TECHNICIANS OR MASTER-ECONOMISTS?

The role of testifying economists in competition litigation

John Davies, Lau Nilausen*
June 2023

"It should be a matter for specialists—like dentistry. If economists could manage to get themselves thought of as humble, competent people on a level with dentists, that would be splendid."

J. M. Keynes, (1931) Essays in Persuasion.

"The master-economist must possess a rare combination of gifts .... He must be mathematician, historian, statesman, philosopher—in some degree. He must understand symbols and speak in words. He must contemplate the particular, in terms of the general, and touch abstract and concrete in the same flight of thought. He must study the present in the light of the past for the purposes of the future. No part of man's nature or his institutions must be entirely outside his regard. He must be purposeful and disinterested in a simultaneous mood, as aloof and incorruptible as an artist, yet sometimes as near to earth as a politician."

J. M. Keynes (1924) 'Alfred Marshall: 1842-1924' (1924). In Geoffrey Keynes (ed.), Essays in Biography (1933)

1 Introduction

1.1 JM Keynes provided two starkly different visions of the proper role of economists, in the quotes above.[1] Should economists providing expert testimony in competition cases be technicians, called upon to make a narrow contribution on the basis of their expertise in their own subject area as we (perhaps ignorantly) imagine dentists might? That is an attractive thought but it is far from the reality of what testifying economists are asked (or put themselves forward) to do, which seems closer to the role described in the second quote. Economists' testimony often considers much, if not all, of the subject matter of the case, leaving only some reserved areas for 'legal issues' or 'issues of fact' on which well-behaved testifying economists have learnt not to opine.

1.2 Economists testifying in front of the Tribunal and other courts in England and Wales have variously been criticised for taking too broad or (occasionally) too narrow a view of their role, as well of being

* John Davies has been a Member of the Competition Appeal Tribunal since 1 June 2023. Lau Nilausen is a consulting economist at Compass Lexecon, as was John Davies when the first draft of this paper was produced. The views expressed in this paper are their own and should not be attributed to other economists at Compass Lexecon, to the firm or to any of its clients; nor to the Tribunal. The authors gratefully acknowledge the contribution of Anish Jolly to this paper, as well as comments from other panellists at the Competition Appeal Tribunal's 20th Anniversary conference held in 2023.

[1] 'To be fair the second quote, from Keynes's obituary for Alfred Marshall, was intended to demonstrate how unusual Marshall had been, in possessing all of those rare abilities. The passage begins by noting "Yet good, or even competent, economists are the rarest of birds. An easy subject, at which very few excel!"

too partial to views that support the positions of their clients, despite formally acknowledging in every report their understanding of their over-riding duty towards the Tribunal. Quite often the Tribunal has noted that economists are more reasonable and balanced in the witness box (and especially in a 'hot tub') than are the positions taken in their reports.

1.3 This is not to suggest that economists are uniquely difficult expert witnesses. Most Tribunal judgments are very complimentary about the quality of the expert testimony the panel received, although some suggest it would have been nice to have had less of it and in some cases it may have had little effect on the final decision. However, as economics is in principle so central to the Tribunal's work, and as that workload has expanded so rapidly in recent years with increased private litigation including class action cases, it is reasonable to ask how the testifying economists' role could become more effective and what the Tribunal, instructing legal teams and the economists themselves could do to help make it so.

2 Use of economics at the CAT

2.1 The Tribunal is clearly more expert in economics and more open to economic evidence than the great majority of courts trying competition cases in Europe, or non-specialised courts in England & Wales. This arises both from the presence of economists on the Tribunal's panels as well as from its role as a specialised competition court, in which Chairs and Members from legal or other backgrounds outside economics nonetheless will often have worked on cases involving substantial economic analysis, particularly econometrics: quantitative analysis of data using statistical techniques.

2.2 Until very recently, courts in Continental Europe had almost never accepted econometric evidence in damages actions under competition law. Jean-François Laborde, a business consultant specialising in expert testimony, publishes regular surveys of competition damages awards in Europe.[2] His 2021 survey notes starkly that "Past editions of this study could not find any damages award in which damages were quantified with regression analysis". However, he notes "some change" in that a few courts in Spain appeared to have accepted some regression results in awarding damages.[3] In comparison, he finds 28 cases in which damages were awarded on the basis of simple comparisons, either with the pre- or post-merger situation, or an unaffected market. For example, a recent judgement from the District Court of Dortmund regarding a rail track cartel quantified an overcharge "without relying on economic evidence or a court appointed expert", discarding the expert evidence submitted by the defendants.[4] Regional Courts in Spain have taken differing approaches on whether to accept or reject econometric evidence in follow-on damages actions involving Trucks.[5] In several cases, defendants' econometric evidence suggesting no

[2] See https://laborde-advisory.com/fr/accueil-2, last accessed April 05, 2023.

