ABSTRACT
There is an increasing use of complex econometric modelling in EC merger control proceedings. The question is whether econometrics are subject to a standard of evidence similar to that applicable to facts and theories that the Commission traditionally uses and articulates in its merger decisions or whether there should be some margin of discretion left to the Commission in the treatment and handling of econometric evidence. In the former case, EC courts would exert an intensive review of the Commission’s use and articulation of econometric evidence. In the latter case, EC courts would adopt a rather deferential approach. While the issue has not yet been dealt with before EC courts, this article submits that the Commission should use econometrics with caution and, hence, should meet a relatively high evidentiary threshold before admitting the results of econometric models into evidence. Several guiding principles of evidence are suggested, which are not intended to negate the Commission’s margin of discretion, but would, nevertheless, ensure that econometrics be subject to a fairly high standard of proof.

I. INTRODUCTION
It is now standard practice for economic experts from the European Commission (DGCOMP), the notifying parties and third parties to participate actively in shaping the way mergers should be assessed. As recent horizontal noncoordinated effects merger cases illustrate,\(^1\) economics has taken an increasingly greater role in the assessment of mergers under the EC merger control system.\(^2\) Economists sponsor seminars, workshops and conferences to raise awareness among antitrust lawyers and the business community...
about the various economic tools available, including regression analyses and bid and merger simulation models.\(^3\) Those instruments have not yet been fully tested in actual cases and their use is sometimes subject to cautions and controversy.\(^4\) It is nevertheless appropriate to identify what role economic models can play in the discharge by DGCOMP of its burden to prove that a merger will significantly impede competition in a substantial part of the Common Market.\(^5\)

In an attempt to contribute to and complement the debate on this issue, this article starts with an overview of the various methodological and evidentiary steps that DGCOMP has to go through in carrying out merger reviews generally. The collection of relevant evidence is at the core of its tasks, but as this introductory overview shows, the standard of proof applying to merger cases is ill-defined despite efforts made by the CFI in the Airtours, Schneider/Legrand, and Tetra Laval/Sidel trilogy. A discussion then follows on the standard(s) of review that Community courts have applied in the past, with a particular focus on the long-awaited ruling from the Court of Justice in the Commission’s appeal of the Tetra Laval/Sidel judgment.\(^6\) Practical implications are drawn from those discussions before we enter into the debate as to what roles and contributions economic models can have in the evidentiary threshold that must be met before DGCOMP can satisfy itself that its opinion regarding the compatibility of a merger is supported by a “cogent and consistent” body of evidence.

This contribution identifies a paradox. While the review exerted by the Community judicature might admittedly be less intensive when the Commission carries out economic assessments on the basis of the factual evidence contained in the file, the proposition whereby the Commission should clear a transaction whenever it is confronted by “grey area” cases\(^7\) may be

---

\(^3\) IBC conferences held in London on 11–12 March 2004 and in Brussels on 27–28 January 2005 entitled “The Use of Economics in Competition Law”.


\(^6\) ECJ, Case C-12/03 P, Commission v. Tetra Laval, not yet reported.

\(^7\) The standard of proof is probably higher than a mere 50/50 probability that the economic harm will materialize as a result of the merger.
inoperative in practice. More specifically, how should the Court review a decision where DGCOMP has selected an econometric model that is not entirely consistent with mainstream economics? Suppose DGCOMP preferred to stand by a minority view that showed with a relatively high level of probability that prices would go up by a significant margin while other economic models/assumptions would lead the Commission to a less clear-cut result.

Our basic proposition is that econometrics can usefully contribute to the evidentiary burden that the Commission has to discharge, but econometrics should not be treated differently from the other factual elements of a merger investigation, at least from the perspective of the evidentiary threshold that has to be satisfied. Likewise, the mere fact that Community courts have consistently held that the Commission enjoys a certain “margin of discretion” when handling economic evidence should not constitute a barrier against a thorough review of the Commission’s approach and reasoning in its use of econometric evidence. While undeniably the “margin of discretion” concept is intended to highlight the limits of the Court’s judicial review, it should only be construed as barring the Court from carrying out its own merger assessment. In this regard, the Commission is in charge of the anticompetitive scenario. The Court’s role is merely to verify that the competitive scenario is reasonable and that the factual evidence that is used by the Commission is solid, consistent and adequately supports the points made. Econometrics should make no exception. However, econometric evidence entails something more complex than crude facts. Econometric modelling is indeed intended to explain with a relatively high degree of confidence (and probability) what consequences a merger will bring to the marketplace. In view of its complexity and purpose, the Courts may not have all the expertise themselves to “re-do” the analysis of the Commission in order to verify whether it is valid and solidly grounded on the facts of the case and conforms with mainstream economics. They may need to seek assistance from an expert or involve the parties in elucidating how the models were constructed, what they intended to demonstrate and why they are consistent with mainstream economics. Undeniably, the complexity of econometrics may have the consequence that Courts may not be keen to delve too much into their intricacies and, for the sake of judicial economy, rather prefer to carry out a relatively “light” review of econometric evidence.

II. THE COMMISSION’S STANDARD OF PROOF IN MERGERS

This section provides an overview of the Commission’s standard of proof in merger reviews. It articulates the basic principles of evidence applicable to mergers and concludes that the Commission’s evidentiary burden in merger cases is set at a fairly high threshold. 8

8 Note that this section does not discuss what standard of proof the Commission has to meet to satisfy itself that a merger does not raise significant concerns and should be allowed to proceed.
A. The Standard of Proof Generally

The standard of proof is commonly understood as the necessary evidentiary threshold that an authority or a court must meet before it can reach a certain opinion or determination in a particular case. Depending on the type of matter at hand, civil or criminal, the standard will be more or less intensive. At one end, the burden is set at a relatively low threshold and is often defined under the “preponderance of the evidence” standard. This standard is usually employed in civil matters where the court will put all the facts and arguments that the parties have produced into the balance before reaching a conclusion. At the other end of the spectrum, the standard is set at a very stringent threshold, namely the “beyond reasonable doubt” standard used in criminal matters. This latter threshold demands from the court that its conclusions be grounded on very solid evidence and that any possibility that the accused is not guilty has been considered and rejected. Between the two extremes, the standard of proof can move across the spectrum.

In merger cases, the Commission is confronted with the fact that the Merger Regulation has not specified the evidentiary threshold that it must meet to prohibit a merger from going ahead. As the following sections illustrate, the European Courts have given some guidance on the relevant standard to be applied but seem to have done so in a relatively inconsistent manner. Indeed, the CFI uses alternatively the phrases “in all likelihood,” “very plausible,” “very probable”. True, each phrase suggests that the standard is more than a mere preponderance of the evidence test. Beyond semantics, though, the issue would seem to relate to the level of probability that the Commission has to reach before a merger can be held to be anticompetitive.

On this point, see the Commission’s decision in the SEB/Moulinex merger and the subsequent ruling of the CFI in Case T-114/02, Babyliss v. Commission, [2003] ECR II-1279.

9 See on this point David Bailey, “Standard of proof in EC merger proceedings”, 40 CMLR 2003, 845 at p. 848. The standard of proof is to be distinguished from the neighbouring concept of burden of proof. While the former relates to the evidentiary threshold that has to be met before a decision can be rendered in a case, the latter deals primarily with procedural rules that determine who has to discharge the evidentiary threshold. In this article, the burden of proof is not discussed in any detail since Article 2 of the Merger Regulation makes clear that it is for the Commission to meet a certain evidentiary threshold before it is allowed to block a merger.


11 Certain commentators have suggested that the probability that a merger is anticompetitive should be somewhere around 70%. It should be noted that the determination of the standard of proof is to some extent closely connected with the “false positives” and “false negatives” problem in antitrust decision-making. See, e.g., Ken Heyer, “A world of uncertainty: economics and the globalization of antitrust”, 72 Antitrust L.J. 375 (2005).
B. The Commission’s Four Steps of Analysis

The Merger Regulation disposes that the Commission has the duty to make an appraisal as to whether a concentration significantly impedes competition in the relevant market. The Merger Regulation is, however, silent as to the evidentiary threshold that the Commission has to reach before declaring a concentration to be incompatible with the Common Market. One may identify several steps before such a determination can be reached. In particular, the Commission has to gather all relevant facts, develop the basic theory of anticompetitive harm, specify the applicable test(s) and select the appropriate econometric tools that would support its opinion. These four steps do not take place all at once or within a specified order. Rather, the facts will determine the theories and tests to be used and vice versa. In this sense, the process is relatively dynamic and evolving. Some or all the above steps may be considered with varying degrees of depth and detail in the course of the first phase of the investigation, depending on the issues at hand.

