts””.

Some empirical evidence on the significance of such a bias can be obtained from the FTC procedures in the US. The FTC procedure is complex but its essential features are presented in Figure 2. The FTC Commission actually plays a mixed role to the extent that it acts both as a prosecutor and a judge on appeal: the FTC Commission acts as a prosecutor in the initial phase and brings the case to an administrative law court. However, if the administrative law court finds against the parties (or impose commitments that the parties do not accept), the parties can appeal its decision to the FTC Commission, which therefore acts as judge on appeal.

Figure 2. FTC procedure



¹⁰⁶ According to Wils (2004), the significance of this hindsight bias is well documented in the psychology literature.

This particular feature of the FTC procedure has been exploited by Coate and Kleit (1998). They test whether the result of the appeal is affected, other things being equal, by the composition of the FTC Commission and in particular the proportion of members which rule on appeal while having also taken the decision to initiate proceedings. They find that the effect is both statistically and economically significant; an overlap of three Commissioners (out of seven) easily doubles the probability that the Commission will confirm the decision of the administrative law court (relative to the probability when there is no overlap).

By contrast, there is some experimental evidence suggesting that pre-mature judgment (which gets reinforced) is less likely to occur in adversarial systems (see Parisi, (2002) and references therein).

Overall, it would thus appear that the self confirming biases that may be induced by the prosecutorial role that the Commission assumes cannot be dismissed as insignificant.

6.2. Adversarial versus inquisitorial

The analysis of adversarial versus inquisitorial procedures has a long tradition in the law and economics literature. In the context of an early debate, Posner (1988) argued that competition between parties in the adversarial system would ensure that every relevant piece of information would be produced. The adversarial model was also defended as it allows for a dialectics of assertion and refutation which may be instrumental in revealing the true state of world. Tullock (1988), by contrast, emphasized the fact that parties would attempt to mislead the decision maker.

Various formal models have explored the merits of these arguments. One strand of the literature assumes that the underlying facts of the case strike a balance between the interests of the parties involved. In other words, the evidence is never inconclusive.

(i) Milgrom and Roberts (1986) examine the intuition of Posner according to which competition between interested parties will ensure that “true” facts will be uncovered. They do not consider the cost of gathering information but allow agents to have different information. Information is verifiable but may be concealed. The decision maker is naïve but knows whether the agents are well informed. They show that if there is always an interested party who is well informed, has an opportunity to report and prefers the full information decision, the full information outcome is the only equilibrium. This result suggests that a naïve decision maker faced with evidence that is strategically reported will enforce the full information decision as long as the interests of the parties are sufficiently opposed¹⁰⁷.

(ii) Froeb and Kobayashi (1996) extend this line of work by assuming that the decision maker may be biased and evidence is costly to produce. In their model, the parties produce evidence by making random draws from the same distribution and only report favorable evidence (so that the parties know the true state and have the same technology in producing evidence). This distribution is however biased in favor of one party (the true facts are thus conclusive and favor one party). They show that the

¹⁰⁷ They also show that agent’s limited ability to communicate the information that they have may not matter if the decision maker is sophisticated; here again, as long as there is an agent that prefers the full information outcome over any alternative, the decision maker can enforce the full information outcome.

decision maker will again take the full information decision. This arises because the party favored by the underlying distribution will produce more evidence (because it is less costly to do so). In addition, parties take advantage of the bias of the jury to produce less (costly) evidence in the direction of the bias. These results, while sensitive to a number of assumptions including the modeling of the decision maker's bias and the functional form of the underlying distribution, still suggest that the importance of the decision maker's lack of sophistication in the adversarial system should not be exaggerated.

(iii) Froeb and Kobayashi (2001) compare the outcome of the inquisitorial and adversarial system in a similar model. Again, they assume that parties have the same technology in producing evidence and focus on the incentive to reveal information. In the adversarial system, evidence on either side is provided by making random draws from the same distribution, each litigant reports only the most favorable information, and uses an optimal stopping rule to determine the number of draws. The judge simply splits the outcome, whereas an arbitrator uses the average of his observations. The authors focus on the variance of the estimator for a given number of draws across all parties (i.e. a given total cost). They find that that adversarial system may lead to a lower variance if the underlying distribution itself exhibits a large variance (for instance with a uniform distribution). This suggests that the average of strategic (extreme) reporting is not necessarily more variable than the average of truthful reports. In other words, the adversarial system is not necessarily worse even when it is assumed that the inquisitor has the same technology as the parties to uncover evidence.

(iv) The assumption that the decision maker knows about the information that is available to the parties is considered by Shin (1998). He shows that competition between agents with sufficiently opposed interests will no longer suffice to ensure the full information outcome. The decision maker is then faced with a pooling between agents that are genuinely ignorant and agents that conceal information. He assumes that there is a signal that is observed with different probabilities by the two parties and observed with some probability by an inquisitor. One can then compare the outcome reached by the inquisitor with that of an arbitrator who knows the probabilities that the agent will have received the signal. He shows that the adversarial procedure still fares well in this set-up because the arbitrator can adjust the standard of proof across agents as a function of the probability that they have received the signal. In essence, the judge reasons that if one party who is thought to be better informed does not come up with evidence, he "must" be wrong.