[3] Laborde, J.-F. (2021) *Cartel damages actions in Europe: How courts have assessed cartel overcharges (2021 ed.)*. Concurrences N° 3-2021, Art. N° 102086, pp. 232-242. Available at: https://www.concurrences.com/en/review/issues/no-3-2021/pratiques/102086.

We note that it is not clear how Laborde would classify a case in which regression analysis contributed to a judge's decision but did not directly determine damages, so the 'stark statement' of no influence whatsoever before 2021 could be over-stated. Furthermore, of course, most actions settle before trial and some settlements have involved econometric evidence.

[4] Wolf, C. and Bach, A. (2021) *Germany: A Leader in Private Antitrust Litigation*. Oppenländer Rechtsanwälte. Available at: https://globalcompetitionreview.com/review/the-european-middle-east-and-african-antitrust-review/2022/article/germany-leader-in-private-antitrust-litigation.

[5] A very large number of cases (each involving a very small number of trucks) have been brought in Spain and the treatment of economic evidence has varied widely. We do not suggest that it is generally dismissive. Colleagues from Compass Lexecon involved in the proceedings have told us in conversation that some courts, for example Oviedo, have carefully worked through economists' reports, distinguishing the good (well-evidenced) from the bad. However, they believe many judges are too ready to use technical criticisms to throw out economic testimony entirely and estimate damages themselves. The many cases, dealing with similar issues across many courts, would provide a rich source of data for a study of factors affecting damages when all are over.

finding of overcharge greater than zero was rejected on the grounds that it did not quantify the overcharge, which is a misunderstanding of the econometric findings.[6]

2.3 In contrast, the Tribunal has on occasion specifically requested econometric evidence. Notably, in its joint case management of the Trucks litigation, the Tribunal ruled that it would prefer to see evidence on market-wide overcharges than bottom-up evidence relating to specific claimants, noting "Instead, it seems to us that the issues will probably have to be approached by the analysis of large amounts of pricing and market data, using established economic techniques to determine what, if any, was the effect of the infringement on prices and any pass-on through the relevant period."[7] The Tribunal went on to require the Parties to submit short statements of their proposed methodologies, which made clear that these 'established economic techniques' implied regression analysis.

2.4 Despite its reputation for fearsome complexity, econometric analysis can involve very simple regressions, which in effect calculate an appropriately-weighted average, along with statistical tests of the results' robustness. However, the Tribunal has on occasion considered relatively sophisticated econometric analysis at length. For example, in a certification judgment in 2022, the Tribunal considered a 'hedonic pricing' regression model, which is a technique for determining how different characteristics of a product affect its overall price. In this certification judgment the Tribunal accepted that this technique could be used, while of course reserving full consideration of the modelling for trial.[8] That judgment also contained some guidance on how the Tribunal will consider causation, as opposed to correlation, in its assessment of that model, as well as some discussion of potential problems of non-linear relationships between price and costs and potential endogeneity (feedback loops, in effect, in prices determining quality when the hedonic model would assume the reverse). Although all of this is reserved for judgment at trial, the certification does not simply authorise the economists to get on with it in a hands-off fashion as perhaps it might have, but instead engages with the econometric debate. There are few parallels from other courts.[9]

2.5 We do not suggest that a non-specialist court cannot deal with economic evidence, indeed non-specialist judges have often quite rightly murdered beautiful economic theories with simple ugly facts. Quite frequently, economists are over-keen to fit the facts of a case into an over-arching theoretical framework, which can blind them to some obvious facts. For example, in the US Concord Boat, in which claimants were seeking damages for monopolisation, an expert economist posited a Cournot model in the counterfactual in which the defendant and claimant had equal market shares (and thus implied that the defendant's market share above 50% was due to illegal conduct).[10] This was rejected, in part because the defendant already had a market share well above 50% before the conduct began. Similarly, in FTC v Sysco Corp, the court rejected the defendant's expert's modelling that seemed to show significant constraints from Sysco to non-supermarket grocery

[6] For example, *Juzgado de lo Mercantil Nº 1 de Alicante*, Sentencia Nº 37/2021, paragraph 130.