With regard to the facts, it is widely recognized that the Commission has a duty to conduct a “thorough and painstaking”\footnote{See Opinion of Advocate-General Tizzano of 25 May 2004 in Case C-12/03, Commission v. Tetra Laval, para 74. This sentence refers to the general principle of good administration under which the Commission must operate in carrying out its merger investigations and is a means to achieve the expected outcome, i.e. that the case be supported by cogent and consistent body of evidence.} investigation. Namely it must, among others, collect all relevant qualitative and quantitative information from the market in a comprehensive manner. The Merger Regulation has given the Commission wide discretionary powers as to the type of information that it may collect from the notifying parties, its competitors, suppliers, and customers. The CFI has also given a relatively wide margin of discretion as to the scope and depth of information that the Commission may request pursuant to Article 11 of the Merger Regulation.\footnote{See in particular, Case T-310/01, Schneider Electric v. Commission, [2002] ECR II-4071, para 109.}

As part of this investigatory process and on the basis of the data provided by the parties in their Form CO and in response to the various information requests, the Commission will start developing the basic anticompetitive harm theory behind the transaction. It will typically pay attention to the potential anticompetitive effects that the concentration may generate using as a basic framework the two theories laid out in the \textit{Horizontal Merger Guidelines},\footnote{Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings, OJ 2004 C 31/5.} as well as the conglomerate and/or vertical effects theories. In particular, the coordinated and unilateral effects theories under the \textit{Horizontal Merger Guidelines} will often be considered useful instruments to better identify and frame the issues. The Commission’s task will not only be to articulate the theory of anticompetitive harm, but to go a step further by laying out the
test and the conditions that must be satisfied before its “gut feeling” or intuitive thinking rises to the level of informed assessment.

Once the tests have been properly spelled out, the Commission will have to use a number of economic tools to verify whether each proposition of the test is fulfilled. The tools range from very basic instruments, such as market-share information, diversion ratios, win/loss analyses, and critical loss analyses, to more sophisticated econometric instruments such as regressions and bid and merger simulation models. The appropriateness of each of those instruments will have to be considered in light of the underlying theory of anticompetitive harm.

C. The Standard of Evidence in Merger Investigations

The case law is also unclear about the applicable standard of proof in merger investigations. From the outset, three considerations should be highlighted. First, the standard of proof may vary depending on the stage of process at which the case is standing. For instance, at the end of phase I, the Commission seems to enjoy relatively broad discretion to decide whether there are sufficient elements in the file to warrant the initiation of an in-depth investigation. To the extent that an Article 6(1)(c) decision does not affect the legal position of the undertakings concerned, the decision is not

---

15 Ibid, para 29. Diversion ratios calculate the amount of lost sales by product A to product B when the price of product A increases by a certain percentage. Diversion ratios can be estimated using own-price and cross-price elasticities. A high diversion ratio between two products indicates that the products are close substitutes. A less sophisticated alternative to diversion ratios includes customer switching studies or win/loss analyses.

16 Critical loss analysis calculates the volume losses that would be necessary to make a post-merger price rise unprofitable and determines whether such a loss would be likely in view of the characteristics of the industry. Critical loss is considered as a useful tool to define markets, but can also, in certain circumstances, be used to assess the unilateral effects of a merger by providing the minimum lost sales necessary to defeat a price increase. Critical loss analysis has been used by the Commission in recent merger cases such as, Case COMP/M 3060—UCB/Solutia, Commission decision of 31 January 2003, para 42.

17 Regression analysis assesses the relationship between one variable called the explained, or dependant, variable and one or more other variables called explanatory variables. Regression analyses are used as a quantitative technique to examine how the variable in question (e.g. price) is affected by a number of other variables (e.g. reduction in the number of competitors or the increased level of concentration). As we shall see below, regression models have been used recently in GE/Instrumentarium and Oracle/PeopleSoft.

18 Merger simulation models have recently emerged in EU merger cases as a quantitative technique used to estimate the price effects of a merger. See, e.g., Case COMP/M. 3191—Philip Morris/Papastratos, Commission decision of 2 October 2003, para 32, where a merger simulation was presented by the merging parties to demonstrate that the price impact of the concentration would be minimal.

19 Note that this article concentrates on the use of the most complex econometric tools in merger investigations.

subject to judicial review by the Community judicature. Since the standard of proof is a concept closely related to the availability and intensity of judicial review, it is not surprising to see that Courts have likewise not defined any evidentiary requirement before a case can go into the second phase.

The second consideration relates to the shifting in the burden of proof. While it is not the purpose of this article to cover this aspect in any great detail, it seems clear that the notifying parties play a key role in the administration of the evidence.

Third, the standard of proof is admittedly much higher when the Commission reviews past and current market conditions than when it starts to rely on those facts to predict the likely competitive effects of the merger in the short and mid-term. While factual evidence should be established with a relatively high level of accuracy, reliability, and consistency, the standard of proof should not likewise require the Commission to prove the anticompetitive effects with “absolute certainty”. That is, given the predictive nature of merger control, the reviewing agency should not be required to prove the anticompetitive effects of the merger using the standard of proof applicable to criminal proceedings, that is, the “beyond reasonable doubt” standard. Nevertheless, the CFI in Tetra Laval/Sidel held that, when the effects of the merger do not immediately affect the structure of the market, the Commission must be convinced that merger will “in all likelihood” allow the parties to achieve a dominant position in the near future. That is, the further in time such effects are predicted to materialize, the higher the burden the Commission must deliver. On appeal of the CFI’s judgment in the Tetra Laval/Sidel case, Advocate General Tizzano suggested, however, that given the prospective nature of merger analysis, it is sufficient if on the basis of solid elements gathered in the course of a thorough and painstaking investigation, and having regard to its technical knowledge, the Commission is persuaded that the notified concentration would very probably lead to the creation or the strengthening of a dominant position. (emphasis added)

If the Commission is not able to reach such an opinion, it must clear the merger. The Court of Justice seems to have adopted a somewhat less stringent standard of proof:

the quality of the evidence produced by the Commission in order to establish that it is necessary to adopt a decision declaring the concentration incompatible with the common market is particularly important, since that evidence must support the Commission’s

21 See Section III below.
22 The parties have a duty to provide complete, accurate and non-misleading information. See Article 14 of the Merger Regulation.
23 Ali Nikpay & Fred Houwen, see above note 21, at 199.
conclusion that, if such a decision were not adopted, the economic development envisaged by it would be plausible.  

The standard of proof applying to the Commission’s prospective analyses—that is, the projected anticompetitive effects flowing from the merger—raises a number of questions. While the ECJ’s “plausibility” test sounds sensible and approaches that applied in US courts, in practice its application is subject to a number of hurdles. In particular, what does a “plausible” standard mean? Does that mean that econometrics would be subject to less scrutiny, especially where such instruments are used to predict the likely effects of a merger?

Let us try to articulate the above ECJ standard in practical terms. As a first step, the Commission must get the facts right and describe the pre-existing market conditions with accuracy. As the ECJ points out, the quality of the data is key to the reliability of the Commission’s prospective analyses. The task of the Commission is particularly demanding. For instance, in the context of particularly complex merger cases such as the recent GE/Instrumentarium and Oracle/PeopleSoft cases, this has resulted in a very burdensome data gathering process.

Once facts are established, the Commission has to assess the facts and determine whether certain conditions and requirements are met. All relevant factors must be taken into account and carefully reviewed before any conclusion is drawn as to their significance and impact on market conditions. In this respect, such conclusions must satisfy the requirements of “logic, coherence and appropriateness”. In particular, the Commission may not use the same set of facts to support two contradictory findings.

Next, the Commission’s opinion entails a complex technical assessment, “based not on the application of precise scientific rules but on criteria and principles which are open to question, such as economic ones”. In this regard, one should pay particular attention to the selection, use, and calibration of economic theories and instruments.

