Best Practices for Expert Economic Opinions
- Key Element of Forensic Economics in Competition Law -[*]

Arndt Christiansen
Christian Ewald

July 2013

(forthcoming in: Heike Schweitzer and Kai Hüschelrath (eds.): Public and Private Enforcement of Competition Law in Europe: Legal and Economic Perspectives, Physica Publishing, Heidelberg)

Abstract

In recent years the importance of economics for competition law and policy has steadily increased. As a result, the issue of an effective integration of economics into competition law enforcement has gained prominence. This paper argues that the most relevant issues and challenges in this context are best encapsulated by the term forensic economics in competition law enforcement. Expert economic opinions constitute one specific input channel for forensic economics in competition law proceedings. In order to contribute effectively to better informed decisions, expert submissions, however, have to conform to certain minimum quality standards such as those laid down in the "Best Practices for expert economic opinions" issued by the Bundeskartellamt in October 2010. A comparative analysis of the Bundeskartellamt's Best Practices reveals that they are broadly in line with similar guidance documents issued by competition authorities in other jurisdictions. Moreover, the court-based adversarial enforcement regime in the U.S. developed very similar principles governing the admissibility of expert testimony. Accordingly, there is a growing international consensus on minimum quality standards which should guide forensic economics in competition law enforcement in general. These can be summarised under two principles: relevance and reliability. Both are of equal importance.

JEL Codes: K21, K41, L40

Keywords: competition law, economic evidence, forensic economics, economic experts

---

[*] Christian Ewald is head of the Unit G3 - Economic Issues in Competition Policy of the Bundeskartellamt (German Federal Cartel Office). Arndt Christiansen is an economist in the same unit. All opinions in this article are those of the authors and do not necessarily represent the official position of the Bundeskartellamt. This article draws on a presentation by Christian Ewald at the ZEW Conference "Public and private enforcement of competition law" in March 2011 as well as a presentation by Arndt Christiansen at the 4th St. Martin Conference of the Office for the Protection of Competition at Brno in November 2010, which was later published in modified form (*Christiansen* 2011). The authors would like to thank participants at both conferences for valuable comments and suggestions as well as their colleague Sara Buccino for excellent editorial assistance.

Contents

I. Introduction

In October 2010 the Bundeskartellamt, the independent German federal competition authority, for the first time published a formal notice on binding quality standards for expert economic opinions, the Best Practices for expert economic opinions ("Best Practices").[1] This testifies to the greater importance of economic reasoning and methods in German competition law enforcement. The Best Practices are first and foremost intended to make sure that the interaction between the parties' economic experts, the competition authorities and the courts contributes effectively to a high(er) decision quality. Even if expert studies constitute just one specific "input channel" with which (new) theoretical insights and empirical analyses can be put forward in competition law proceedings, a detailed analysis and in particular a comparison with similar documents and principles applied in other jurisdictions provides a valuable insight into core principles for an effective integration of economic analysis in competition law enforcement in general.

The remainder of the paper is structured as follows: Section II sketches the main issues and challenges of a proper integration of economic arguments and methods into competition law enforcement. Section III specifies the rationale and purpose of appropriate quality standards for economic submissions, describes key elements of the Bundeskartellamt's Best Practices and provides a comparison with similar documents published by competition authorities in other jurisdictions. Subsequently, Section IV analyzes the quality standards developed and applied within the U.S. adversarial enforcement regime for (economic) expert testimony in court. Section V concludes.

II. Forensic economics in competition law

The single most important recent trend in competition law and policy has been the increasing importance of economic analysis.[2] On the EU level this development has often been labelled with the term "more economic approach" following certain statements by European Commission representatives.[3] The new approach has been debated with particular intensity in reaction

---

[1] Bundeskartellamt, Best Practices for expert economic opinions, 20 October 2010, available at http://www.bundeskartellamt.de/wEnglisch/download/pdf/Merkblaetter/Bekanntmachung_Standards_Englisch_final.pdf. In case of contest only the German version is valid, which is available at http://www.bundeskartellamt.de/wDeutsch/download/pdf/Merkblaetter/Merkblaetter_deutsch/Bekanntmachung_Standards_final.pdf.

[2] See inter alia *Ewald* (2011) with regard to Germany and *Christiansen* (2010) with regard to the EU.

[3] For example, then Commissioner for Competition Policy Mario Monti said in 2002: "I should like to underline that an increased economic approach in the interpretation of our rules was, indeed, one of my main objectives

to the European Commission's reform initiatives in virtually all areas of competition law since the late 1990s.[4] Very pronounced criticism came from German scholars and practitioners, albeit from somewhat different perspectives and with different reform proposals.[5] Presumably, some if not most of the criticism was due to the perceived normative and policy implications of the Commission's new "approach" (also *Haucap* 2007).[6]

Irrespective of these more abstract debates, the cardinal relevance of economics as a scientific discipline for competition law and policy seems beyond any reasonable doubt.[7] Economics heavily influences competition law at distinct stages, namely the design of the rules including guidelines as well as the analysis of individual cases.[8] The focus here is on the analytical refinements in the substantive assessment by means of introducing economic concepts and a greater use of quantitative analyses. These refinements closely mirror advances in industrial economics (or industrial organization as it is called in the US), the field of economic science which is most closely related to competition law and policy. More precisely, academic research greatly expanded the range and sophistication of available theoretical concepts and empirical tools (overviews by *Buccirossi* 2008, *Davis*/*Garcés* 2010 and *Davis* 2011). In addition, empirical work made progress because of the increasing availability of quantitative data, the advancement of statistical software packages and growing computer power.

The task of integrating available scientific knowledge and progress properly into different stages of the legal process is, however, by no means a distinctive feature of competition law. On the contrary, the relevant issues and challenges arise in many if not all areas of law enforcement and can probably best be summarized under the term "forensic science". Broadly defined

> "[...] forensic science (often known as forensics) is the application of a broad spectrum of sciences and technologies to investigate and establish facts of interest in relation to criminal or civil law. The word *forensic* comes from the Latin *forēnsis*, meaning 'of or before the forum.' In Roman times, a criminal charge meant presenting the case before

---

[…]. And we have already substantially increased our economic approach in all areas of competition policy." (Quoted from Mario Monti, 2002, EU Competition Policy, 31.10.2002, available at http://ec.europa.eu/ competition/speeches/, at p. 7).

[4] See the sympathetic overviews by the two former Chief Competition Economists *Neven* (2006) and *Röller* (2005).

[5] See inter alia *Böge* (2004), *Budzinski* (2008), *Möschel* (2013) and *Schmidt* (2007).

[6] These debates e.g. relate to the ultimate goal and possible intermediate targets of competition law and policy.

[7] For the sake of a focused discussion it seems advisable to separate normative or policy issues from the analytical question of the integration of economics in competition law enforcement (also Ewald 2011, 21 et seq.; Christiansen 2010, 285 et seq.). This separation will be adhered to in this article.

[8] See in general on this distinction and its implications *Christiansen/Kerber* (2006).

> a group of public individuals in the forum. Both, the person accused of the crime and the accuser would give speeches based on their sides of the story. The individual with the best argument and delivery would determine the outcome of the case."[9]

Accordingly, the issues and challenges associated with an effective integration of economic concepts and methods in competition law enforcement seem to be best encapsulated by the term forensic economics in competition law (also *Schinkel* 2008; *Ewald* 2011).

Currently, there is, however, no generally accepted definition of the scope and precise meaning of forensic economics. In fact, the term has traditionally received a quite narrow interpretation with respect to the context and the kind of work done. As *Zitzewitz* (2012, 731) aptly put it: "Traditionally, forensic economics has referred to the application of economics to the detection and quantification of harm from behavior that has become the subject of litigation, and has been practiced by experts who are paid by the court or one of the parties." Especially in the US economists testify regularly in court proceedings for damage liability for example following traffic accidents, industrial accidents or commercial litigation. The respective field is organised in the National Association of Forensic Economics (NAFE)[10] and has its own journal, the Journal of Forensic Economics (see *Slesnick et al.* 2013 for a recent survey among members of the NAFE).[11]

In recent years the term forensic economics has come to be used in a somewhat broader sense. In particular, academic papers have been published which covered a range of diverse subject-matters such as trading on financial markets, teaching, surgery, traffic controls and real estate brokerage (see examples in *Ritter* 2008, *Schap* 2010 and *Zitzewitz* 2012). However, this broader conception does not conform to the specific meaning attributed to the term in our context of competition law enforcement. Here, the focus is not exclusively on the identification of (personal) damages and the calculation of their magnitude (although this is one of the specific tasks in private competition law enforcement). Rather, the task of forensic economics in particular in public competition law enforcement lies in the assessment of the competitive effects of firm conduct against the background of relevant theoretical and empirical knowledge and the identification of competitively harmful conduct as opposed to neutral or even benign behaviour.