[7] Competition Appeal Tribunal (2020). *Case Nos.: 1291-1294-1295/5/7/18, Ryder Limited and Another v MAN SE and Others* (2020). Available at: www.catribunal.org.uk/sites/cat/files/2020-01/1291-1294-1295_Trucks_ruling_2020_CAT3_150119.pdf (para 41).

[8] Competition Appeal Tribunal (2022). *Case No: 1382/7/7/21, Consumers' Association v Qualcomm Incorporated* (2022). Available at: www.catribunal.org.uk/sites/cat/files/2022-05/20220517_1382_Approved%20CPO%20Judgment%20%5B2022%5D%20CAT%2020.pdf (para. 62-66).

[9] But there are a few. A recent High Court judgment on 'FRAND' patent licensing royalties, *Interdigital vs. Lenovo [2023] EWHC 539 (Pat),* also discusses hedonic price regressions.

[10] United States Court of Appeals (2000). *Concord Boat Corp v Brunswick Corp, No: 98-3732*. Available at: https://ecf.ca8.uscourts.gov/opndir/00/03/983732P.pdf.

retailers, as this contradicted testimony from industry experts, quoting the judgment in Arch Coal that "[A]ntitrust theory and speculation cannot trump facts[.]".[11]

2.6 Similarly, the Tribunal has particularly strongly criticised economists for what it regards as an *ex post* rationalisation of a company's conduct, unsupported by any evidence that the company concerned had the objective ascribed to it. "In our view, the theoretical approach adopted by [economists testifying for GSK] does not reflect the reality of this case. There is no suggestion in the evidence from GSK, in particular the witness statement of [Witness A], that GSK ever regarded the Agreements as likely to create downward pressure on GSK's own price."[12] Similarly, in Royal Mail vs DAF, the Tribunal found that DAF's expert economist's arguments that the coordination should not have led to price rises: "was contradicted by DAF's own witness evidence, in particular [Witness B] who described several highly plausible links between list price changes and transaction prices and said that he expected from his years of experience for approximately half of the list price increase to be translated into transaction price increases."[13]

2.7 However, courts have occasionally rejected economic theorising that could have assisted the case, without good cause from economists' point of view. The persistence of the use of simple interest for damages is the most notorious example: calculating simple interest without compounding makes no more sense to economists than would adjusting for inflation without compounding its effects on the price level.[14] The Tribunal's economics expertise and more widely its relative openness to economic reasoning provides a contrast, ruling in Royal Mail v DAF, commenting "We have no difficulty in favouring a compound interest calculation over simple interest. This accords with economic reality and there is no legal bar to compounding the appropriate interest rate that we find to be applicable. This is what happens in the real world […]."[15] The Tribunal has also shown itself ready to engage in fairly complex theoretical economic reasoning, for instance when it recently considered the concept of a two-sided market and the difficulties defining one, seeking to address these "novel questions for UK competition law".[16]

2.8 Again, we want to make clear that we are not claiming non-specialist courts cannot evaluate economic evidence. However, expertise matters and the Tribunal's expertise derived from its economist Members as well as its experience on competition cases is surely a positive.

3 Expert economic testimony

3.1 In practice, economists testifying as experts in litigation before the CAT play many roles, including:

[11] United States District Court, D. Columbia (2015). *Federal Trade Commission et al. v. Sysco Corporation, et al, Civil Action Number 1:15-cv-00256*. Available at: https://www.ftc.gov/legal-library/browse/cases-proceedings/sysco-usf-holding-corp-us-foods-inc. See also United States District Court, D. Columbia (2004). *Federal Trade Commission v. Arch Coal, Inc*. Available at: https://casetext.com/case/federal-trade-commission-v-arch-coal.

[12] Competition Appeal Tribunal (2018). *GlaxoSmithKline PLC v Competition and Markets Authority, Case Nos: 1251-1255/1/12/16*. Available at: www.catribunal.org.uk/sites/cat/files/1.1251-1255_Paroxetine_Judgment_CAT_4_080318.pdf (para. 300).

[13] Competition Appeal Tribunal (2023). *Royal Mail Group Limited v DAF Trucks Limited and Others, Case Nos.: 1284/5/7/18, 1290/5/7/18*. Available at: www.catribunal.org.uk/sites/cat/files/2023-02/2023.02.07_NON-CONFIDENTIAL_Trucks_1284_90_Final.pdf (para. 295).