Hence, it appears that two pieces of biased information processed by a naïve judge may be at least as good as one (possibly two) piece(s) of unbiased information processed by an inquisitor, when the judge knows what the agents know and the interest of agents are opposed, when the agents have the same technology of producing evidence, and when differences in the quality of information that the agents have access to can be observed.

(v) Dewatripont and Tirole (1999)¹⁰⁸ consider an alternative set-up, in which there are three possible states of the world (and associated decisions); one party wins, the other party wins, and the status quo. This structure differs from that adopted in the models reviewed so far in which one party always wins. If there is information in favor of both parties, the status quo should prevail (from a social point of

¹⁰⁸ 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.

view). Agents invest in getting information and may obtain it with some probability. If there is no information in its favor, the agent will not get any. If there is favorable information the agent will get it with some probability. Hence, in this set up, there are some situations of genuine inconclusiveness as there may be no fact in favor of either party.

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 in case of the status quo (it is equal to the payoff that he gets if he does not search). 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.

In order to consider the manipulation of evidence, the authors assume that a party can either get a positive signal or conflicting evidence. He 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 the 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 of inertia. However, when the opposite party has no evidence, it will lead 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.

(vi) Some experimental evidence on the relative performance of inquisitorial and adversarial systems is available. Block et al. (2000) consider an experimental design in which one party is right and the other is wrong (so that evidence, if it is available, is conclusive)¹⁰⁹. They consider two scenarios; one in which Mr Wrong has private information to the effect that he is wrong and one in which, in addition, Mr Right also has a hint that he is right. In the adversarial set up, the parties are free to debate whereas in the inquisitorial set up, the inquisitor controls the debate.

The results are striking: when Mr Wrong has private information, the inquisitorial system performs better. The private information is revealed in 28 % of cases and only in 7% with an adversarial system.

¹⁰⁹ See also Block and Parker (2004).

By contrast, when the information is correlated, the reverse obtains but the difference is more dramatic. The information is revealed in 71 % of cases with the adversarial system and in 14 % of cases with the inquisitorial system.

Block and Parker (2004) further exploit this experiment by characterizing the settlement imposed by the judge when the information was not revealed. They find that, relative to an adversarial regime, the inquisitorial regime will produce more extreme settlements, in favor of one party of the other. This finding is consistent with the predictions of Dewatripont-Tirole.

To sum up, the literature seems to provide the following insights:

- There is some validation of Posner's intuition that competition between interested parties leads to the revelation of information particularly in circumstances which may resemble those of antitrust proceedings (in which it is likely that the decision maker has reliable prior on the information available to the parties).
- The inquisitorial regime can be expected to produce more extreme decisions than the adversarial regime. This result may however be highly dependent on the assumption that is made with respect to the objective of the inquisitor. The inquisitor's aversion to the status quo which is built into the model of Dewatripont-Tirole is not, however, obviously ill-founded, and seems to accord with intuition in light of inquisitors' career objectives.
- Experimental evidence provides some validation of this assumption and confirms that the adversarial regime fares better when information is not totally skewed. This would seem to fit with the circumstances of antitrust proceedings in which plaintiffs (or their proxies) can be expected to have some information regarding the merits of the case.
- Existing theoretical models do not consider explicitly what is potentially one of the main advantages of the adversarial regime, namely the dialectics of assertion and refutation in the evaluation of evidence produced by the parties.

6.3. EU procedures and reform

The prosecutorial bias and the intrinsic features of an inquisitorial procedure would appear to reinforce each other; in particular 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 will be reinforced in the presence of a hindsight bias. 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 tendency to focus on one side of the evidence would also appear to be consistent with the way in which the Commission has been found by the Court to mishandle economic theories and evidence. 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.

This interpretation is congruent with some of the criticism that has been formulated towards 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, namely that the Commission takes a view on cases early on and subsequently focuses on findings which supports that view.

It is tempting to associate extreme decisions with high fines and clearance and the status quo with moderate fines (with respect to collusion under Art 81). From this perspective, it is interesting to note (as discussed above) 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 absence of a proper validation of economic evidence in some procedures can also be observed; 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 themselves¹¹⁰ as the procedure does not allow for a second round of discussion. One cannot help thinking that an adversarial regime, which allows for cross-examination and direct confrontation, would have been more effective in validating the evidence in this instance and more generally in other procedures¹¹¹. 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.¹¹² Even if the presentation of evidence is not distorted, investigating its robustness is more effectively undertaken by several parties with different perspectives.

Of course, the EU procedure would also appear particularly weak in validating economic evidence in light of the current imbalance in resources observed above. Inquisitorial procedures may not be best suited to distill and improve economic evidence, but such a procedure without adequate resources for the inquisitor would seem particular prone to abuse.