---

[9] Quoted from wikidepia at https://en.wikipedia.org/wiki/Forensic_science.
[10] See the website of the NAFE at http://www.nafe.net/.
[11] Among the responding NAFE members the mean time of practicing forensic economics amounts to 25.48 years (*Slesnick et al.* 2013, 91). Moreover, the survey noted a shift of income sources away from academic salaries to consulting which may hint at an increasing detachment from academia (*Slesnick et al.* 2013, 92).

A more appropriate definition of forensic economics makes reference to the relevant academic field adjacent to competition law enforcement. For example, according to *Schinkel* (2008, 3) forensic economics in competition law is the "application of theoretical and empirical industrial organization economics in one or more of the various stages of the legal process of competition law enforcement. It is close to antitrust economics, which is concerned with the economics underlying competition law generally." This perception has the merit of stressing the fact that the application of economics in competition law is not confined to supporting the decision-making in individual cases but that it is also necessary for the development of general rules and for the setting of priorities for investigation and enforcement. Moreover, it is not limited to empirical (quantitative or econometric) analyses (see also *Italianer* 2011). Although empirical evidence is of course important and economists are especially well-placed to its development, the implementation of quantitative and econometric analysis is sensible only as the second logical step. Indeed, the more important first logical step is the conceptual analysis of a given case[12], in particular the development of a consistent and testable theory of harm. The term refers to a conceptual framework which specifies in what way competition is actually harmed (or is likely to be so if future conduct is concerned) by a certain behaviour and which can be used to organise the facts of the case in question. Only if a sound conceptual framework has been established, it is possible to devise the appropriate investigations and assess the empirical evidence. This may include the collection of quantitative data, which can then be used for an econometric analysis. But in many cases also simpler types of empirical analysis may suffice. *Bishop* (2013, 68, fn. 5) in a recent paper quite rightly stated that "[it] is a common fallacy to equate the use of empirical evidence with the use of econometric analysis. Econometric analysis represents only one method for analyzing observed data."

Furthermore, the fact that forensics in general marks the interface between science and the legal process of law enforcement constitutes an important difference between forensic economics in competition law proceedings and economic research in the academic context (see also *Evans* 2008, esp. 114 and pp. 119 et seq.; *Fisher* 1989). In the latter the use of sophisticated models or complex quantitative techniques apparently is valuable for its own sake, because it demonstrates the researcher's capabilities or because the novelty of a piece of research may precisely depend on the method(s) employed. Moreover, it seems to be common

---

[12] The current Director-General at the Directorate-General for Competition of the European Commission ("DG COMP"), *Alexander Italianer* (2010, 3), offered a description of the task of the economists at DG COMP in the much the same way by saying: "The contribution of our in-house economists is not limited to quantitative econometric work. Our economists are now fully involved in the development of conceptual frameworks for our cases and our overall policy-making."

practice to prove the (theoretical) possibility of a certain result subject to a specific set of assumptions. This in turn leads to further research based on a slightly modified set of assumptions which in turn stimulates even further research and so on. In this process, time constraints apparently are not of foremost importance.[13] In fact, there is a long-standing criticism of modern industrial economics based primarily on game theory, namely that it produces too many theoretically possible results and too few insights as to their empirical relevance and applicability to real-world cases (*Fisher* 1989; *Budzinski* 2011; *Bishop* 2013).[14]

By contrast, in competition law enforcement the capabilities of the analyst and the novelty of the method(s) applied are not as important. Neither is the mere theoretical proof of the possibility of a certain result. Rather any economic analysis put forward in the context of competition law proceedings must produce robust and reliable results which help to decide a specific case within a given, often very tight time-frame. This means that it is not enough to merely state that a certain behaviour possibly leads to a certain effect. Rather it is necessary to offer a reasoned assessment as to whether this is likely in the case at hand.

Further challenges result from the character of forensic economics as the interface between economic science and the legal process of competition law enforcement. These relate to the practical interaction between law and economics respectively between practitioners with a legal background and those with an economic background (see also *Italianer* 2010; *Sibony* 2012; *Pohlmann* 2013). Properly understood, forensic economics does not intend to replace but to support the ultimately legal assessment in a given case effectively. Therefore, in order to be effective economic inputs – be they on the conceptual level or be they pieces of empirical analysis – must be sufficiently accessible and comprehensible to legal practitioners and, in fact foremost, to judges (see also *Nothdurft* 2008; *Wood* 2009).[15] Accordingly, the current Director-General at DG COMP, Alexander Italianer (2010, 5), correctly noted in a recent speech:

---

[13] They certainly do not (or at least should not) matter with regard to the economic "science" viewed as a whole but they likely do with regard to individual scholars who pursue an academic career which depends above all on articles published in highly rated journals in a finite period of time (see *Ellison* 2002 on that matter).

[14] *Fisher* (1989) contributed an already famous and particularly outspoken specimen of this criticism, and even more interestingly in one of the top journals in the field (Rand Journal of Economics). For example, he wrote (1989, 188): "Returning to my main subject, it should be plain that (with or without game theory) the status of the theory of oligopoly is that of exemplifying theory. We know that a lot of different things can happen. We do not have a full, coherent, formal theory of what must happen or a theory that tells us how what happens depends on well-defined, measurable variables." Or, at a later point in his article (1989, 123): "There is a strong tendency for even the best practitioners to concentrate on the analytically interesting questions rather than on the ones that really matter for the study of real-life industries."

[15] See on that matter also the OECD Competition Policy Roundtable on Presenting Complex Economic Theories to Judges, 2008, DAF/COMP(2008)31, available at http://www.oecd.org/daf/competition/abuse/41776770.pdf.

> "However we must all bear in mind that we ultimately have to prove our cases before a court. And when we prove our cases we do not do it to an economic standard, but to a legal one. The key point here is that we are in fact using economic analysis to support the construction of legally robust cases."

On the economics side, this "rule of law" in competition law enforcement has important implications not only for the final presentation of economic analyses but also for the decision on which analyses to perform in the first place. The relevance for the case at hand and the robustness of the results are particularly important. The same holds for the accessibility and comprehensibility of economic submissions for legal practitioners and judges.[16]

However, operability and effectiveness of any interface crucially depend on the quality of the connection and the responsiveness on both sides. Therefore, the legal side has likewise parallel obligation to provide for a sufficient degree of economic knowledge to assess the adequacy and relevance of economic analysis in a given case. This is to make sure that the level of complexity of an analysis does not fall below the level needed for an appropriate assessment of the case at hand. In other words: Economic experts commissioned or appointed by the parties or the courts do not represent a panacea to cure any communication problem between practitioners with a legal background and those with an economic background. Exactly the opposite is true. To avoid the risk of being (partially) replaced by economic experts in their task and self-conception to conclusively assess a specific case in legal terms, lawyers and judges should possess or acquire the basic economic knowledge necessary to "separate the wheat from the chaff", i.e. to evaluate the relevance and adequacy of economic expert submissions. This ability is all the more necessary in cases where the decision-maker is confronted with contradicting economic submissions from opposing parties.

III. Minimum quality standards for expert economic submissions

1. Purpose and rationale

The assessment of the quality of an economic submission in competition law proceedings in fact is equal to an evaluation of its probative value. Against this background and also taking into account the most recent developments in enforcement practice, several reasons strongly

---

[16] For example, *Bishop* (2013, 76) put it that way: "If economists cannot explain and demonstrate the relevance of their results, and show how their predictions about economic effects are drawn from a body of work that is consistent with observed industry facts, it is not clear why they should be taken seriously by the ultimate decision-makers."

militate in favour of the development and implementation of certain minimum quality standards.

Since the primary objective of forensic economics is to contribute effectively to a high decision quality,[17] poor economic arguments and analyses providing only insufficient probative values should be avoided generally. This is even more so because any sound economic analysis of a specific case also has to satisfy the side-condition of procedural efficiency.[18] Considering the famous explicit warning attributed to *William Gladstone* that "justice delayed is justice denied", the fact that different economic submissions may come to different conclusions or even contradict each other, should not end up in a 'battle of sophistication' and thus a deadlock situation, which significantly staves off the binding conclusion of single cases and sufficiently prompt clarification of legal disputes. Conversely, the objective to improve procedural efficiency must not suppress the appropriate assessment of the relative probative value of possibly even contradicting economic submissions. Any assertion that contradicting economic submissions in fact 'neutralize' each other and do not have to be assessed in terms of their (relative) quality and probative value should be avoided. In this context, quality standards for economic submissions may in particular facilitate an efficient and transparent debate of the merits and demerits of concurrent economic submissions.