[14] Adjusting for five years of inflation at 10 percent as if prices had increased by 5 x 10 percent = 50 percent, for example, which is simply wrong. The right answer is 61 percent.

[15] Competition Appeal Tribunal (2023). *Royal Mail Group Limited v DAF Trucks Limited and Others.* Op. cit. para. 768.[13]

[16] Competition Appeal Tribunal (2022). *BGL (Holdings) Limited & Others v Competition and Markets Authority, Case No: 1380/1/12/21*. Available at: www.catribunal.org.uk/sites/cat/files/2022-08/20220808%201380%20BGL%20v%20CMA%20Approved%20Judgment%20%5B2022%5D%20CAT%2036%20-%20Website%20%281%29.pdf (para. 115-).

a. Drawing upon and discussing the economic implications of evidence provided by factual witnesses, notably people involved in the businesses involved.

b. ‘Collating facts’ (by which here we mean drawing upon material in the public domain).

c. Selecting, introducing and drawing out the implications of relevant economic literature.

d. Explaining how economic theories fit (or do not) with the relevant legal tests.

e. Analysis of data including:

   i. Choice of data, which includes assessing the relevance and reliability of different data sources, as well as the inclusion or exclusion of particular data elements.

   ii. Choice of analytical approach, from selection of the broad approach taken (from simple inspection of data at the simplest, to more complex econometric techniques).

   iii. Specification of the detailed econometric technique, if relevant.

   iv. Reporting on and explaining the relevance of statistical significance or other metrics in interpreting modelling.

f. Financial analysis, in which we include assessing interest and tax, in the context of assessing damages.

3.2 Obviously, whether all of these activities apply in a given ‘project’ of expert testimony, will depend on the type of case (for example, follow-on damages or stand-alone case) as well as the stage within it. Not everything happens in the economist’s report, or in the witness box (or hot tub). Economists may undertake any or all of the activities above in:

a. Testifying in certification hearings in CPOs.

b. Testifying (usually in written form) in case management conferences, in particular in identifying what data or other evidence is needed in disclosure, to carry out analysis reliably to answer the questions on which they are instructed, or experts for the other party are instructed.

c. Writing reports.

d. Assessing and replying to reports by other testifying economists.

e. Discussion with those other experts at Joint Expert Meetings and collaboration on the Joint Expert Report.

f. Testifying in court, whether under cross-examination or in a ‘hot tub’.

3.3 These activities need not be distinct. For example, joint expert meetings and reports can be part of the process of identifying necessary disclosure, before case management conferences.

3.4 Despite all these different activities, there are some themes running through the expert testifying roles; within which we now discuss some possible tensions, namely:

a. The breadth of the economists’ work: whether they should limit themselves to technical analysis within tightly defined instructions, or should take it on themselves to ‘tell the story’.

b. Whether the adversarial process helps or hinders experts in discharging their duty to the Tribunal.

3.5 We then consider whether the process that testifying economists face – as set by their instructing solicitors and ultimately by the Tribunal itself in exercising its case management powers – could better define how these tensions should be resolved.

4 Tension 1: technicians or story-tellers?

4.1 The breadth of economists' roles in Tribunal cases has frequently been the subject of (critical) comment, whether formally in judgments or in public commentary. Occasionally, economists have been criticised for taking too narrow a view of their role, usually because their instructions unduly constrain the areas on which they are supposed to opine. This might involve instructions that require the economist to consider only a limited set of facts, that might not represent the full universe of facts that the Tribunal considers relevant to the case. In Flynn v CMA, for example, the Tribunal identified areas which the respondent's expert could have provided useful insight but did not due to the "narrow nature" of his instructions. The Tribunal believed that the expert had more to offer than what he had been asked to cover, referencing "a number of contentious matters, on which his expertise might have been of material assistance to the Tribunal."[17] Similarly, instructions might – in effect – require the economist to assume something and draw out the consequences when the assumptions they are asked to make are disputed. In these circumstances, economists' testimony can end up being discarded by the Tribunal as irrelevant.

4.2 Conversely, when the scope of the experts' evidence is too broad, that can sometimes be ascribed to their instructions:

"It was when [Expert] strayed into areas outwith her economic expertise that we consider her evidence to have been less helpful.[…] we would not want this point to be taken as a criticism of [Expert], who we consider was doing her very best to assist the Tribunal. The fact is that [Expert] was asked to approach questions by those instructing her in a manner which unduly exposed her into evaluating questions of fact which were the province of the Tribunal."[18]

4.3 Still within the theme of the proper scope of testifying economists' work, Sir Marcus Smith has raised the question of whether economists should 'adduce evidence', which seems to us to involve a rather subtler breach of an expert's duty to stick only with what they know.