Following the Court decisions mentioned above, the EU has implemented a couple of significant reforms: the office of the Chief Competition Economist has been created (with a staff of about 10 professional economists). A review of the analysis of the case team at a late stage of the procedure by a set of different Commission officials has been introduced. This institution, commonly referred to as the “fresh pair of eyes” is arguably well targeted at the main weakness of an inquisitorial procedure with a procedural bias, namely its tendency to suppress information or to fail to look for it. Whether it intervenes at a 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 unclear¹¹³.

¹¹⁰ 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)).

¹¹¹ In recent cases, the Commission has however introduced some element of cross-examination within the existing procedure (by allowing the economic advisors to the parties to access data and evaluate the analysis performed by the Commission (or plaintiffs) on its premises.

¹¹² In the words of Posner (1999), referring to economic expert witnesses “the expert witness can mislead judges and juries more readily than lay witnesses can because they are more difficult to pick aPart. in cross-examination, they can hide behind an impenetrable wall of esoteric knowledge”.

¹¹³ 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).

7. REMEDIES ?

From our discussion of procedures, the following conclusions emerge:

The allocation of the burden of proof with respect to Article 81§3 is a bit odd and possible overextensions 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, and with respect to Article 82 (as proposed by the discussion Paper on Article 82) may be misplaced.

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 the inquisitorial regime with a prosecutorial bias implemented by the EU.

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.

The nature of economic evidence, which needs to be validated, may be such that it is best handled by in the process of assertion and refutation which is typical of an adversarial system of proof taking.

As the US experience suggests, validation of economic evidence is 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. This is enforced in a code of conduct (the Reference Manual on scientific evidence used by Federal Courts) which incorporates the standards set by the Supreme Court in the *Daubert* decision¹¹⁴. The EU could adopt a similar standard. Whatever the system of evidence gathering, a set of rules on handling of economic evidence would prove useful.

The imbalance in resources between the Commission and the parties is an impediment to a proper validation of economic evidence.

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 mismanagement of economic evidence.

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.

As discussed above, it is hard to tell whether the reforms implemented by the Commission will prove effective in redressing the biases induced by the inquisitorial procedure. In view of the intrinsic advantages of an adversarial procedure discussed above, it is still worth considering what the implementation of such a 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 (and administrative) systems and seems therefore feasible. This institutional arrangement would effectively involve the establishment of an administrative tribunal within the Commission (like that of the FTC).

¹¹⁴ See Posner (1999), Werden (2005) and Breyer (2004)

Alternatively, the decisions could be taken by the CFI, with the “Commission” acting a plaintiff. This would involve a broadening of the tasks entrusted to the Court by the Council which according to Wils (2004) is feasible within the current EC treaty¹¹⁵.

Whether decision making is entrusted to an administrative law judge or the CFI, it will also be necessary to provide them with support in particular regarding economic analysis. As emphasized by Posner (1999), the ability to appoint experts is essential for the functioning of US Courts. This option would seem to be open at least in the case of the CFI¹¹⁶.

Those changes would imply in any event that the College of Commissioners would no longer take the final decision. This may be attractive in itself. As mentioned above, the scope for capture by corporate interests and member states at the level of the College of Commissioners has been a concern in the past. Clearly, Commissioner Monti has established very high standards of independence towards corporate interests¹¹⁷ and member states and the focus has sifted away from that sort of capture. However, since there is no clear benefit from granting decision making power to the college of Commissioners and no guarantee that this form of capture may not surface again¹¹⁸ in the future, a delegation of decision making would seem attractive.

8. CONCLUSION

According to Richard Posner (1999), “there is a remarkable isomorphism between legal doctrine and economic theory. The isomorphism becomes an identity when, as in antitrust, (but not only there), the law adopts an explicitly economic criterion of legality”. The isomorphism and possible identity is constructed as economics influences the interpretation of the law. The evidence reviewed in this paper confirms that important progress has been made in this respect in Europe in the last twenty years. Furthermore, the wording of the law itself has occasionally been changed to allow for more economics-friendly implementation. Some conditions are also in place to deepen the process. A number of national antitrust agencies are headed by economists and have accumulated economic expertise (including sometimes the creation of an office of chief economist). The proportion of antitrust lawyers with a sound understanding of economics and the proportion of competition economists with a good understanding of the law has increased. The CFI in recent judgments has not shied away from the review of economic analysis.

What are the most significant impediments to further progress? First, the imbalance in economic resources between parties and the Commission is gross. The Commission needs to mobilize further resources, in particular by reinforcing the team of the Chief Competition Economist. What is required is a step and not a marginal increase. Second, as argued in the paper, the procedures used by the Commission, in particular its system of proof taking, may not allow for the most effective development of economic theory and evidence in actual cases.

¹¹⁵ There is however no consensus among lawyers on this issue. See Wils (2004) for a discussion.

¹¹⁶ See Botteman (2006)

¹¹⁷ The biography of J. Welch provides an amusing illustration of this (Welch and Byrne, 2001)

¹¹⁸ See for instance Vives (2005) who highlights renewed risks of capture by member states.

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