The experience from German competition law enforcement in recent years clearly indicates that the challenge of a proper assessment of the relative probative value of economic expert submissions has become increasingly relevant. Since the creation of the economics unit at the Bundeskartellamt in mid-2007 the number of expert economic opinions submitted has risen steadily (*Christiansen*/*Locher* 2011, 446 et seq.; *Christiansen* 2011, 9 et seq.; *Ewald* 2011, 39 et seq.). The expert opinions either were submitted on own initiative of the parties or in reaction to the economic reasoning and empirical analyses conducted by the Bundeskartellamt. Taken together, the number of expert opinions since July 2007 exceeds sixty. In the year 2012 alone a total of 14 studies were submitted and evaluated. In principle, they concern all areas of competition law enforcement. The majority of studies were compiled by specialist economic consultancies, some of which focus their practice on Germany and some of which be-

---

[17] In a decision-theoretic framework, the objective of an increased decision quality corresponds to a reduction of the cost of erroneous decisions, i.e. of over-enforcement (false positives, type-1-error) or under-enforcement (false negatives, type-2-error) of the legal provisions at stake (*Christiansen*/*Kerber* 2006, 223 et seq.; *Ewald* 2011, 18 et seq.).

[18] In a decision-theoretic framework, this aspect is covered by the implementation cost of any attempt to reduce the cost of erroneous decisions by a more sophisticated and elaborate analysis of the relevant facts of a case.At the margin, any further reduction of the cost of error (marginal benefit) should be only aspired if the (expected) reduction exceeds the additional implementation cost (marginal cost) associated with the more sophisticated assessment of facts.

long to the international consultancies.[19] A noteworthy number of opinions were prepared by individual academic economists.

Looking at absolute numbers, merger control seems to have been a focal point. However, one has to be aware of the high number of merger cases compared to other areas. In fact, the relative importance of economic studies appears to be at least as high in other areas such as cartel enforcement and sector inquiries. As a rule, expert opinions are submitted in more complex cases only. In terms of methods most of the studies contained quantitative analyses of some sort while practically all opinions contained references to theoretical research. Purely conceptual or theoretical analyses were, however, the exception.

2. The Bundeskartellamt's "Best Practices for expert economic opinions"

To take account of these developments, the Bundeskartellamt in October 2010 for the first time published a formal notice on binding quality standards for expert economic opinions. The notice is entitled "Best Practices for expert economic opinions" Although formally addressed only to expert opinions submitted to the Bundeskartellamt the Best Practices have in fact wider implications. To begin with, their content is equally relevant to economic arguments put forward by parties other than economic experts. Obviously, company lawyers and outside counsel may also use economic arguments. Clearly, the relevance of these arguments will then be assessed according to the same standards as those set out in the Best Practices. Furthermore, they also implicitly set standards for economic analyses conducted by the authority itself. However, mainly due to confidentiality requirements especially with regard to empirical analyses a certain asymmetry is inevitable. This is, however, not fundamentally different from other pieces of evidence. Typically, information gathered in the course of market investigations is not disclosed to the parties completely.

In line with the general rationale for minimum quality standards set out above, the Best Practices explicitly state that "[the] Bundeskartellamt expects that common and transparent procedures for evaluating expert economic opinions will allow for a fair and efficient application of this type of evidence to the specific competition law proceedings."[20] Focusing on the probative value of economic submissions the document furthermore stipulates that "arguments, results and conclusions of economic opinions which do not comply with these standards can

---

[19] For an overview of the economic consultancies active internationally see the recent compilation in Global Competition Review (2013).

[20] Quoted from Best Practices, p. 2.

only be considered to a lesser extent, if at all."[21] The aim of the document is thus not to discourage the submission of economic opinions. Rather, the aim is to discourage parties from submitting studies of low quality or with little or no relevance for the case at hand. The reason is that such studies cannot contribute to a high decision-quality but only produce costs and effort for all parties concerned.

The detailed structure of the Best Practices (see table 1 below) clearly indicates that more room is devoted to substantive issues while procedural steps are treated in less detail. This weighting not least reflects the fact that – from a legal point of view – economic expert opinions are in principle subject to the same procedural rules as other documents submitted by the parties. Accordingly, the Best Practices do not set out binding procedural steps and are not meant to establish a universally applicable course of action for dealing with expert opinions. Contacts before submitting an opinion are nevertheless held to be advisable.[22] Moreover, the necessity of a timely submission is stressed repeatedly in order to enable the authority to examine the study adequately.[23]

[21] Quoted from Best Practices, p. 2.
[22] See Best Practices, p. 9.
[23] See Best Practices, pp. 2 and 9.

Table 1: Structure of the Best Practices by the Bundeskartellamt

(page numbers at the right-hand side)

With regard to substance, the notice specifies several basic requirements which are subsequently elaborated further:[24] Above all, the analyses conducted have to be relevant for the competition issues of the case at hand. Should the submission contain several different pieces of analysis with regard to the same competition issue, consistency of the results constitutes an additional requirement. The key requirement of robustness of the results presented is further elaborated in the Best Practices both with regard to theoretical arguments and with regard to empirical analyses (sections 2.3 and 3.4). If a certain theoretical model proves to be highly sensitive to small changes in the underlying assumptions, the Best Practices foresee that less probative value has to be attached to the results compared to more robust models. The same applies to empirical results if they prove to be highly sensitive to minor changes in the dataset or the included variables.

[24] Best Practices, pp. 2 et seq.

Furthermore, any submission has to be complete and comprehensible; assumptions have to be transparent and ought to be discussed with respect to their compatibility with the market conditions underlying the specific case. An expert submission can only be considered complete if the Bundeskartellamt is able to replicate the relevant arguments and quantitative analyses in each and every detail. Where relevant details are missing, an expert opinion is regarded as incomplete and will, depending on the level of incompleteness, not be considered at all or only to a lesser degree. With regard to quantitative analyses the requirement of completeness includes in particular the submission of the relevant (raw) data (including the documentation of the process of data gathering and processing), programme codes as well as explanations that are necessary to follow and replicate the empirical results presented.[25]

The Best Practices in addition on the one hand clearly state a preference for established and tested theories and methods. These have been published in a scientific journal and have thus undergone peer review. Ideally, they have also been used in competition law proceedings before and have thus been examined with regard to their informative value and limitations in this specific context. On the other hand, the Best Practices also do not rule out the possibility to apply relatively new and untested concepts or methods.[26] Such theories and methods are, however, said to require a more elaborate explanation and reasoning in order to be accepted. This includes an explanation as to why the expert holds established theories or methods to be insufficient in the case at hand.

Concerning the presentation of the results, the Best Practices require the inclusion of a non-technical summary, which should be comprehensible also to a non-economist audience, and a complete list of references.[27] As regards the content of the non-technical summary, the Best Practices require five aspects to be covered: (1) purpose: issues addressed by the opinion and their relevance, (2) methodology: reasons for the method(s) chosen, (3) specification of the theoretical model and/or empirical method, (4) presentation of main results and their implications for the competitive assessment and (5) a discussion of the robustness of results.

In summary it can be said that the Best Practices essentially stipulate and further elaborate the following core evaluation criteria for the quality of expert economic submissions:

- Relevance to the case at hand,
- reliability / robustness of the results,

---

[25] Best Practices, p. 9.
[26] Best Practices, p. 4.
[27] Best Practices, pp. 3 et seq.

- replicability / transparency of all steps of analysis and
- accessibility / comprehensibility also with regard to non-experts.

Despite expressing a preference for established and tested theories and methods, the Best Practices abstain from detailed prescriptions with respect to the substantive content or the methodology of economic expert submissions.

3. The international perspective

As already mentioned, the significance of economic expertise has increased in recent years. As a corollary, a rising number of expert opinions are submitted to competition authorities and competent courts. As a reaction guidance documents of some kind have been issued in a growing number of jurisdictions in order to guarantee the quality of the submissions (also *Christiansen*/*Locher* 2011, 451 et seq.; *Christiansen* 2011, 16 et seq.; *Ewald* 2011, 40 et seq.; *Walker* 2011, 30 et seq.). To put the Bundeskartellamt's Best Practices into perspective, this section offers an international overview and contains a brief comparison with other guidance documents published by competition authorities (sub-section a). Then a few remarks follow with regard to jurisdictions where economic expert opinions are submitted but the respective authority has not issued a comparable guidance document so far (sub-section b).

a) A comparison with guidance documents from six other jurisdictions

Apart from Germany, in several other jurisdictions guidance documents with regard to economic expert opinions have been issued by competition authorities.[28] Table 2 below lists relevant documents from six jurisdictions, three of them from Europe (European Union, France, United Kingdom) and another three from overseas (Australia, Korea, USA).[29] Interestingly, with the exception of the Best Practices by the US Federal Trade Commission all listed documents were issued or revised[30] around the year 2010 when also the Bundeskartellamt issued the Best Practices.