"The expert economist, most times, has a role in furnishing a expert opinion, but also a role in collating the factual material on which that expert opinion is based. The problem is that the very process of selecting this evidence is subjective. The evidence does not select itself, and is not imposed on the expert in this case. It is chosen, and chosen by the expert."[19]

and

"It is fine for the experts to reach divergent opinions on the same agreed facts. It is not fine for the experts – in their reports – to adduce evidence (as opposed to referring to evidence adduced by a witness of fact) that is controversial."[20]

[17] Competition Appeal Tribunal (2018). *Flynn Pharma Ltd and Flynn Pharma (Holdings) Ltd v Competition and Markets Authority, Case No: 1275-1276/1/12/17*. Available at: www.catribunal.org.uk/sites/cat/files/2018-08/1275-1276_Flynn_Judgment_CAT_11_070618.pdf (para. 78).

[18] Competition Appeal Tribunal (2022), *BGL (Holdings) Limited & Others v Competition and Markets Authority.* Op. cit. para. *66.*[16]

[19] Smith, M. (2019) "Lawyers come from Mars, and economists come from Venus – or is it the other way round? some thoughts on expert economic evidence in competition cases," *Competition Law Journal*, 18(1), p. 3. Available at: https://doi.org/10.4337/clj.2019.01.01.

[20] Smith, M. (2019). Op. cit. p. 4.[19]

and

"It seems to me that if an expert is proposing to rely on, let us say, historic inflation rates, before getting into a debate about how this data affects the expert's opinion, we first need to ask whether this material is admissible as evidence at all."[21]

4.4 Almost all expert reports draw upon facts, in some cases selecting facts from disclosed material but also drawing in a wealth of material from the public domain. They might cite economic literature, as well as industry or other factual reports, newspaper articles and so on. We understand Sir Marcus's concern to be that the selection of facts is not a neutral activity, so in effect an expert choosing to cite one source of facts rather than another is making a judgement which may not be within their competence as an expert economist.

4.5 Things become still more difficult when expert economists present 'facts' about the industry under investigation, that they themselves have selected and may even themselves have found, from public sources. The difference from the example above is that there will be parties involved in the case who are more expert in such matters than the economists: namely employees of the businesses involved as parties. Should economists refrain (or be prevented) from providing such material?

4.6 In our experience, it is almost universally the case that economists *do* present such material. Every one of the 'first' expert reports we have written contains a chapter titled 'Industry background' or similar, which seeks to set out the basic factual position as we saw it. Often, there is also a chapter or section titled 'Regulatory background' which might explain how an industry regulator's rules work in practice – there is some 'economics' in that, but a lot of purely factual background too. From reading other expert reports, we believe we are entirely typical in this practice. On the face of it, it is not the proper role of an expert, so why do we all do it (and why do instructing solicitors allow or encourage us to do it)? We see two possible reasons.

4.7 First, such a section helps make clear what facts the economist is relying upon, so that it is clear when any of his conclusions are drawn from facts which are in dispute. This should be helpful, although if the disputed fact is only found to be false at the time of the Hearing, a lot of time, effort and money will have been wasted in building some elaborate structure on a base of sand.

4.8 More pragmatically, however, it is not clear to us who *else* provides this overview within the Tribunal's process. There are several candidates, none of them ideal:

a. Initial Particulars of Claim and replies tend to be quite brief and leave much factual matter assumed, for subsequent presentation.

b. Witnesses of fact may well provide such an overview (and are clearly best placed to do so) but often their statements are quite narrow: not presenting the industry overview as relevant to the case, but rather talking about this particular contract, or that pricing decision and so on.

c. Skeleton arguments and opening statements are nakedly partisan.

4.9 In our experience, economists' reports 'tell the story' in a way that no other material in a typical case does. They present an overview of the industry bringing out the facts relevant to the case, perhaps an account of some relevant legal issues (a wise economist author being exceptionally careful to make clear that this is presented for convenience rather than a matter of their own opinion), then material from factual witness statements, disclosed documents and public sources before undertaking anything that could be described as economic analysis.