It is quite clear that the selection and use of economic theories should be supported by the facts. For instance, while a broad-brush review of the case may suggest that a particular merger may be explained using a unilateral effects scenario, the Commission has to ensure that the facts and the

---

26 ECJ, C-12/03 P, Commission v. Tétra Laval, not yet reported, para 44.
27 In preliminary injunction cases, US courts apply the “preponderance of the evidence” standard.
28 One may question whether the strict timetables set forth in the Merger Regulation conflict with the evidentiary requirements. It seems to us that, in view of the necessity to base its opinion on solid factual grounds the Commission will probably continue to make extensive use of the “stop the clock” provision under Article 11 ECMR. For instance, in the Oracle/PeopleSoft merger, the clock was stopped twice and the review period was extended by about 6 months.
30 Opinion of Advocate-General Tizzano of 25 May 2004 in Case C-12/03, Commission v. Tétra Laval, para 73.
conclusions drawn therefrom support the unilateral effects theory. In this respect, there is much less guidance as to the evidentiary value to be given to econometric instruments. There is equally little guidance on the level of confidence or probability that the Commission must arrive at in relation to the results generated by the operation of those econometric models. The ECJ only indicates that the economic effects predicted by the econometric theories and models should be “plausible”. While the selection of a particular econometric tool should logically be made in accordance with a relatively well established set of guidelines, the way a particular instrument should be used—the parameters and variables to be included in the model and the admissible assumptions that the Commission may draw—and the data upon which it should rely are subject to debate, even among economists.31

For instance, in the context of a differentiated product merger raising unilateral effect concerns, the Commission must ascertain the extent to which the elimination of competition that existed between the merging parties prior to the merger will be of such magnitude as to allow the merged entity to find it profitable unilaterally to raise its prices post merger. Resolving that question calls for an evaluation of the relevant test to be applied using the principle of logic, coherence, and appropriateness as well as the selection, use, and calibration of econometric tools that may be particularly suitable to establish convincingly each branch of the test. In the hypothetical situation at hand, the Commission’s first task will be to demonstrate the closeness of competition between the merging parties.32 Suitable econometric tools include win/loss data, provided that the underlying information is sufficiently precise and reliable to indicate against whom each of the merging parties competed. In this respect, the way the win/loss sample has been prepared (what products are covered and which geographies) and presented is an important aspect. Another set of instruments that might be considered includes regression analyses with a view to evaluating the extent to which the presence of one party significantly impacts the pricing behaviour of the other party. Both instruments require not only that the fact-finding process has been carried out properly, but also that the econometric tools are calibrated to the particular circumstances of the case. This latter part is subject to some form of arbitrage and it is unclear, under the ECJ’s proposed standard, what justification the Commission has to provide in support of the choice of one particular calibration or the selection of a certain variable against another.


32 The other limbs of the test include evaluating the extent to which the non-merging parties could be considered distant substitutes for the merging firms and their ability to reposition their offering in response to a price increase by the merged entity.
To explore this issue further, it is appropriate to review how the European judicature has articulated the scope of its judicial powers in exercising its oversight of the Commission’s work in past merger cases.

III. STANDARD(S) OF REVIEW IN MERGER CASES

From a constitutional law point of view, judicial review can be described as an institutional concept defining the scope of intervention of the judiciary in relation to acts and decisions adopted by the administrative bodies of the European Union. There is the idea that Courts may not be invested with the power to review an administrative decision de novo but should nevertheless inquire as to the legality of the decision against a set of principles, for example, the principle of good and sound administration. This would suggest that there is a certain level of deference that Courts should maintain and keep in mind when reviewing the legality of administrative decisions.

A. The Scope of Judicial Review in Merger Cases

In accordance with Article 230 of the EC Treaty, Commission decisions may be annulled on the grounds “of lack of competence, infringement of an essential procedural requirement, infringement of this Treaty or of any of its rule of law relating to its application, or misuse of powers”. The Courts’ review will consist of verifying whether: (i) the Commission carried out its duties under the ECMR by conducting a “thorough and painstaking” investigation; (ii) the relevant procedural rules have been complied with; (iii) the statement of the reasons for the decision is adequate;33 (iv) the facts upon which the Commission’s assessment is based are correct; and (v) whether there has been any manifest error of appraisal or misuse of powers.34 Grounds based on legal and factual infringements are captured by the “manifest error of appraisal” standard. In RJB Mining, the CFI explained how this concept should be understood:

as regards the evaluation of the situation resulting from economic facts or circumstances underlying the contested decision, it is settled case law that the Court, in conducting its review, must confine itself to ascertaining whether the Commission misused its powers or manifestly failed to observe the provisions of the ECSC Treaty or any rule of law relating

33 This would include whether the reasoning of the Commission satisfies “requirements of logic, coherence and appropriateness”. See ECJ, Joined Cases C-68/94 and C-30/95 France and Others v. Commission, [1998] ECR I-1375 (“Kali and Salz”), para 229–241.
34 See, e.g., ECJ, Case 42/84, Remia and Others v. Commission, [1985] ECR 2545, para 34, and Joined Cases 142/84 and 156/84; BAT and Reynolds v. Commission, [1987] ECR 4487, para 62; Case C-7/95, John Deere v. Commission, [1998] ECR I-3111, para 34: “[The Court’s] review of complex economic appraisals made by the Commission is necessarily limited to verifying whether the relevant rules on procedure and on the statement of reasons have been complied with, whether the facts have been accurately stated and whether there has been any manifest error of appraisal or a misuse of powers”.

to its application. In that context, the term *manifest* ... presupposes that the failure to observe legal provisions is so serious that it appears to arise from an obvious error in the evaluation, having regard to the provisions of the ECSC Treaty, of the situation in respect of which the decision was taken.35 (emphasis added)

The manifest error of appraisal test inquires whether the findings and conclusions drawn from the facts of an economic nature are exempt from obvious errors of appreciation. The manifest error standard would therefore be limited to ascertaining whether the error is so erroneous or irrational as to amount to an infringement of the provisions of the Treaty and EC’s secondary legislation. Another interpretation, which may be more in line with the depth of the CFI’s reviews and analyses in the *Airtours*, *Schneider*, and *Tetra* trilogy, would suggest that the error does not have to reach a level of seriousness or gravity to tip the Court’s opinion towards a decision of annulment. Indeed, as discussed below, the CFI does not seem to have limited itself to glaring mistakes in the Commission’s appraisals of concentrations.

In the past and still today, the European Courts have nonetheless insisted on the separation of powers between the Commission and the Community judicature. In particular, the Courts emphasized that Article 2 of the Merger Regulation leaves a certain margin of discretion to the Commission, especially in relation to assessments of an economic nature:

> the basic provisions of the [Merger] Regulation, in particular Article 2, confer on the Commission a certain discretion, especially with respect to assessments of an economic nature, and that, consequently, review by the Community Courts of the exercise of that discretion, which is essential for defining the rules on concentrations, must take account of the margin of discretion implicit in the provisions of an economic nature which form part of the rules on concentrations.36

The exercise by the Commission of that discretion means that Courts should abstain from entering “into the merits of the Commission’s complex economic assessments or to substitute its own point of view for that of the institution”.37 Clearly, the Courts have been keen to highlight the fact that their power is not to review a case on its merits but to exercise an appellate jurisdiction over the findings and conclusions of an administrative body. However, as the ECJ puts it:

> 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.38

The above quotes from the ECJ, while contributing to the task of identifying the contours of the Commission’s margin of discretion, do not clearly spell out where the Court’s review should stop.

36 ECJ, C-12/03 P, *Commission v. Tetra Laval*, para 38.
B. The Standards of Review in Motion

In past merger appeals, the CFI’s review has been relatively intensive irrespective of whether the ground for appeal relies on the facts or the conclusions drawn from them or on the misapplication of an economic theory articulated by the Commission. However, regarding the economic analyses used as supporting evidence to a prohibition decision, there is a relative paucity of cases defining what the Court’s scope of review should be.

1. Factual Findings

With regard to the factual findings, the review is undoubtedly very intensive. In practical terms, the Court will “verify objectively and materially the accuracy of certain facts and correctness of conclusions drawn in order to establish whether certain drawn facts make it possible to prove the existence of other facts to be ascertained”.39 As the quote indicates, it is not for the Court to carry out the investigation afresh.40 Rather, the Court will consider the Commission’s decision in light of all the factual elements gathered and contained in the file at the time the decision was adopted.41

The Commission has a certain margin of appreciation in terms of what issues should be investigated and how; what evidence should be gathered (either qualitative or quantitative or both); and what manipulations to the economic data should be made.42 This being said, the Commission’s margin is almost nil on the requirements to rely on accurate facts, on the selection of all relevant facts, and on the conclusion to be drawn from those facts.