---

[28] The list reflects the authors' best knowledge based on a review of the relevant literature combined with a search of the websites of selected competition authorities. We do not claim completeness but we are fairly certain that we traced down both most of the relevant documents as well as the most relevant documents. We would, however, be very thankful if further guidance documents were brought to our attention.

[29] The abbreviations used in the following footnotes are explained in table 2.

[30] The Australian Federal Court issued its first guidelines in 1998, which were revised regularly (*Veljanovski* 2009, 16 et seq.).

Table 2: Notices and comparable guidance documents with regard to economic expert opinions from other jurisdictions

Jurisdiction	**Title of Document, Source online, Date of publication, abbreviation**
Australia	Australian Competition and Consumer Commission, Formal merger review process guidelines 2008, available at http://www.accc.gov.au/content/index.phtml/itemId/776055, June 2008 (henceforth "ACCC, Guidelines") Federal Court of Australia, Practice Note CM 7: Expert Witnesses in Proceedings in the Federal Court of Australia, available at http://www.fedcourt.gov.au/case-management-services/ADR/?a=16333, 01 August 2011 (henceforth "FCA, Note")
European Union	Directorate General for Competition, Best Practices for the submission of economic evidence and data collection in cases concerning the application of Article 101 and 102 TFEU and in merger cases, available at http://ec.europa.eu/competition/consultations/2010_best_practices/best_practice_submissions.pdf, January 2010 (henceforth "DG COMP, Best Practices")
France	Autorité de la Concurrence, Lignes directrices de l'Autorité de la concurrence relatives au contrôle des concentrations, available at http://www.autoritedelaconcurrence.fr/doc/ld_concentrations_dec09.pdf, paras 558 et seq., December 2009 (henceforth "AdlC, Lignes directrices"),
South Korea	Korea Fair Trade Commission, Guidelines on the Submission of Economic Analysis Evidence, available at http://eng.ftc.go.kr/files/static/Legal_Authority/Guidelines_on_the_Submission_of_Economic_Analysis_Evidence_mar_14_2012.pdf, July 2010 (henceforth "KFTC, Guidelines")
United Kingdom	Competition Commission, Suggested best practice for submissions of technical economic analysis from parties to the CC, available at http://www.competition-commission.org.uk/rep_pub/corporate_documents/corporate_ policies/best_practice.pdf, February 2009 (henceforth "CC, Suggested best practice") Civil Justice Council, Protocol for the Instruction of Experts to give Evidence in Civil Claims, http://www.justice.gov.uk/courts/ procedure-rules/civil/contents/form_section_images/practice_directions/pd35_pdf_eps/pd35_prot.pdf, June 2005 amended October 2009 (henceforth "CJC, Protocol") Competition Commission and Office of Fair Trading, Good practice in the design and presentation of consumer survey evidence in merger inquiries, available at http://www.oft.gov.uk/shared_oft/consultations/merger-inquiries/Good-practice-guide.pdf, March 2011 (henceforth "CC/OFT, Good practice")
USA	Federal Trade Commission, Best Practices for Data, and Economics and Financial Analyses in Antitrust Investigations, available at http://www.ftc.gov/be/bestpractices.shtm, 2002 (henceforth "FTC, Best Practices")

Naturally the content and scope of the documents vary somewhat between the jurisdictions due to differences in the substantive provisions and the procedural framework and presumably also due to different experiences with expert opinions. In case of Australia and the United Kingdom supplementary documents from the court system are also included in the table because they form an important part of the overall institutional framework (see *Veljanovski* 2009).[31]

With respect to scope the most comprehensive document are the Best Practices of the EU Commission's DG Competition (DG COMP), which among other things also contains some general remarks on economic models.[32] In contrast to the Bundeskartellamt's Best Practices, the documents by DG COMP and the US Federal Trade Commission also deal with requests by the respective authorities for quantitative data.[33] This is a separate but related issue because data requests typically form the basis for the quantitative analyses carried out by the authorities.[34] For example, DG COMP sets out the three following requirements for responses to a formal data request according to Article 18 of Regulation 1/2003 or Article 11 of the Merger Regulation: completeness, correctness and timely submission.[35] The documents by the French Autorité de la Concurrence and by the British Competition Commission and Office of Fair Trading also deal with one specific form of evidence often used in connection with economic submissions, namely customer survey evidence.[36] For example, data from such surveys can be used to estimate diversion ratios for the purpose of assessing merger effects (e.g. *Edwards* 2013).

At the same time, all guidance documents display a high level of correspondence. A common basic requirement is relevance, more specifically relevance of the submitted analysis for the competition issue in question.[37] A closely related requirement is a clear statement of the questions that the expert was commissioned to address and any specific hypotheses tested.[38] Partly a non-technical summary of the analysis and the main results or a summary of conclusions are

---

[31] The underlying provisions of procedural law as for example in case of the UK Part 35 of the Civil Procedure Rules (CPR 35) and its associated Practice Direction (PD 35; available at http://www.justice.gov.uk/courts/procedure-rules/civil/rules/pd_part35) have, however, not been included.
[32] DG COMP, Best Practices, paras 9 et seq.
[33] DG COMP, Best Practices, paras 46 et seq.; FTC, Best Practices, p. 1.
[34] DG COMP, Best Practices, paras 48 and 51.
[35] DG COMP, Best Practices, paras 60 et seq.
[36] AdlC, Lignes directrices, paras 577 et seq.; CC, Suggested best practice, paras 25 et seq.; CC/OFT, Good practice.
[37] DG COMP, Best Practices, para 16; AdlC, Lignes directrices, para 568; KFTC, Guidelines, Article 4; CJC, Protocol, paras 4.4 and 6.1.
[38] DG COMP, Best Practices, paras 17 et seq.; AdlC, Lignes directrices, para 559; ACCC, Guidelines, paras 3.40 and 3.41; FCA, Note. para 2.1.

also required.[39] Transparency, especially with regard to the specification of any model used and the assumptions made, is generally demanded. The complete documentation of the analyses and replicability of all results by the authority are also a common requirement.[40] More specifically, in the case of empirical analyses the transmission of the complete data set and partly the program codes are typically asked for.[41] The complete data set is meant to include both the raw data and any alterations or modifications made by the experts such as the removal of "outliers" or the standardisation of certain variables. Another standard requirement concerns the robustness of the results.[42] This last point entails, in particular, the documentation of respective tests as part of the submission. Typically the documents also express a preference for the use of established methods and require the relevant literature to be cited.[43]

Taken together all mentioned requirements may be summarised under the principles of relevance and reliability. Both are of equal importance. Failure to conform to the first principle means that the expert opinion cannot influence the outcome of a case since it offers no relevant evidence. This inevitable consequence is irrespective of the technical quality and the level of sophistication of the analysis in question. Failure to conform to the second principle also rules out any influence on the decision but for a different reason. In this case the analysis is potentially relevant, but the results are not reliable, i.e. they lack probative value. Consequently, a good economic expert opinion must conform to both principles. Only then the integration of economic inputs into the decision-making process can be successful. A final common requirement relates to procedure. Most if not all guidance documents stress the necessity to inform the authority (or the court) about the involvement of economic experts at an early stage of the proceedings and especially refer to the time-limits in merger control proceedings.[44]

Another important similarity between the compared guidance documents lies in the fact that they all abstain from detailed prescriptions as to which specific theoretical models, which empirical methods or which kind of data should be used in individual cases. Rather this is left