[21] Smith, M. (2019). Op. cit. p. 4.[19]

4.10 Perhaps they are wrong to do so, but reading skeleton arguments and opening statements, it seems to us that the lawyers are happy to use the economists' reports as the foundation for their arguments. We wonder as well whether Tribunal members, seeking to read a general account of what a case is all about, turn to the economists' (first) reports.

4.11 Cases not involving competition law seem to manage perfectly well without economists 'telling the story', so presumably it is possible. But if economists were to confine themselves strictly to economic analysis, then something else in the process will need to fill the gap, because at present there is no obvious alternative. Economists, in our opinion, do not produce their wide-ranging reports because they are arrogant would-be renaissance men (and women), along the lines described in Keynes's second quote above, who think their opinion on everything worth hearing. They do so because they are expected and asked to do so. If they are not to do so, something else must replace the 'factual' sections of economists' reports.

4.12 Some of their decisions as to evidence to adduce *will* be within that competence. The selection of which academic economic literature to cite involves a judgement about the relevance of the paper to the case itself and possibly some judgement about the papers' quality, such as whether it is generally accepted in the profession, is not superseded or contradicted by later papers and so on. These matters seem to us quite properly to be within the scope of economists' professional expertise, although of course the Tribunal and the other side may well ask probing questions and more generally require evidence in support of any such judgements made.

4.13 The specific example that Sir Marcus provides – of economists using as a 'factual source' some particular index of inflation – seems to us, with respect, more borderline. There may be alternative choices of measures of inflation that affect damages and it would be disappointing if economists were each to choose the one that happens to favour their own client. However, the implied difference in damages resulting from the use of the alternatives is likely to be very easy to calculate. Typically, this might be clearly expressed in the Joint Statement, not as a purely factual matter on which the experts cannot opine, but at least as a clear disagreement that the Tribunal would have to resolve by choosing which approach (if either) it considers more reliable.

4.14 In a case that absolutely turned upon which index was 'right' (or rather, most relevant to the case) it might be worth calling upon some specialised expert, with a macro-economic or public economics specialisation, both very different from the typical background of an economist specialising in competition. Most economists testifying in front of the Tribunal will not be specialists in the choice and interpretation of government statistical series, such as those for inflation, although all of us have had basic training in that topic and will have had to make decisions about which index to choose (or the interpretation and application of different indices) at various times in our professional lives.

4.15 In most cases, there will be many such small decisions, each affecting the case in some minor way, and one cannot call upon a world-class expert on each such topic. Instead, in our experience, competition specialists do opine on the appropriate index to use, may cite evidence and provide reasoning in support of their choices and perhaps in criticising the other expert's choices. We agree that it would be useful to establish a common basis for analysis but there are other examples when the economist's early choice of 'facts' is much more fundamental, and any analysis constructed upon those facts harder to shore up at trial, should the Tribunal disagree with an economist's initial assumptions.

4.16 So we think it inevitable within the current process that economists will both adduce evidence and opine on its economic consequences. However, if possible, the Tribunal's process should allow for separate consideration of these two very distinct activities; ideally trying to establish facts before considering economic reasoning on the basis of those facts. We understand this to be Sir Marcus's

view as well in his *Mars and Venus* paper. This fits with our overall conclusion that it would be helpful if the Tribunal's process were more interactive, rather than leaving everything to be decided at trial, as we shall discuss later.

5 Tension 2: do conflicting expert viewpoints assist or hinder the Tribunal?

5.1 The Tribunal has also often criticised testifying experts for being unduly partisan toward the interests of their clients. On occasion, judgments have noted that economists' testimony is more balanced, prepared to recognise alternative views, in court (whether under cross-examination, or in the hot-tub process) than in their earlier reports. The Tribunal has occasionally directly criticised individual experts for inflexibility and a recent judgment repeatedly noted that on one technical issue after another the two experts adopted positions that happened to coincide with the interests of their clients.[22]

5.2 Such a coincidence between findings and interests is particularly striking when purely empirical, data-driven analysis is concerned, rather than matters of economic principle on which experts might have pre-existing views that they hold to firmly. No one is likely to have pre-existing views on whether or not the average price of a product – properly assessed – within the cartel period was higher than outside it. However, there are some topics which are common to many cases on which economists might be known previously to have taken positions. For example, it is quite common for experts to disagree on whether the analysis should take account of a possible 'overhang' of high prices following the end of a cartel and it might be hard for an economist to argue that point one way in one case and the contrary in another. Similarly, economists in damages cases need to take a view on the extent to which an overcharge estimate that is not statistically significant (usually meaning not statistically significantly larger than zero) can be interpreted as evidence for a zero overcharge - and would do well to be consistent in that view, from case to case.[23]