On the accuracy of the facts themselves, the CFI indicated that the Commission may not rely on information taken out of context or on information whose source cannot be verified.43 For its part, the ECJ held in its Tetra judgment that the “Community courts must establish whether the evidence relied on is factually accurate, reliable and consistent” (emphasis added). However, it is unclear whether the Commission should go beyond a formal verification of the documents presented to it and play a more proactive role by carrying out in-depth inquiries into the quality and reliability of the data provided.

The Courts will also take a hard look at the way the Commission has selected the facts.44 The risk for the Commission of selectively omitting certain

39 Opinion of Advocate-General Tizzano of 25 May 2004 in Case C-12/03, Commission v. Tetra Laval, para 86.
42 This is obviously part of the Commission’s “margin of discretion with regard to economic matters”.
44 ECJ, C-12/03 P, Commission v. Tetra Laval, para 39: “Not only must the Community Courts, inter alia, establish whether the evidence relied on is factually accurate, reliable and consistent but also that evidence contains all the information which must be taken into account in
elements among the facts available to it constitutes one aspect of the problem. For instance, in Airtours, the CFI found that the Commission’s finding that the rate of demand for packaged holidays was low was incomplete and inaccurate in part because the Commission did not take account of the rate of demand over the most recent period preceding the notification, even though data on that aspect was produced by the notifying parties in the Form CO.45

Another aspect of the problem is determining the extent to which the Commission took all relevant factors into account and/or sufficiently inquired into the materiality of an assertion made in its decision. The Airtours, Tetra, and Schneider trilogy provides ample examples of situations where the Court took issue with the lack of sufficient and cogent evidence for the assertions made by the Commission or from the absence of considering certain factors that would have had a significant impact on the Commission’s findings of fact.46 For instance in Schneider, the Commission relied heavily on the fact that the merged entity’s position in the EEA would be unrivalled and unmatched. However, the CFI noted that the Commission failed to consider the number, position (in terms of scope and coverage of products), and reputation of other competitors on each of the national sectoral markets, and concluded that the Commission’s assertion was not sufficiently ascertained by adequate evidence.47 Likewise, the CFI found many loopholes in the Commission assessment of the Tetra Laval/Sidel merger.48

Regarding the conclusions that the Commission draws from the facts, the CFI has adopted a similar approach. In a number of situations, the CFI overturned conclusions drawn by the Commission because the facts upon which it relied actually appeared to be more supportive of a competition-neutral or even a pro-competitive conclusion.49

order to assess a complex situation and whether it is capable of substantiating the conclusions drawn from it” (emphasis added).

48 Among others, the CFI observed that the Commission, in assessing the foreseeable effects of leveraging in the PET packaging market, did not inquire into the competition that Sidel faced in the market for high-capacity SBM machines (i.e. one element of a PET filing line). In fact, it turned out that Sidel faced at least three strong competitors on that market. The CFI concluded that the Commission should have examined the ability of that competition to resist leveraging on the part of the merged entity. Case T-5/02, Tetra v. Commission, [2002] ECR II-4381, para 300.
49 For instance, in Airtours, the Commission considered that, in a market subject to high volatility of demand, the cautionary approach adopted by the suppliers of package holidays in planning capacity for the next season was illustrative of collective dominance. The CFI rejected that view holding that “caution [in capacity planning] cannot, therefore, be interpreted, as such, as evidence of collective dominance rather than as a characteristic of a competitive market of the kind.
2. Articulating and Applying the Economic Theories

European Courts have also reviewed the appropriateness of the economic theories used by the Commission to articulate the competitive harm effects underlying problematic transactions. While recognizing the Commission’s margin of discretion in relation to economic assessments, the CFI has critically reviewed how the Commission articulated the theories on collusive oligopolies in *Gencor, Kali & Salz* and *Airtours* and on conglomerate effects mergers in *Tetra Laval* and scrutinized the extent to which the Commission had correctly spelled out the constitutive elements of the applicable theories. The following example illustrates this point. In coordinated effects cases, one of the key issues is determining the extent to which fringe competitors and consumers would be capable of jeopardizing the results expected from the oligopoly’s common policy. In *Airtours*, the CFI held that it implies that where the large tour operators, for anti-competitive purposes, reduce available capacity to a level below what is required to adjust to anticipated trends in demand, such a reduction must not be offset by their current competitors, smaller operators, any potential competitors, tour operators with a presence in other countries or on the long-haul market, or their customers (United Kingdom consumers) reacting in such a way as to render the dominant oligopoly unviable.

In this regard, the CFI rejected as irrelevant the Commission’s contention that small tour operators cannot reach the size and scale necessary for them to compete effectively with the integrated tour operators. Instead, the question is whether small operators, taken as a whole, can respond effectively to a reduction in capacity put on to the market by the large tour operators to a level below estimated demand by increasing their capacity to take advantage of the opportunities inherent in a situation of overall under-supply and whether they can thereby counteract the creation of a collective dominant position.

---

50 The CFI in *Tetra Laval* articulated the conglomerate merger test as follows: “in a case where the markets in question are neighbouring markets and one of the parties to a merger transaction already holds a dominant position on one of the markets, the means and capacities brought together by the transaction may immediately create conditions allowing the merged entity to leverage its way so as to acquire, in the relatively near future, a dominant position on the other market. This could especially be the case where the relevant markets are tending to converge and where, in addition to the dominant position held by one of the parties to the transaction on a market, the other party, or one of the other parties, to the transaction holds a leading position on another market”. Case T-5/02, *Tetra v. Commission*, [2002] ECR II-4381, para 151.


52 Ibid, para 213.
The key test was thus to examine (a) how small operators would be likely to react in the event of a reduction in capacity by the leading providers of package holidays and (b) whether they would have access to upstream and downstream markets (for airline seats and travel agents).

The CFI thus reviews the extent to which the relevant test has been adequately presented by the Commission, including all its ramifications as well as whether the relevant questions were correctly posed in the course of the administrative proceedings.

3. Review of Econometric Analyses

The question is whether the standard of review that the Court should apply to econometric analyses ought to be different from any other element mentioned above. There are very few instances where the CFI and the ECJ have been confronted with econometric analyses carried out by the Commission or by experts acting on behalf of the notifying parties or other third parties.

The first of such instances appears to have occurred in *Airtours*. In its judgment, the CFI criticized the methodology used by the Commission to assess the extent to which capacity decisions adopted by each of the major tour operators for the coming seasons were sufficiently transparent for collusive behaviour to arise post merger. The Commission’s approach was to look at the overall capacity as a whole. The CFI observed that the planning process is “not simply the renewal of capacity budgeted or sold in the past but is the attempt to predict how demand will develop on both a macro and microeconomic level”.53 The setting of the global capacity is the result of a whole range of individual decisions taken on a resort-by-resort and flight-by-flight basis. It was accordingly very difficult for the Commission to limit itself to looking at the global capacity estimates of each operator to assert that the market was transparent because “total capacity stemmed from a miscellaneous set of individual decisions”.54 It appears that the CFI criticized more the methodology used rather than a hypothetical calculation that the Commission failed to carry out in order to verify the extent to which the market was transparent. Accordingly, this case could probably be categorized somewhere between articulating the constitutive elements of the economic theory (see section above) and the translation of the economic theories into concrete econometric models.