---

[39] AdlC, Lignes directrices, para 562; CC, Suggested best practice, para 8; CJC, Protocol, para 13.14.
[40] DG COMP, Best Practices, para 32; AdlC, Lignes directrices, para 570; CC, Suggested best practice, para 8; KFTC, Guidelines, Articles 4 and 5; ACCC, Guidelines, para 3.42; FCA, Note, para 2.1.
[41] DG COMP, Best Practices, para 32; AdlC, Lignes directrices, para 571; CC, Suggested best practice, paras 8 and 19 et seq.; FTC, Best Practices, p. 2; ACCC, Guidelines, para 3.41.
[42] DG COMP, Best Practices, paras 37 et seq.; AdlC, Lignes directrices, paras 569 and 580; CC, Suggested best practice, paras 18 and 30; KFTC, Guidelines, Article 4; FTC, Best Practices, p. 2; ACCC, Guidelines, para 3.41.
[43] DG COMP, Best Practices, paras 29 and 40; AdlC, Lignes directrices, para 562; CC, Suggested best practice, paras 14 and 32; CJC, Protocol, para 4.5; KFTC, Guidelines, Article 4.
[44] DG COMP, Best Practices, para 2; KFTC, Guidelines, Article 6; AdlC, Lignes directrices, para 564; FTC, Best Practices, p. 2.

to the discretion of the parties and their advisors. The guidance documents likewise do not set a range of issues where the submission of expert opinions would be necessary or even advisable. All the reviewed guidance documents focus on the process after a party has decided to make use of economic expertise, namely the presentation of the economic work and results before the authority (or court where applicable).

b) A quick glance at jurisdictions with no guidance documents

In many more jurisdictions than those reviewed above no guidance documents have been issued so far.[45] This may be due to various reasons which can only be conjectured here. First of all, quality problems with economic studies may not have arisen so far.[46] Secondly, there may be other means of dealing with the issue: General rules for the procedure and the content of submissions may make special provisions with regard to economic opinions dispensable; alternatively, the orientation at the existing guidance documents from other jurisdictions may have been sufficient so far.[47] An inquiry whether and to what extent these reasons are valid is, however, beyond the scope of this paper. The point to be made here is merely that the underlying challenge of integrating economics into competition law enforcement certainly is relevant in more jurisdictions than the ones that took the formal step of issuing guidance documents for expert economic opinions. This point is corroborated by a quick glance at three other jurisdictions, which differ in terms of maturity of their competition law regime, country size and geographical position.

The first jurisdiction is Canada where according to some observers "the use of expert economists […] is reasonably common in more complex merger cases" (*Goldman et al. 2011*, p. 702). *Goldman* et al. (2011) specifically refer to econometric analyses conducted by economic experts and mention the availability of data and time constraints as the most important limiting factors. In fact, beyond specific econometric work the entire assessment of mergers is informed by economics and, thus, amenable to expert opinions (see *Ross* 2006). An area particularly amenable to economic analysis is the efficiency defense incorporated in the Canadian Competition Act (see *Ross/Winter* 2005). Accordingly, the Canadian contribution to the

---

[45] See for example the various country contributions in the OECD Roundtables on Managing Complex Mergers (DAF/COMP(2007)44, available at http://www.oecd.org/daf/competition/mergers/41651401.pdf) and on Economic Evidence in Merger Analysis (DAF/COMP(2011)23, available at http://www.oecd.org/daf/competition/EconomicEvidenceInMergerAnalysis2011.pdf.

[46] This in turn may have two reasons. Either economic opinions have suffered from quality problems but these have not been detected or there have been no submissions of poor quality so far.

[47] This may particularly be the case in the European Union where smaller authorities could look to the guidance offered by DG COMP as the arguably most important authority.

2011 OECD Roundtable on Economic Evidence in Merger Control emphasized the "considerable productive interaction between the parties' economists and the Bureau's internal and external economists"[48] in a recent - not further specified - case.

The second case is New Zealand where there are also similarly clear indications as to the regular involvement of economic experts although no guidance document by the Commerce Commission exists. To begin with the Mergers and Acquisitions Guidelines issued in 2003 contain at least a brief reference to economic modeling that already makes clear its perceived usefulness by the Commission.[49] The draft revised Guidelines issued for consultation in March 2013 again repeatedly make references to "economic evidence" and "expert economic evidence the applicant wishes to provide" as relevant evidence in merger control proceedings.[50] Moreover, the Commission conducted own economic analyses in a number of cases (see *Law et al.* 2010). The agency reportedly also developed an "approach to modeling" and inter alia implemented a „quality control policy" for its own modeling work that also applies to external studies (*Law et al.* 2010, 22-23).[51] Also with regard to abuse of dominance economic analyses are commonly used to implement the so-called counterfactual test under section 36 of the New Zealand Commerce Act 1986 (see *Veljanovski* 2013).

Finally the People's Republic of China may be mentioned as an example of a relatively young competition law regime. Only in August 2008, the Anti-Monopoly Law (AML) entered into force. Numerous pieces of secondary legislation followed suit (see overviews by *Wei* 2013 and *Furse* 2013 with regard to merger control). The prescriptions in the AML with regard to anti-competitive agreements and abuse of market power generally provide for a rule of reason approach that leaves ample room for the application of economics (see *Lu/Tan* 2012).[52] Merger control is another important and quickly developing area of enforcement, which is open to economic analysis (overview by *Furse* 2013). The coming into force of the AML and related

---

[48] OECD Competition Committee: Economic Evidence in Merger Analysis, DAF/COMP(2011)23, available at http://www.oecd.org/daf/competition/EconomicEvidenceInMergerAnalysis2011.pdf, p. 99.

[49] New Zealand Commerce Commission, Mergers and Acquisitions Guidelines, 2003, available at http://www.comcom.govt.nz/assets/Imported-from-old-site/BusinessCompetition/MergersAcquisitions/ClearanceProcessGuidelines/ContentFiles/Documents/Mergers-and-AcquisitionsGuidelines-2003.pdf, p. 32.

[50] New Zealand Commerce Commission, Draft Mergers and Acquisitions Guidelines for consultation, March 2013, available at http://www.comcom.govt.nz/assets/Business-Competition/Mergers-and-Acqusitions/Commerce-Commission-draft-Mergers-and-Acqusitions-Guidelines-for-consultation-08-March-2013.pdf, pp. 37, 38 , 39.

[51] See also New Zealand, Country Contribution, in: OCED Roundtable Managing Complex Mergers, DAF/COMP(2007)44, pp. 55-64 (available at http://www.oecd.org/daf/competition/mergers/41651401.pdf), pp. 63-64.

[52] One particular area especially amenable to economic input is (potentially) the efficiency defense in merger control (*Wei* 2013, 126).

secondary legislation in turn led to an increase in public enforcement and private enforcement in the lower and appellate courts (see *Li* 2012; *Wei* 2013). Especially with respect to the latter the China's Supreme People's Court issued a judicial interpretation (JI) in May 2012, in order to offer some guidance in resolving private disputes.[53] Article 12 of the JI states that parties may use specialists including economic experts and Article 13 states that the courts may also appoint an (economic) expert on their own initiative (*Lu/Tan* 2012, 15). Although case-law to date is limited, the framework outlined above makes it likely that economic experts will be employed regularly in the future.

IV. A special look at the US: The Daubert trilogy and beyond

To provide a full picture of the different approaches to promote an effective integration of economic analysis into competition law enforcement, a more detailed treatment of the developments in the U.S. seems to be useful for several reasons. In the U.S. in particular exists a distinct body of case-law regarding the admissibility of experts and their testimony in (all kinds of) court proceedings. This body and the related debate among both academics and practitioners are of much interest in the context of this paper, although it is not confined to antitrust. Still they form the basis for the specific debate in antitrust circles until today (see *Gavil* 2000, 2005; *Hovenkamp* 2005; *Werden* 2008; *Wood* 2009; *Langenfeld/Alexander* 2011; *Wrobel Meriwether* 2011). The obvious difference compared to the agency guidance papers reviewed above lies in the identity of the decision-maker, namely courts in the US context versus competition agencies. Still, the basic issue is the integration of scientific expertise into decision-making. The most important reason why the debate in the U.S. focuses on court proceedings is that – contrary to the administrative systems of public competition law enforcement prevailing in Germany and, in particular, on the European level – in the adversarial enforcement regime in the U.S. courts are involved to a greater extent in public competition law enforcement.[54] The federal antitrust agencies (DoJ and FTC) have far more limited formal decision-making powers compared to their European counterparts (see e.g. *Trebilcock/Iacobucci* 2002, pp. 368 et seq.; *Crane* 2011, 93 et seq.). Typically, the DoJ and to a lesser extent also the FTC must bring formal complaints before courts which can then order

---

[53] Provisions on Several Issues Concerning the Application of the Law in Adjudication of Monopoly-Related Civil Disputes, issued on May 8, 2012, effective from 1 June 2012, available in Chinese at http://www.court.gov.cn/qwfb/sfjs/201205/t20120509_176785.htm.