Minimising unconscious bias

5.3 We believe testifying economists now generally understand the importance of avoiding bias towards their clients' interests. Any who do not would do well to read the Tribunal's judgment in BT v OFCOM, finding that one testifying economist "lacked the objectivity and balance required of an independent expert witness. Rather than explaining the relevant economic principles in neutral or objective terms for our assistance, [Expert's] written material was couched throughout as a one-sided argument and critique of Ofcom's reasoning and approach."[24]

5.4 Like any professionals, economists can be subject to conscious but also to unconscious biases. An expert under instruction may not intend to produce analysis favourable to his or her client but may wish to, as their life will certainly be easier having done so. The way economic analysis is carried out within the litigation process does little to guard against this unconscious bias, in that econometric analysis can be refined and changed in the light of initial results, before being presented to the Tribunal. This raises concerns similar to those found in the so-called 'replication crisis' of recent years, in which published papers (often those examining behavioural regularities,

[22] "It is perhaps a flaw in the system but in any event appeared quite marked to us in this case that all the experts, but particularly [Economist experts], who opined on a number of different issues, came to conclusions that favoured their clients."

Competition Appeal Tribunal (2023). *Royal Mail Group Limited v DAF Trucks Limited and Others.* Op. cit. para. 235.[13]

[23] This is a complicated issue that we do not propose to attempt to address here.

See Bönisch, P. and Inderst, R. (2022): *Using the statistical concept of "severity" to assess seemingly contradictory statistical evidence (with a particular application to damage estimation)*. Journal of Competition Law and Practice, Vol 18, Issue 2. An unpublished working paper version is available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3462993

[24] Competition Appeal Tribunal (2017). *British Telecommunications v Office of Communications (BCMR), Case No: 1260/3/3/16*. Available at: www.catribunal.org.uk/sites/cat/files/1260_BT_Judgment_CAT_25B_101117.pdf (para. 87).

from psychology and behavioural economics) were found to depend on statistical artefacts that disappear in a better designed – or simply repeated – study.[25] One common problem is 'p-hacking' where the 'p' refers to the probability score of a statistical test of significance of some effect, which expresses how likely it is that the observed data would have been seen purely by chance, were there in fact no effect. If this p-value is low, typically taken to mean below five percent, that gives some confidence that the effect measured is real and not driven by chance. P-hacking refers to analytical methodologies in which a finally expressed p-value considerably understates the likelihood of the effect arising by chance.

5.5 To take a crude example, if a researcher conducted twenty separate but identical experiments, only one of which found an effect 'statistically significant at five percent', then reported results only from that one, it would be thoroughly misleading, as one would expect one of those experiments to have resulted in an outcome that is five percent (one in twenty) likely.[26] Similarly, if a single experiment resulted in one interesting correlation at five percent significance, but the experimenter actually examined dozens of possible correlations before finding one that worked, then again the 'unlikelihood' of the finding is overstated.[27] Transparency (reporting all twenty experiments in the first example), pre-registration and pre-commitment to methodologies (stating in advance what the researcher was looking for rather than just going on a fishing expedition, in the second) are the two main ways of combating p-hacking.

5.6 These are rather blatant forms of p-hacking, probably reflecting conscious bias. However, common econometric techniques can have just the same effect. For example, decisions on the exclusion of outlier data or on how to measure variables, as well as the choice of control variables within an econometric equation, all provide the opportunity for multiple results to be found.[28] For example, it is obvious that unconscious bias could arise if decisions about classifying data points as outliers are made only after the results of the analysis are known. The economist runs a regression analysis and obtains a result he or she did not expect (and perhaps did not want), such as an economist instructed by defendants who finds a large fall in prices at the end of a cartel. That economist might look again at the data and note that a few of the price data points in the cartel are extremely high; he or she investigates and discovers that these related to unusual sales. Perhaps the economist might find that they were sales of tiny volumes, or witnesses from the business can explain that they were one-off and unrepresentative. The economist therefore considers them outliers, excludes them and re-runs the regression to find a lower overcharge.