The second occasion where the CFI reviewed data of an econometric nature seems to have taken place in *Schneider*. In that case, the parties disagreed on the degree of customer loyalty. The Commission was of the view that the inelasticity of overall demand for low-voltage equipment was a factor that would enable the merged entity to act independently of its competitors. Schneider did not challenge the fact that overall demand was relatively

53 Ibid, para 159.
54 Ibid, para 167.
inelastic but held that the Commission should have taken into account the
cross-elasticity of demand to assess the level of brand loyalty on the part of cus-
tomers. To that effect, Schneider had produced in the administrative proceed-
ings two reports from NERA Economic Consulting to demonstrate that sales
promotions enabled rivals to win business over the merging parties. The
reports suggested that, when a manufacturer launched an advertising cam-
pany, sales of the affected item increased. The Court focused the discussion
on the link between customer loyalty and the econometric tools supposedly
capable of measuring it. The Court found that “it is not inconceivable that
the increase in sales of products promoted by the manufacturers can be
accounted for by wholesalers” and, hence, “it cannot necessarily be inferred
from the increased sales of promotions items either that switchboard assem-
bler and installation engineers have a tendency to change brands quickly, or
as a consequence, that there is high cross-elasticity of demand on the part of
those operators”. In fact, the Court was apparently not convinced that the
NERA Economic Consulting reports adequately demonstrated the point
that Schneider was trying to make. Accordingly, the Court held that
Schneider did not show “that the Commission, for the purpose of assessing
the impact of the transaction, was wrong to use the test of price sensitivity
of overall demand for low voltage equipment instead of relying on cross-
elasticity of demand (which has not been proved) on the part of switchboard
assemblers and installation engineers”.

These two examples illustrate the fact that European Courts have not yet
delved deeply into considerations that relate to how the econometric models
are constructed and which parameters have (and should have) been taken
into account. Rather, the Courts so far have reviewed the extent to which an
economic study supports the argument that either the Commission or a
party is trying to put in the administrative or judicial proceedings. This
interpretation is consistent with the ECJ’s approach in Tetra, which would
limit the scope of judicial review to reviewing Commission’s interpretations
of information of an economic nature.

What would happen if the courts were confronted with complex economic
issues going beyond the Commission’s mere interpretations of econometric
data? Suppose that the Commission and the parties have constructed econo-
metric studies whose predictive results are both “plausible” but at odds. The
CFI and the ECJ would be ill-equipped to adjudicate alone between the two
econometric studies without the assistance of experts. They may thus refer

56 Ibid, at para 142.
57 In the Woodpulp and Dyestuffs cartel cases, the ECJ appointed experts to assist it in the adjudica-
tion of complex economic questions. See, Woodpulp II, ECJ, 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, A. Ahlström Osakeyhtio and
questions of economics to independent experts either to help them understand how the Commission’s or the parties’ models were constructed and what those models are intended to demonstrate or to provide their views as to which study is more robust, reliable, and better reflects market conditions. Although the ECJ did have recourse to expert opinions in past cartel cases, it is unclear whether the ECJ or the CFI would act in the same way in the context of merger cases.58

C. Conclusions

In light of the above, the following conclusions can be drawn. First, an overview of the Commission’s standard of proof as recently articulated by the ECJ in *Tetra* does not reveal specific guidelines or parameters against which econometrics can be weighed to determine their evidentiary value. Likewise, the neighbouring concept of standard of review does not provide much information as to how Courts should review the use by the Commission of econometric evidence. As indicated above, the question arises whether econometric evidence should be treated any differently from other factual elements which form part of the Commission’s file.

In view of the relatively intensive review exerted by the CFI (as endorsed by the ECJ) in merger cases, some may be inclined to conclude that the “margin of discretion” left to the Commission is basically now a hollow concept,59 and that the day has come when expert testimonies are heard in the court-room to challenge econometric models presented by the Commission.60 It is suggested, however, that the ECJ in the recent *Tetra* judgment has provided some indications that the concept may still have some meaning. Indeed, even in cases where anticompetitive effects are not immediately palatable and are predicted to materialize sometime in the future, such as in conglomerate effect mergers, the Court recognizes that the proof of such anticompetitive effects materializing post merger must satisfy a mere plausibility standard rather than an

58 To some extent, the use of econometric expert opinions in *Woodpulp II* was motivated by the fact that the Commission’s case rested on a limited set of facts, i.e. parallelism in prices meant that concert between the pulp producers was at play, that needed to be tested against the possibility that the normal operation of the market was a more plausible explanation for the uniformity of prices than a concerted action. Given that merger investigations are more and more data- and facts-intensive, it is unclear whether the Courts would appoint their own experts. In this regard, recent practice of the CFI, e.g. in the Microsoft appeal, indicates that when cases are factually well prepared by both sides, there is no need to call independent experts to testify before the Court.

59 This would be consistent with the view that the manifest error standard is not limited to obvious or glaring errors of appraisal.

60 The presence of expert economists in the court-rooms in Luxembourg is not new and recently economists acting for both the Commission and the appellant made representations before the CFI in the General Electric’s appeal against the Commission decision in the *GE/Honeywell* merger. Since the case is still pending, it is not clear yet whether their representations will be paramount to the CFI’s decision.
“all likelihood” standard. The more permissive standard of the ECJ would admittedly provide some room for manoeuvre to the Commission, in particular with regard to the use of complex economic instruments. The question put before us is, however, how much margin is left to the Commission when it uses econometric tools?

IV. MARGIN OF DISCRETION AND THE MOVE TOWARDS USING COMPLEX ECONOMETRIC MODELS TO SUPPORT THE COMMISSION’S OPINIONS

Before we tentatively answer this question, it is relevant to examine how the Commission has dealt with econometric evidence in past decisions. It is also appropriate to briefly examine how authorities/courts in other jurisdictions, particularly in the United States, have dealt with and considered econometric evidence in recent past.

Clearly, there has been a lot of criticism of the Commission’s processes and methods for its handling of mergers in the aftermath of the Airtours, Tetra, and Schneider judgments. DGCOMP has undergone a number of organizational reforms aimed at improving the quality of its work, and several procedural changes have been brought into the ECMR. It is noteworthy that the Commission is not the only agency whose decisions were annulled by judicial bodies. One should not lose sight of the fact that US agencies have equally suffered major setbacks in recent years. In particular, what emerges from recent US court decisions ruling against the agencies is that econometric evidence in US merger enforcement cases should take a greater role versus traditional evidentiary instruments. It is no longer enough to rely on consumer complaints to tip the Court’s opinion in the agency’s favour.

A. Particularities of the US Merger Enforcement System

In the United States, merger enforcement is carried out under Section 7 of the Clayton Act, which prohibits concentrations between undertakings, the effect of which “may be substantially to lessen competition, or to tend to create a monopoly”. The test under the Clayton Act is commonly referred to as the “substantial lessening of competition” or SLC test. To establish a

61 The latter standard had been put forward by the Court of First Instance in Case T-5/02, Tetra v. Commission, [2002] ECR II-4381, para 148.
62 See, e.g., the dissolution of the Merger Task Force, the creation of the Chief Economist Office, the peer-review panel and the mechanism of state-of-play meetings at critical stages of an investigation.
63 The most important of which is in our view the introduction of more flexibility in the strict time limits and deadlines for the Commission to complete its investigation and render decisions.
Section 7 violation, the plaintiff must show that the merger is reasonably likely to cause anticompetitive effects.\(^6\)

As a practical matter, the powers of a Federal District court differ somewhat from those of the EC judicature in a number of respects. When a case is brought either by the Department of Justice (“DOJ”) or the Federal Trade Commission (“FTC”), the agencies act as plaintiffs in a civil matter. They basically have to establish the various elements of the Section 7 test. The judge will review all the evidence that is produced before him and is not constrained as the EC judge is to limit judicial review to considerations relating to how the agency gathered the evidence, what conclusions were drawn and whether the agency committed a “manifest error of appraisal” in deciding to challenge the merger. This latter aspect is important as the admission of complex econometrics into evidence in a US court would seem, at least from that procedural perspective, to be easier to achieve than before the EC judge.\(^6\)

B. Admission of Complex Econometrics into Evidence in US Trials

In the United States, both the DOJ and the FTC experienced at least four major setbacks before US federal district judges since 2000.\(^6\) In the most recent ones—\(FTC\ v. Arch Coal\) and \(US\ v. Oracle\)—the US agencies relied on the \(Philadelphia National Bank\) presumption,\(^6\) customer testimonies, and economic evidence to challenge the proposed takeovers of Triton Coal Company by Arch Coal and of PeopleSoft by Oracle. While Arch Coal was presented by the FTC as a coordinated effects case, the Oracle/PeopleSoft merger was challenged by the DOJ on unilateral effects grounds. At trial in

\(^6\) FTC v. H.J. Heinz Co., 246 F.3d 708 at 713 (Congress used the words “\(may\) be substantially to lessen competition” to indicate that its concern was with probabilities, not certainties); \(Hospital Corp. of America v. FTC\), 807 F.2d 1381, 1389 (7th Cir 1986) (Section 7 does not require that a merger or other acquisition \([will]\) cause higher prices in the affected market. All that is necessary is that the merger create an appreciable danger of such consequences in the future).