[54] There is no private enforcement before the European courts to date since there is no supranational law with regard to damages.

remedial relief. In addition, private enforcement which naturally takes place before courts has traditionally played a greater role in the US than in Germany and certainly in the EU, at least outside the area of merger control (*Jones* 1999; *Crane* 2011, 49 et seq,; for an analysis of recent case-practice see *Lande*/*Davis* 2008). This greater involvement of the judicature implies that the courts deal with economic opinions more often in the US and, thus, have the opportunity (or duty) to gather experience and devise strategies to deal with them adequately. In this latter regard the U.S. experience has important complementary insights to offer.

With respect to the integration of scientific evidence into the different stages of law enforcement, the US Supreme Court issued three landmark decisions in the 1990s which are commonly referred to as the „Daubert trilogy"[55]. In the constitutive Daubert decision issued in 1993 the Supreme Court assigned an obligatory "gatekeeping" function to trial judges in order to screen out scientifically inferior expert opinions at an early procedural stage (*Berger* 2000; *Hawk*/*Keyte* 2011, esp. 720 et seq.).[56] In interpreting the relevant piece of legislation, i.e. Rule 702 of the Federal Rules of Evidence, the Supreme Court laid out a threshold that expert testimony must satisfy in order to be admissible. The guiding principles are, again, relevance and reliability. As in the guidance documents reviewed above, the Supreme Court abstains from detailed prescriptions with respect to the substantive content of expert testimony. Instead, the Court outlined the focus of the inquiry in the following way:[57]

> "The inquiry envisioned by Rule 702 is, we emphasize, a flexible one. Its overarching subject is the scientific validity - and thus the evidentiary relevance and reliability - of the principles that underlie a proposed submission. The focus, of course, must be solely on principles and methodology, not on the conclusions that they generate."

As regards the examination of reliability a number of factors are mentioned which together have come to be known as the Daubert criteria.[58] These consist of

- the possibility and extent of testing of the theory or technique at hand,
- the question whether the theory or technique at hand was subject to peer review and publication,

---

[55] Daubert v. Merrell Dow Pharmaceuticals, 509 U.S. 579 (1993); General Electric Co. v. Joiner, 522 U.S. 136 (1997); Kumho Tire Co. v. Carmichael, 526 U.S. 137 (1999). The usual shorthand references for the decisions are "Daubert", "Joiner" and "Kumho". As regards the subject matter of the underlying legal disputes the first two related to toxic tort suits while the third one concerned a case of product liability action.

[56] The procedural framework differs between merger cases according to Section 7 Clayton Act and other antitrust issues because in contrast to the other cases Section 7 challenges typically proceed on the preliminary injunction track which inter alia does not provide for a final jury decision (*Hawk*/*Keyte* 2011, esp. 741 et seq.).

[57] Daubert v. Merrell Dow Pharmaceuticals, 509 U.S. 579 (1993), at 593.

[58] Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579 (1993), at 593f.

- the known or potential rate of error of a theory or technique, and finally
- the question of whether the theory or technique at hand enjoys general acceptability in the relevant scientific community.

With regard to the second criterion (peer review and publication) the Supreme Court does not stipulate a strict limitation to established and tested theories and methods. On the one hand the Court makes clear, indeed, that "submission to the scrutiny of the scientific community is a component of 'good science' […] because it increases the likelihood that substantive flaws in methodology will be detected"; but on the other hand the Court also acknowledges that "publication (which is but one element of peer review) is not a sine qua non of admissibility; it does not necessarily correlate with reliability […] and, in some instances, well-grounded but innovative theories will not have been published." Accordingly, the Court considers "the fact of publication (or lack thereof) in a peer reviewed journal […] [as] a relevant, though not dispositive, consideration in assessing the scientific validity of a particular technique or methodology on which an opinion is premised."[59]

Moreover, the Court made clear in the Daubert decision that it did not hold this set of criteria to be definitive.[60] This implies that the courts must decide on the relevance and weighting of the factors to be considered in a particular case. In the Kumho decision, the last of the above-mentioned trilogy, the Supreme Court in 1999 once again stressed the importance of the "gatekeeping requirement" and described the basic rationale as follows:

> "The objective of that requirement is to ensure the reliability and relevancy of expert testimony. It is to make certain that an expert, whether basing testimony upon professional studies or personal experience, employs in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field."[61]

Again, relevance and reliability are mentioned as guiding principles. According to *Gavil* (2000, 857) the key objective is to keep "junk science" out of the courtroom and to at least limit the prevalence of so-called "hired gun" experts who appear to be ready to testify whatever the client needs.

In another noteworthy passage of the Daubert decision the Supreme Court dealt with the relationship between scientific research and the application of scientific knowledge in law enforcement, which is the precise domain of expert testimony. The relevant point here is the

---

[59] Daubert v. Merrell Dow Pharmaceuticals, 509 U.S. 579 (1993), at 595.
[60] Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579 (1993), at 591.
[61] Kumho Tire Co. v. Carmichael, 526 U.S. 137 (1999), at 152.

tension between on the one hand requiring the expert to adhere to scientific standards[62] in order to provide reliable evidence and on the other hand acknowledging that scientific methods and findings cannot be transplanted directly into legal proceedings. The Court thus pointed to the fundamental differences between science and law enforcement in the following way:[63]

> "Yet there are important differences between the quest for truth in the courtroom and the quest for truth in the laboratory. Scientific conclusions are subject to perpetual revision. Law, on the other hand, must resolve disputes finally and quickly. The scientific project is advanced by broad and wide-ranging consideration of a multitude of hypotheses, for those that are incorrect will eventually be shown to be so, and that in itself is an advance. Conjectures that are probably wrong are of little use, however, in the project of reaching a quick, final, and binding legal judgment - often of great consequence - about a particular set of events in the past."

In the year 2000 the relevant legislation, that is the Federal Rule of Evidence 702, was revised to take account of the aforementioned trilogy (*Werden* 2008).[64] It now reads:

> "If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise, if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case."

The first condition is further strengthened by the subsequent Federal Rule of Evidence 705 which stipulates that the expert "may in any event be required to disclose the underlying facts or data on cross-examination". This in turn is closely related to Rule 26(a)(2) of the Federal Rules of Civil Procedure[65] on disclosure of expert testimony. This Rule does not prescribe the substantive content but stipulates wide-ranging disclosure obligations in abstract terms and basically mirrors a strict transparency requirement. In general, an expert witness must provide a written report which contains inter alia a "complete statement of all opinions the witness will express and the basis and reasons for them and the facts or data considered by the witness

---

[62] In fact, according to the Supreme Court the relevant Federal Rule of Evidence 702 requires "a grounding in the methods and procedures of science" (Daubert v. Merrell Dow Pharmaceuticals, 509 U.S. 579 (1993), at 590).
[63] Daubert v. Merrell Dow Pharmaceuticals, 509 U.S. 579 (1993), at 592.
[64] The current version of the Federal Rules of Evidence can be accessed inter alia via the website of the United States Courts at http://www.uscourts.gov/uscourts/RulesAndPolicies/rules/2010_Rules/Evidence.pdf.
[65] Available at http://www.uscourts.gov/uscourts/RulesAndPolicies/rules/2010 Rules/Civil Procedure.pdf.

in forming them" (Rule 26(a)(2)(B)(i) and (ii)). Moreover, comprehensive information with regard to the expert and the conditions of his or her engagement is required.[66]

In conclusion, the Daubert trilogy as well as the legal framework in the U.S. address a number of fundamental issues with regard to the integration of scientific expertise in law enforcement and, indeed, do so in much the same manner as the guidance documents issued by the Bundeskartellamt and other competition authorities. The analysis reveals that identical core evaluation principles for ensuring the quality of expert submissions are used, in particular relevance and reliability.

The US Supreme Court decisions as well as the Federal Rules of Evidence apply to all kind of expert testimony in court proceedings. Their implications are further spelled out in the „Reference Manual on Scientific Evidence" and the "Manual for Complex Litigation" published by the Federal Judicial Center, the influential training and research institution of the US federal courts.[67] Especially the latter Manual contains an entire section (30.2) devoted to the procedural handling by judges of voluminous datasets and expert economic testimony as forms of evidence. As regards the effects of these quality standards in the field of competition law enforcement, both *Werden* (2008) and the *Economic Evidence Task Force*, a group of leading practitioners and academics set up by the Antitrust Section of the American Bar Association, in their report from August 2006 provide an overall positive assessment. For example, *Werden* (2008, 817) states: "Daubert and its progeny are improving the quality and clarity of economic testimony in antitrust cases, and they are thereby increasing the sophistication of the discourse in antitrust litigation and the accuracy of judge and jury decisions." [68] At the same time, some members of the Task Force also pointed to the high costs associated with so-called Daubert motions (*Economic Evidence Task Force* 2006, 8). The group also recommended further specification of the Daubert factors with regard to antitrust (*Economic Evidence Task Force* 2006, 8). *Hovenkamp* (2005) is more critical and sees a tendency by judges to look at experts' testimonies in a "superficial manner" (80) which results in the erroneous admission of testimony that should (and could) have been excluded according to *Hovenkamp*.