In US courts, expert testimonies are admitted into evidence in accordance with the Daubert doctrine. \(Daubert v. Merrell Dow Pharmaceuticals Inc.,\ 509 U.S. 579 (1993).\) To be admissible under Federal Rule of Evidence 702, expert testimony must come from a qualified expert, assist the trier of fact, and meet three foundational requirements: the testimony must be (1) based on sufficient facts or data, (2) the product of reliable principles and methods, and (3) a reliable application of principles and methods to the facts of the case. The Daubert doctrine focuses primarily on the second and third foundational requirements: whether the expert’s reasoning or methodology is scientifically valid and whether that reasoning or methodology can be properly applied to the facts at issue. In short, Daubert is about the “reliability” of the scientific principles and methods at issue and about the adequacy of the “fit” between that science and the facts of the case.


\(^6\) U.S. v. Philadelphia National Bank, 374 U.S. 321 (1963) (holding that a merger that results in a significant increase in market share and concentration must be enjoined unless there is evidence clearly showing absence of anticompetitive effects).
these cases, both District Court judges decided against the government agencies. In each case, the court essentially ruled that the case presented by the government was weak on the evidence. Both judges were unimpressed by the various customer testimonies, finding them subjective, unpersuasive, and inadequate to support the economic arguments put forward by the agencies. They equally refused to apply at face value the presumptions of substantial anticompetitive effects, holding that agencies had to go beyond the oversimplified concentration ratios laid down in the *Horizontal Merger Guidelines*. Stripped of customer testimonies and conventional presumptions, the agencies were basically left to rely on economic theories and evidence to defend their case.

1. Arch Coal

In May 2003, Arch Coal agreed to purchase Vulcan Coal Holdings for $364 million. Vulcan owns Triton Coal Company (“Triton”). The FTC claimed that Arch’s acquisition of Triton mine would substantially undermine competition in the market for coal mined from the Southern Powder River Basin (“SPRB”).

The thrust of the FTC’s case was that the merger would increase the likelihood of coordinated interaction in the market. The FTC alleged that the three largest producers of coal in the SPRB area would engage in a tacit scheme to restrict output. The Court found that, despite currently high concentration levels, the merger would “just barely” raise significant concerns under the *Horizontal Merger Guidelines* because the increase in HHI was small. The Court thus concluded that, because the prima facie case was not strong, the evidence required from the defendant to rebut that presumption is set at a relatively low threshold.69

The Court pointed out that coordination was feasible, but this element was not enough to block the merger. The FTC had to show that anticompetitive coordination was likely in view of factors such as evidence of past coordination, the market structure and dynamics, and the role of fringe players.70 In this regard, the expert acting for the FTC acknowledged at trial that additional investigations would be required to show that the market was currently prone to tacit or express coordination. In support of its theory of anticompetitive harm, the FTC’s expert relied on public statements suggesting signalling by suppliers of future cuts in output, the availability of data in the market to allow competitors to collude, and lastly on empirical evidence of the relative profitability of deviating from the coordinated outcome. On the other side, Arch’s expert made a number of submissions to deconstruct the FTC’s analysis. The expert showed in substance that (i) signalling had no effects

70 Ibid, at 138.
on output decisions of the other producers, (ii) publicly available data was not sufficient to facilitate coordination, and (iii) the profitability model articulated by the FTC could result in profits from the coordination falling to zero if underlying assumptions in the model were modified.\footnote{See Mark Glueck and Henley Manning, Economic issues in 2003-2004, available at www.globalcompetitionreview.com/ara/us_economics.cfm (visited 5 July 2005).}

It appears that throughout its very lengthy and detailed opinion, the District Court carried out an intensive review of the facts and gave more weight and credit to objective market conditions than to customer fears and to unsubstantiated economic theories produced by the FTC. In sum, the case of the agency was insufficiently rooted in the particular facts and circumstances of the SPRB coal market and may have been too reliant on theory, circumstantial and tainted evidence, and conventional presumptions.\footnote{For additional commentaries on Arch Coal, see, e.g., James A. Keyte, “Arch Coal and Oracle Put the Agencies on the Ropes of Proving Anticompetitive effects”, Volume 19, No. 1, Antitrust, Fall 2004, p. 79; Janet McDavid & Gretchen Fritz, “Antitrust law and ‘Arch’ and ‘Oracle’ cases”, The National Law Journal, 1 November 2004.}

2. Oracle/PeopleSoft

In the hostile takeover bid for PeopleSoft, the DOJ articulated its case around unilateral effects. Although unilateral effects have been encapsulated in the FTC/DOJ Horizontal Merger Guidelines since 1992 and have been the subject of intense debate among economists for decades, there have been very few cases tried on the basis of this theory. It is interesting to note from the outset that, whereas Staples\footnote{FTC v. Staples, 970 F. Supp. 1066 (DDC 1997). For an overview of the economic analysis conducted by the FTC in the Staples/Office Depot merger, see, e.g., Jonathan Baker, “Econometric analysis in FTC v. Staples, Prepared remarks before the ABA Antitrust Section Economics Committee”, 18 July 1997 available at www.ftc.gov/speeches/other/stspch.htm (visited 5 July 2005); see also Gregory Werden & Luke Froeb, “Unilateral competitive effects of horizontal mergers”, Draft of 14 January 2005, Forthcoming in Paolo Buccirossi, Advances in the Economics of Competition Law (MIT Press), presented at the IBC Conference in Brussels on 27–28 January 2005 on “The Use of Economics in Competition Law”, at p. 71.}—the most recent case to fall within the category of unilateral anticompetitive effects—was the first trial case brought by FTC where regression analyses were produced and admitted into evidence, Oracle\footnote{U.S. v. Oracle, 331 F. Supp. 2d, 1098.} was the first case in US antitrust history where merger simulation models were used at trial.

The basic assumption underlying the DOJ’s case was that the market for enterprise application software should be segmented in accordance with a number of parameters, including qualitative evidence showing differences between mid-market software versus up-market software solutions. According to the DOJ, only three players were capable of supplying and meeting the complex business needs of large complex enterprises: SAP, PeopleSoft, and Oracle. SAP was the clear market leader. The thrust of the
DOJ’s case was that the merger would reduce the number of competitors to two and, in turn, would provide enough incentives for the merged entity to unilaterally raise prices.

As in Arch Coal, the Court rejected the use of the Horizontal Merger Guidelines presumptions to establish a prima facie case of illegality. According to the guidelines, significant unilateral anticompetitive effects are presumed where the combined share of the merging parties passes the threshold of 35%. Likewise, in relation to customer testimonies presented by the DOJ at trial, the Court found them to be unhelpful to the Government’s case, since customer preferences for one product over another, or their unsubstantiated apprehensions, do not say anything about the extent to which customers would be able to switch to a rival’s products in the event of a small but significant nontransitory increase in prices.

On the substance of the case, the Court deconstructed the DOJ’s view that the relevant market should be defined narrowly. On the methodology used by the DOJ to define the relevant market, the Court essentially held that one should be cautious about using qualitative criteria to define the relevant product market. It also pointed out that in differentiated product mergers, it is particularly difficult to identify “clear breaks in the chain of substitutes”. In this respect, the Court noted that much of the DOJ’s case was based on customer preferences and vague criteria rather than on the “reasonable substitutability of demand” test. As a result, the Court found that the market as defined by the DOJ was overly narrow and “underinclusive”. Hence, the merger would not reduce the number of suppliers from three to two, since customers were found to have alternatives other than Oracle and SAP.

While much of the DOJ’s case fell apart on the issue of market definition, the Court nevertheless continued the analysis on unilateral effects. In this regard, the Court held that, in a unilateral effects case, “a plaintiff must demonstrate that the merging parties would enjoy a post-merger monopoly or dominant position, at least in a ‘localized competition’ space”. The Court thus concluded that, in order to be successful, a unilateral effects

---

75 The Court held that “a presumption of anticompetitive effects from a combined share of 35% in a differentiated products market is unwarranted. Indeed, the opposite is likely true” (U.S. v. Oracle, 331 F. Supp. 2d, 1098 at 1123).

76 The 35% threshold or presumption may not be adequate in the context of differentiated product mergers because it does not say anything about the closeness of competition between the merging parties and the ability of rivals to reposition.

77 The court found their testimony “largely unhelpful”. The court questioned the ground “upon which these witnesses offered their opinions on the definition of the product market and competition within that market” (U.S. v. Oracle, 331 F. Supp. 2d, 1098 at 1130).

78 U.S. v. Oracle, 331 F. Supp. 2d, 1098 at 1120.

79 Ibid, at 1155.

80 Ibid, at 1118.
case must be based on market dominance in a “localized” market. In this regard, the Government had produced the following two testimonies by an econometric expert in support of its unilateral effects case. First, Professor McAfee used a regression analysis to calculate what effect the presence of PeopleSoft would have on the discount that Oracle would offer to customers. The Court did not call into question the fact that the presence of PeopleSoft in bids may impact the discounts offered by Oracle, but held that little had been done by the DOJ and its experts to explain the extent of the head-to-head competition between SAP and the two merging parties. In other words, it was not enough to prove that Oracle and PeopleSoft were very close substitutes: it was also important to explain why SAP was not in that localized market as well, and that other competitors could reposition their products to fill the gap left by the disappearance of PeopleSoft as a competitive constraint. Next, Professor McAfee conducted a merger simulation analysis using the auction-type model to account for multiple bidders and successive rounds. The simulation was based on a number of variables and assumptions, such as market share data and percentage of wins in head-to-head competition. The court did not deconstruct the way the model had been presented and run. Instead, the Court considered it to be unreliable because the simulation was based on market share data that the Court had found unreliable.

3. Key Conclusions

Economics has undoubtedly taken an increasingly greater role in US merger analysis. In “gray-area” or borderline cases, reliance on unsubstantiated presumptions is misplaced. Instead, enforcement agencies have to produce a very strong, consistent, and reliable set of facts in order to prevail. On the use of economics, both District courts admitted expert econometric testimonies as evidence, but they seemed to have criticized more the reliability of the underlying data and/or the probative value of the econometric models, that is, what the models show, than the selection and calibration of econometric models and underlying assumptions themselves. In sum, as their EU counterparts, US courts do not seem to have yet delved too much into questions pertaining to the adequacy and appropriateness of the selection and operation of econometric modelling as such.

81 The court held “simply because Oracle and PeopleSoft often meet on the battlefield and fight aggressively does not lead to the conclusion that they do so in the absence of SAP” (U.S. v. Oracle, 331 F. Supp. 2d, 1098 at 1169).
83 This seems to have also been the case with Judge Hogan in Staples; see Econometric analysis in FTC v. Staples, Prepared remarks of Jonathan Baker before the American Bar Association’s Antitrust Section, Economics Committee, 18 July 1997, available at www.ftc.gov/speeches/other/stspch.html (visited 5 July 2005).
C. The Use of Econometrics in Two Recent EC Merger Enforcement Decisions

In two recent merger control cases, the European Commission made extensive use of tools such as regression analyses and merger simulation models. Both cases went to phase II, but led ultimately to clearance. This section focuses on the econometric methods that have been used and what issues, if any, were raised in relation to their practical operation and probative value. To conduct those analyses, the Commission collected bid data from the merging parties and their competitors.

1. Win/Loss Analysis

This tool was used in GE/Instrumentarium to measure the intensity of competition between the merging parties and assess the competitive constraints on each of the merging parties by each competitor in the peroperative monitoring market. The extensive bidding data submitted by the notifying parties and third parties identified the number of bidders and the identity of the winning bidder and the runner-up competitor. The data enabled the Commission to examine the following statistics. First, the statistical analysis indicated how many times the merging parties were in competition in each national market. It also showed whether they were alone or whether they faced any competition. The analysis enabled the Commission to go beyond the market share information by identifying whether the merging parties were each other’s closest competitors. In this regard, win/loss analysis can either confirm or dismiss the presumption that high market shares would enable the merger entity to appreciably restrict competition without being challenged by the remaining competitors.

For a comprehensive overview of economic tools available and their practical use in EC merger control, see Derek Ridyard, “The role of Economics in European Merger Control”, in Nicholas Levy, European Merger Control Law, a Guide to the Merger Regulation (LexisNexis, 2003), Chapter 24.

Case COMP/M. 3083—GE/Instrumentarium, Commission decision of 2 September 2003; and Case COMP/M. 3216—Oracle/PeopleSoft, Commission decision of 26 October 2004.

Obviously, those cases are not the only ones in the recent past where econometric evidence was produced. They are merely cited here to illustrate the growing reliance on econometrics. Cases where economic analyses played a central role also include case COMP/M. 3333—Sony/BMG, Commission decision of 19 July 2004. It was a coordinated effects merger case where the Commission reviewed extensively pricing data of the five major music recording companies to examine the extent to which the music recording industry was characterized by price parallelism.

Case COMP/M. 3083—GE/Instrumentarium, Commission decision of 2 September 2003, in particular para. 131 ff.
2. Regression Analyses

To test the win/loss results further, the Commission also conducted regression analyses in GE/Instrumentarium to calculate the likely price impact of the merger on the basis of the discounts proposed by the various competitors in bids. Philips, a competitor of the merging parties in this case, produced its own regression analyses. The Philips’ study was based on bids in which it had participated and measured the likely pricing behaviour of Philips post merger. The study showed that the discount from Philips was higher when both merging parties were present than when only one of the parties was present, suggesting that the merger would reduce the competitive constraint on Philips. The regression analysis provided by GE was at odds with that presented by Philips. The regression used the percentage discount off the list price as the relevant variable, and not on the final transaction price. The study tended to show that the presence of GE in bids had little influence on Instrumentarium’s final discount and that Philips was actually the main competitive constraint on Instrumentarium, since the discount offered was higher when Philips was present. The Commission rejected the regression analyses presented by GE on methodological grounds and on the fact that the discounts offered by Instrumentarium in all bids in which it participated were based on the company manager’s recollection.

Similar regression analyses were conducted to assess the impact of the GE/Instrumentarium merger in the mobile C-arm and mammography devices market. The purpose was to identify the effect that the joint presence of GE and Instrumentarium had on prices in past bidding rounds. The Commission found that the presence of Instrumentarium and the number of bidders did not have any systematic influence on the size of the discount offered by GE in its bids. The Commission ran multiple models to account for the varying methods to calculate the discount and to verify whether the results would change if the key European markets were considered separately or collectively and if the regressions focused on won bids rather than on all bids.

In Oracle/PeopleSoft, the Commission used regression analyses to assess the extent to which Oracle’s pricing behaviour varied depending on the number and the identity of the competitors against which it competed in bids. While

88 A regression analysis seeks to explain how changes in prices are explained by a number of factors such as the number of bidders, the identity of the bidder, the size of the customer, or the specific package offered to the customer.
89 For an explanation on the econometric models used in this case see, RBB Brief 14, “Assessing unilateral effects in practice: Lessons from GE/Instrumentarium”, May 2004.
90 Case COMP/M. 3083—GE/Instrumentarium, Commission decision of 2 September 2003, para 185–86. The Commission further held “as there is no objective way for the Commission to verify the validity of these discounts, the Commission cannot rely on the results of the econometric study presented by RBB”.
91 Case COMP/M. 3083—GE/Instrumentarium, para 248 and 278.
92 Case COMP/M. 3216—Oracle/PeopleSoft, para 136.
the regressions produced by PeopleSoft early in the process showed that the number of bidders had a significant impact on prices PeopleSoft submitted in bids, the results were found to be too “crude” because the regressions had been constructed with too few variables. Namely, they allegedly failed to capture key parameters, in particular the size of the bid and the number of final round bidders. Following the oral hearing in this case, Oracle produced its own bidding data and regressions. On that basis, the Commission found that the size of the deal had a strong influence on the level of discount. The Commission observed in particular that “once the size of the deal was taken into account in the analysis, the number of final bidders no longer provided any additional explanatory element over the discount offered and no general pattern emerged regarding the presence of a particular competitor prompting particularly high discounts”.93 Again, as in GE/Instrumentarium, the econometric evidence produced by the notifying party and the involved party were at odds.