---

[66] These include a list of all publications authored by the witness within the preceding 10 years, a listing of any other cases in which the witness has testified as an expert within the preceding 4 years and the agreed compensation (Rule 26(a)(2)(B)(iv) to (vi)).

[67] Federal Judicial Center, Reference Manual on Scientific Evidence, Second Edition 2000, available at http://www.fjc.gov/public/pdf.nsf/lookup/sciman00.pdf/$file/sciman00.pdf; Manual for Complex Litigation, Fourth, 2004, available at http://www.fjc.gov/public/pdf.nsf/lookup/mcl4.pdf/$file/mcl4.pdf.

[68] Similarly, the *Economic Evidence Task Force* (2006, 7) wrote: "Our review of the reported cases suggests that the judges who chose to write published opinions understood the economic issues and made sensible decisions. As a result, *Daubert* likely deters at least some types of unprofessional economic testimony, particularly by encouraging efforts to match the economic argument with the facts of the case."

The most comprehensive empirical analysis of the relevant jurisprudence was done by *Langenfeld/Alexander* (2011).[69] Their analysis confirms first of all the great relevance of the so-called gatekeeping challenges, i.e. the motions by opposing parties to exclude economic expert testimony. For the period from 2000 to early 2011 they find a total of 113 antitrust economist challenges, of which 97 were based on Federal Rule of Evidence 702 which reflects the Daubert criteria (*Langenfeld/Alexander* 2011, 23). Their data further suggest that plaintiffs' experts are much more likely to be challenged than defense experts with their chance of being excluded (partially or fully) being 40% compared to 0% for defense experts (*Langenfeld/Alexander* 2011, 23 and Annex, Table 3). According to *Langenfeld/Alexander* this demonstrates that gatekeeping challenges have become a routine tool especially in defendants' litigation strategy. Defendants have a greater incentive to plea for the exclusion of economic evidence, because this may effectively undermine the plaintiffs' case given that the plaintiffs have the burden of proof and thus have to establish e. g. the definition of the relevant market or the possession of market power by the defendant.

The empirical analysis by *Langenfeld*/*Alexander* and the critical points raised by the *Economic Evidence Task Force* and *Hovenkamp* show that certain challenges remain beyond the establishment of minimum quality standards even though their basic content seems to reflect a growing international consensus. Specifically, the effects of the standards in the enforcement practice and their actual handling should be monitored closely in order to detect undesirable side-effects which may result from the fact that they can also be strategically (ab-)used in legal disputes.

V. Conclusion

In recent years the importance of economics for competition law and policy has steadily increased in Germany and, indeed, in Europe and on a worldwide basis. As a result, the issue of an effective integration of economics into competition law enforcement has gained prominence. This paper argues that the most relevant issues and challenges in this context are best encapsulated by the term forensic economics in competition law enforcement. Expert economic opinions constitute one specific input channel for forensic economics in competition law proceedings. In order to contribute effectively to better informed decisions, expert submissions, however, have to conform to certain minimum quality standards.

---

[69] By comparison, Appendix IV on Daubert Antirust Decisions of the Final Report of *Economic Evidence Task Force* (2006) lists 42 decisions from 1990 to 2005.

A comparative analysis of the "Best Practices for expert economic opinions" issued by the Bundeskartellamt in October 2010 and similar guidance documents issued by other competition authorities reveals the following core evaluation criteria for the quality of expert economic submissions: relevance, reliability / robustness, replicability / transparency and accessibility / comprehensibility. Despite sometimes expressing a preference for already established and tested theories and methods, the guidance documents abstain from detailed prescriptions with respect to the substantive content or the methodology of economic expert submissions. Furthermore, a special look at the U.S. clearly indicates that also court-based adversarial enforcement regimes apply almost identical principles which govern the admissibility of expert testimony. Accordingly, there is a growing consensus on minimum quality standards which should guide forensic economics in competition law enforcement in general.

References

Berger, Margaret A., 2000, The Supreme Court's Trilogy on the Admissibility of Expert Testimony, in: Reference Manual on Scientific Evidence, Second Edition, available at http://www.fjc.gov/public/pdf.nsf/lookup/sciman00.pdf/$file/sciman00.pdf, 9-38.

Bishop, Simon, 2013, Snake-Oil with Mathematics is Still Snakeoil: Why Recent Trends in the Application of So-Called "Sophisticated" Economics is Hindering Good Competition Policy Enforcement, European Competition Journal, 9, 67-77.

Böge, Ulf, 2004, Der "more economic approach" und die deutsche Wettbewerbspolitik, Wirtschaft und Wettbewerb, 54, 726-733.

Buccirossi, Paolo, ed., 2008, Handbook of Antitrust Economics, Harvard, Mass.: MIT Press.

Budzinski, Oliver, 2008, Monoculture versus Diversity in Competition Economics, Cambridge Journal of Economics, 32, 295-324.

Budzinski, Oliver, 2011, Modern Industrial Economics: Open Problems and Possible Limits, in: Josef Drexl, Wolfgang Kerber and Rupprecht Podszun (eds.): Competition Policy And The Economic Approach. Foundations and Limitations, Cheltenham: Edward Elgar, 111-138.

Caffarra, Cristina and Mike Walker, 2010, An Exploration into the use of Economics before Courts in Europe, Journal of European Competition Law & Practice, 1, 158-161.

Carlton, Dennis, 2011, How Should Economic Evidence be Presented and Evaluated?, in: Claus-Dieter Ehlermann and Mel Marquis (eds.): European Competition Law Annual 2009. The Evaluation of Evidence and its Judicial Review in Competition Cases, Oxford: Hart, 611-622.

Christiansen, Arndt, 2010, Der More Economic Approach in der EU-Fusionskontrolle. Darstellung, konzeptionelle Grundlagen und kritische Analyse, Frankfurt: Peter Lang.

Christiansen, Arndt, 2011, The 'Best Practices for Expert Economic Opinions' by the Bundeskartellamt in international Context (June 22, 2011). ANTITRUST: REVUE OF COMPETITION LAW, Sdružení Kairos, Forthcoming. Available at SSRN: http://ssrn.com/abstract=1869986.

Christiansen, Arndt and Liselotte Locher, 2011, Die neuen Standards des Bundeskartellamts für ökonomische Gutachten in der Kartellrechtsanwendung, Wirtschaft und Wettbewerb, 61, 444-453.

Christiansen, Arndt and Wolfgang Kerber, 2006, Competition Policy with Optimally Differentiated Rules Instead of "Per se Rules vs. Rule of Reason", in: Journal of Competition Law and Economics, 2, 215-244.

Coombs, Justin and Jorge Padilla, 2011, The Use of Economic Evidence before the Courts of the European Union, in: Claus-Dieter Ehlermann and Mel Marquis (eds.): European Competition Law Annual 2009. The Evaluation of Evidence and its Judicial Review in Competition Cases, Oxford: Hart, 473-483.

Crane, Daniel A., 2011, The institutional structure of antitrust enforcement, New York: Oxford University Press.

Davis, Peter, 2011, On the role of empirical industrial organization in competition policy, International Journal of Industrial Organization, 29, 323-328.

Davis, Peter and Eliana Garcés, 2010, Quantitative Techniques for Competition and Antitrust Analysis, Princeton: Princeton University Press.

Economic Evidence Task Force, 2006, Final Report, August 2006, Antitrust Section, American Bar Association, available at http://www.abanet.org/antitrust/at-reports/01-c-ii.pdf.

Edwards, Kirsten, 2013, Estimating Diversion Ratios: Some Thoughts on Customer Survey Design, in: Philip Lowe and Mel Marquis (eds.): European Competition Law Annual 2010. Merger Control in European and Global Perspective, Oxford: Hart, 31-42.

Ellison, Glenn, 2002, The Slowdown of the Economics Publishing Process, Journal of Political Economy, 110, 947-993.

Evans, David S., 2008, Economics and the Design of Competition Law, in: ABA Section of Antitrust Law, Issues in Competition Law and Policy, Vol. 1, 99-123.