3. Merger Simulation Models

These models are considered particularly useful in the context of horizontal mergers involving differentiated products. The Oracle/PeopleSoft merger is probably not the first case where the Commission considered merger simulation models as a possible method to assess the impact of a concentration.94 In Oracle, the Commission constructed a model to simulate the negative effects of a merger from three to two on consumers in terms of reduced choice and prices. The Commission eventually did not rely on the simulation in view of the fact that the analysis of market definition showed that the market included more players than Oracle, PeopleSoft, and SAP. Hence, the simulation model proved to be no longer adequate.95

Nonetheless, the Commission provided some interesting policy statements in its decision. First, the Commission acknowledges the fact that the use of simulation models “depends critically on the ability of the model to adequately capture the fundamental mechanisms that drive the behaviour of the different market participants and that, in principle, the assessment as to whether that is

93 Ibid, para 201.
94 In GE/Honeywell, a third party submitted a mixed-bundling model to predict that there would be an incentive for the combined entity to offer package discounts to customers who buy both GE engines and Honeywell products. However, the Commission did eventually not rely on it in its final decision. See, Mathias Pflanz and Christina Caffarra, “The economics of GE/Honeywell”, [2002] ECLR 115–121, at 116.
95 At a seminar organized by the Global Competition Law Centre on 4 February 2005 on the Oracle/PeopleSoft merger, Claes Bengtsson, the economist from the Office of the Chief Economist who acted in this case, explained that the integration of additional players into the model no longer resulted in consistent—across the board—price increases. That is, in a three to two context, modifying the values attributed to each variable of the model did not have a significant impact on the projected price increases. However, in a four to three merger, the model no longer produced consistent results (i.e. the price increase pattern was no longer clearly apparent).
the case in any particular case may be subject to debate”. 96 It also indicates that the “debate as to which simplifications to accept in the model should not obscure the fact that any prospective analysis of the effect of a merger will inherently be based on assumptions”. 97 The Commission then concludes that simulation models can be a “useful tool in assisting the Commission in making the economic assessment of the likely impact of a merger”. 98

Incidentally, this “policy” position should be considered in the light of the ECJ’s ruling in Tètra quoted above, which essentially recognizes that, “while 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”. The quoted language suggests that the Court would be inclined to adopt a relatively cautious approach by limiting its review to the interpretation by the Commission staff of the results of a simulation model and, hence, would not venture to assess whether the Commission got the model parameters and assumptions right. However, such an interpretation may give too much leeway to the Commission in that regard: it could eventually conflict with the proposition that, despite having a certain margin of appreciation regarding facts of an economic nature, the Commission should not intervene in cases where the econometric models would, depending on the parameters and calibrations applied, lead to inconclusive or even conflicting results about the likelihood of harmful effects of a merger. In substance, as the above review of recent Commission decisions indicates, Commission officials appear to have carried out multiple verifications, for example, by changing the parameters of their models or including more variables into their models, before concluding that the results of an econometric study may be considered sufficiently “plausible”.

V. PROPOSED EVIDENTIARY GUIDELINES RELATING TO THE USE OF ECONOMETRICS IN EC MERGER CONTROL

The robustness and adequacy of econometric tools and models depend on a number of factors. The first aspect to consider is whether the model that the Commission contemplates using is consistent with mainstream economics. In this respect, Philip Lowe, Director General of DGCOMP, said at the closing address of the IBA/European Commission Conference of 10–11 March 2005 that

enforcement action does not necessarily need more economic input, but rather the right economic input. Antitrust agencies should not work at the cutting edge of

96 Case COMP/M. 3216—Oracle/PeopleSoft, para 193.
97 Ibid, para 194.
98 Ibid, para 195.
economic theory, but should conduct their analysis within the mainstream of economic thought.  

A second aspect is whether the model or tool fits with the industry under review, that is, whether it explains relatively well the past and present competitive process in the relevant market. This is the predicate to assess the extent to which the model can predict the future with some degree of confidence. This is consistent with what courts have consistently said about the need for theories of anticompetitive harm to be rooted in the particular facts of the case. For a model or regression to fit the empirical evidence, parameters and other variables have to be calibrated. Assumptions as to how consumers, suppliers and the sales process take place have to be made, but those assumptions have to be based on the evidence gathered in the course of the Commission’s investigation. The issue with calibration is what degree of granularity the modeller is looking at. Models may be overly simplistic or too complicated to be capable of explaining how the competitive process operates in a given market. Arbitrage often has to be made as to what variables ought to be included and what values should be given. Contentious debates will inevitably emerge among economists. However, as a general matter, “econometric analyses are more persuasive when key modelling choices are consistent with economic theory, informed by quantitative and qualitative information about the market, and tested against plausible alternatives.”

A third issue is transparency. When the Commission produces the results of regression analyses, the full dataset and methodologies should be produced. In GE/Instrumentarium and Oracle/PeopleSoft, confidentiality hampered the review process as it made it very difficult for economists and counsel to understand how the data was collected, compiled, and cleaned, whether all observations were included in the model, how the variables were created, and how the regression or simulation model relates to them. Furthermore, little was done to allow the parties to examine what statistical methods were used, and access to the various outputs was severely restricted. To that effect, econometric analyses lose in credibility when they are filed without the underlying data and sufficient background explanations to allow the parties and the Commission to test their robustness. Hence, as a general matter, the modeller


102 The transparency will not affect the admissibility of the evidence but the robustness and reliability of an econometric model.
should be able and prepared to explain and justify certain assumptions and on what basis certain calibrations of the models were made.

Turning to the substance of what properly conducted econometric instruments can achieve, there seems to be a broad consensus among economists that, irrespective of the calibrations and variables used, econometric modelling suffers from intrinsic weaknesses. For instance, a common criticism of merger simulation models is that they only look at "static competition" and measure only the short-run effects of a merger without capturing the extent to which entry or repositioning on the part of suppliers and consumers will impact the ability of the merged firm to raise prices or of the collusive oligopoly to achieve coordination.

At the IBC conference held in Brussels in January 2005 on the use of economics in competition law, Mike Walker from Charles River Associates noted that, “Merger simulations omit important factors including barriers to entry and expansion; buyer power and the potential for post-merger coordination”. He further added that merger simulations “add confidence to the competitive effects analysis but are no substitute for the competitive effects analysis”. However, because merger simulations and regressions force assumptions to be made explicit (rather than subsumed), “they add focus to what really matters, why it matters and how much it matters”. To some extent, econometrics help assess what evidence has been gathered and how useful the evidence is to the analysis, but those tools are merely predictive and equally sound competing models may sometimes offer differing predictions. As a result, econometric models, especially the most complex ones, should come in addition to other factual evidence in the file and should probably not be the sole piece of evidence upon which a prohibition decision rests.

Lastly, a party seeking to deconstruct an econometric model should adduce elements showing that its alternative methodology is reasonably well founded and generate substantially different results. If this is the case, then the econometric model would be deemed weak or unreliable to prove the claimed anti-competitive effects.

---


VI. CONCLUSIONS

As explained above, European Courts have not yet been called upon to rule on the appropriateness and robustness of econometric evidence in a merger context. Given the increased use of those econometric instruments in EC merger investigations, a day will come when the issue will be raised and litigated in the court-room in Luxembourg. The question is whether the courts should intervene, as they have done in the past in relation to other factual elements, conclusions drawn from them, and economic theories, or whether they should essentially satisfy themselves with a review of the Commission’s interpretation of information of an economic nature. The latter option would have the merit of preserving the need for the Court to adopt a deferential approach vis-à-vis complex economic assessment and with the division of powers between the Commission and European Courts. 108 On the other hand, the proposed guidelines in Section V above suggest that the Court of First Instance could have a role to play in the administration of econometric evidence. In particular, the Court could review (i) whether the econometric analyses were conducted in a transparent manner, (ii) whether the analyses essentially fit well with key market conditions and support the other elements of evidence in the file, and (iii) whether the Commission has adequately weighed the econometric evidence in support of its conclusions against competing models. As to the last condition, the recent Oracle/PeopleSoft merger case indicates that the Commission was very careful not to move too quickly by relying on “crude” estimates, but instead embarked on a thorough review of alternative econometric models to assess whether its initial objections were well founded.109

108 As discussed above, unlike the DOJ and the FTC in the United States, the Commission is in fact the judge of first instance.