Ewald, Christian, 2011, Ökonomie im Kartellrecht: Vom more economic approach zu sachgerechten Standards forensischer Ökonomie, Zeitschrift für Wettbewerbsrecht/Journal of Competition Law, 9, 15-47.

Fisher, Franklin M., 1989, Games Economists Play: A Noncooperative View, Rand Journal of Economics, 20, 113-124.

Furse, Mark, 2013, Merger Control in China: Four and a Half Years of Practice and Enforcement - A Critical Analysis, World Competition, 36, 285–313.

Gavil, Andrew I., 2000, Defining Reliable Forensic Economics in the Post-Daubert/Kumho Tire Era: Case Studies from Antitrust, Washington & Lee Law Review, 57, 831-878.

Gavil, Andrew I., 2006, Competition Policy, Economics, and Economists: Are We Expecting Too Much?, Annual Proceedings of the Fordham Corporate Law Institute on International Antitrust Law & Policy, 2005, Huntington: Juris Publishing, 575-601

Gavil Andrew I. and Katherine I. Funk, 2006, Daubert Comes to Washington: Managing Expert Economic Testimony in Part III Proceedings at the FTC, Antitrust, 20, 21-28.

Global Competition Review, 2013, The Economics 20, in: GCR 100. A Guide to the world's leading competition law and economics practices, 13th annual edition - revised and updated, Law Business Research Limited, 227-236.

Goldman, Calvin, Robert Kwinter, Navin Joneja and Chad Leddy, 2011, A Canadian Perspective on the Evaluation of Evidence in Antitrust and Merger Cases in the Context of Recent

Changes to Canada's Competition Law, in: Claus-Dieter Ehlermann and Mel Marquis (eds.): European Competition Law Annual 2009. The Evaluation of Evidence and its Judicial Review in Competition Cases, Oxford: Hart, 697-711.

Haucap, Justus, 2007, Irrtümer über die Ökonomisierung des Wettbewerbsrechts, Orientierungen zur Wirtschafts- und Gesellschaftspolitik, 114, 12-16.

Hawk, Barry and James Keyte, 2011, Separating the Wheat from the Chaff: How the U.S. Courts Analyze Antitrust Evidence, in: Claus-Dieter Ehlermann and Mel Marquis (eds.): European Competition Law Annual 2009. The Evaluation of Evidence and its Judicial Review in Competition Cases, Oxford: Hart, 713-749.

Hovenkamp, Herbert, 2005, Expert Testimony and the Predicament of Antitrust Fact Finding, in: ibid: The Antitrust Enterprise, Cambridge, Mass.: Harvard University Press, 77-91.

Italianer, Alexander, 2010, The interplay between law and economics, Speech at Charles River Associates Annual Conference, Brussels, 8 December 2010, available at http://ec.europa.eu/competition/speeches/index_speeches_by_the_dg.html.

Italianer, Alexander, 2011, Quantity and quality in economic assessments, Speech at Charles River Associates Annual Conference, 07 December 2011, available at http://ec.europa.eu/competition/speeches/text/sp2011_15_en.pdf.

Jones, Clifford, 1999, Private Enforcement of Antitrust Law in the EU, UK and USA, Oxford: Oxford University Press.

Lande, Robert H. and Davis, Joshua P., 2008, Benefits from Private Antitrust Enforcement: An Analysis of Forty Cases, University of San Francisco Law Review, 42, 879-918.

Langenfeld, James and Christopher Alexander, 2011, Daubert and Other Gatekeeping Challenges of Antitrust Experts, Antitrust, 25, 21-28.

Law, David, Michael Pickford and Qing Yang, 2010, Quantitative Methods in Competition Cases: A New Zealand Perspective, Competition and Consumer Law Journal, 17, 252-275.

Li, Zhu, 2012, New Developments in Civil Antitrust Litigation in China, CPI Antitrust Chronicle January 2012 (2), Jan 25, 2012, at https://www.competitionpolicyinternational.com/file/view/6622.

Lu, Dennis and Guofu Tan, 2012, Economics and Private Antitrust Litigation in China (September 6, 2012). USC CLEO Research Paper No. C12-13; USC Law Legal Studies Paper No. 12-21, available at SSRN: http://ssrn.com/abstract=2146803.

Möschel, Wernhard, 2013, European Merger Control, European Competition Law Review, 34, 283-286.

Neven, Damien, 2006, Competition economics and antitrust in Europe, Economic Policy, 21, 741-791.

Nothdurft, Jörg, 2008, Ökonomie vor Gericht. Richterliche Überprüfung wirtschaftlicher Fragen im deutschen und europäischen Kartellverwaltungsprozess, in: Gerda Müller, Eilert Osterloh and Torsten Stein (eds.): Festschrift für Günter Hirsch zum 65. Geburtstag, München: Beck, 285-300.

Pohlmann, Petra, 2013, Ökonomische Normtatsachen im Kartellzivilprozess – Am Beispiel der Kosten-Preis-Schere, in: Alexander Bruns, Christoph Kern, Joachim Münch, Andreas Piepenbrock, Astrid Stadler and Dimitrios Tsikrikas (eds.), Festschrift für Rolf Stürner zum 70. Geburtstag, Tübingen: Mohr Siebeck, 435-454.

Ritter, Jay, 2008, Forensic Finance, Journal of Economic Perspectives, 22, 127-147.

Röller, Lars-Hendrik, 2005, Economic analysis and competition policy enforcement in Europe, in: Peter A. G. van Bergeijk and Erik Kloosterhuis (eds.), Modelling European Mergers: Theory, Competition Policy and Case Studies, Cheltenham: Edward Elgar, 13-26.

Ross, Thomas W., 2006, Merger Review in Canada and the Role of Economics, Sauder School of Business, Phelps Centre for the Study of Government and Business, Working Paper 2006 – 10, December 2006, available at http://www.sauder.ubc.ca/Faculty/Research_Centres/Phelps_Centre_for_the_Study_of_Government_and_Business/~/media/Files/Faculty%20Research/Phelps%20Centre/Working%20Papers/2006_10_ross.ashx.

Ross, Thomas W. and Ralph A. Winter, 2005, The Efficiency Defense in Merger Law: Economic Foundations and Recent Canadian Developments, Antitrust Law Journal, 72, 471 - 504.

Schap, David, 2010, Forensic Economics: An Overview, Eastern Economic Journal, 36, 347-352.

Schinkel, Maarten Pieter, 2008, Forensic Economics in Competition Law Enforcement, Journal of Competition Law and Economics, 4, 1-30.

Schmidt, Ingo 2007, The suitability of the more economic approach for competition policy: dynamic v static efficiency, European Competition Law Review, 28, 408-411.

Sibony, Anne-Lise, 2012, Limits of Imports from Economics into Competition Law, in: Ioannis Lianos and D. Daniel Sokol (eds.): The Global Limits of Competition Law, Stanford: Stanford University Press, 39-53.

Slesnick, Frank L., Michael R. Luthy and Michael L. Brookshire, 2013, Survey of Forensic Economists: Their Methods, Estimates, and Perspectives, Journal of Forensic Economics, 24, 67-99.

Trebilcock, Michael J. and Edward M. Iacobucci, 2002, Designing Competition Law Institutions, World Competition, 25, 361-394.

Veljanovski, Cento, 2009, Economists in Court: A Comparative Assessment of Procedures and Experience in Australia and England & Wales from an Economist's Perspective (December 7, 2009), available at http://ssrn.com/abstract=1519952.

Veljanovski, Cento, 2013, Market Power and Counterfactuals in New Zealand Competition Law, Journal of Competition Law and Economics, 9, 171-201.

Walker, Mike, 2011, Background Note, in: OECD Competition Committee: Economic Evidence in Merger Analysis, DAF/COMP(2011)23, pp. 19-51, available at: http://www.oecd.org/daf/competition/EconomicEvidenceInMergerAnalysis2011.pdf.

Wei, Dan, 2013, Antitrust in China: An Overview of Recent Implementation of Anti-Monopoly Law, European Business Law Review, 14, 119-140.

Werden, Gregory J., 2008, The Admissibility of Expert Testimony Issues in Competition Law and Policy, available at http://ssrn.com/abstract=956397.

Wood, Diane P., 2009, Square Pegs in Round Holes: The Interaction between Judges and Economic Evidence, Competition Policy International, 5, 50-64.

Wrobel, Gregory G. and Ellen Meriwether, 2011, Economic Experts: The Challenges of Gatekeepers and Complexity, Antitrust, 25, 8-12.

Zitzewitz, Eric, 2012, Forensic Economics, Journal of Economic Literature, 50, 731-769.