5.7 Nothing in the example above necessarily reflects conscious bias. The economist might be entirely convinced that it is correct to exclude those data points and he or she may well be entirely right. But a willingness to examine such data points only after seeing initial results is precisely how unconscious bias can creep in. It would be better had the economist pre-committed to an approach to including or excluding any data points, before seeing the data at all, let alone the results.

5.8 Changes to the specification of the econometric equation, in the light of results, can have similar effects. For example, after running an initial, usually simple, equation an economist will start to consider whether it would be more reasonable to add other (control) variables so that the equation

[25] The 'crisis' is held to have begun with the publication of the following paper, the title of which is self-explanatory. Ioannidis, J.P. (2005) *Why most published research findings are false*. *PLoS Medicine*, 2(8). Available at: https://doi.org/10.1371/journal.pmed.0020124. See the following for applications to economics in general (not just behavioral economics): Ortmann, A. (2020) *The replication crisis has engulfed economics*. Available at: https://theconversation.com/the-replication-crisis-has-engulfed-economics-49202.

[26] In fact, the chance of finding at least one such result in twenty experiments is about 65%: 1-(0.95^20)..

[27] A cartoon on the site XKCD illustrates both of these points better than any peer-reviewed academic paper ever could. https://xkcd.com/882

[28] These and other econometric techniques are all included in a list of possible p-hacking strategies in Stefan, A.M, and Schönbrodt, F.D. (2023): *Big little lies: a compendium and simulation of p-hacking strategies, Royal Society Open Science* available at https://royalsocietypublishing.org/doi/epdf/10.1098/rsos.220346.

better fits the data patterns and change the way existing variables 'interact' with one another, all of which can profoundly change the results. Each of those methodological decisions can be part of an entirely honest strategy to best model the market and may well be correct – but if the economist only considers whether to make such changes after seeing initial results, then the process is vulnerable to unconscious bias.

5.9 Honest researchers should trust no one – least of all themselves. In a double-blind test of a drug's effectiveness, for instance, the scientist does not know which data points relate to patients who took the drug and which relate to those who took the placebo. This method exists not (primarily) because scientists are bad people who would fake the results if given such information, but to avoid unconscious bias. Similarly, recognising such biases in expert witnesses should not lead to a moral judgement on the economists concerned (nor a response that the duty to the Tribunal should be enough to exclude such behaviour), but rather to considering whether the process they follow contains enough safeguards. For example:

a. Do economists developing an econometric model report all of the specifications and data set choices they (or - crucially - their supporting teams) make along the way, from the beginning of the process? In general this does happen and economists provide reasoned explanations of their choices. Furthermore, this is enforced by the Tribunal: we note a recent judgment that criticised a testifying expert who admitted in the witness box that he had conducted and discarded an econometric specification that he had not mentioned in his report.[29] The Tribunal could be stricter and more consistent on requiring this. Alternatively, cross-examining counsel could make a habit always of asking about it.

b. Have the economists provided any decision rules as to what specifications, data and statistical tests to accept *before* undertaking any analysis, indeed ideally before even seeing the data? We do not suggest that such pre-registration and pre-commitment can cover everything. Some iteration is necessary and useful in econometric analysis. However, the Tribunal could place more weight on results following some pre-announced method, than those depending on a method which seems only to have occurred to the economist in the light of initial results. Again, the latter is not necessarily nefarious and should not be dismissed. But it is reasonable to ask why it was not anticipated.

Benefits from tension between opposing views

5.10 Judges tired of economists arguing each point *ad infinitum* may yearn for a single, neutral court-appointed expert, but such an expert may turn out to be – in econometric jargon – unbiased but imprecise. That is, although there is no reason to think the court-appointed expert will lean one way or another, there may not be the same rigour that an economist expecting to face hostile questioning will bring.[30] Economists from Continental Europe, used to a more accepting process, have occasionally failed badly when trying to convince English courts of the reliability of their analysis. Having experts expressing competing views is much more likely to expose weaknesses in the analysis. This need not be achieved solely or even mainly through adversarial cross-examination; the inquisitorial 'hot tub' is often more effective, not least because it ensures the experts' views are immediately contrasted with one another. To quote Keynes again: "There is no harm in being sometimes wrong - especially if one is promptly found out."[31]

[29] Competition Appeal Tribunal (2023). *Royal Mail Group Limited v DAF Trucks Limited and Others.* Op. cit. para. 420.[13]

[30] Of course, this need not be the case either if parties instruct their own economists to challenge the court-appointed economist's findings, or if as in the Tribunal, there is an economist on the panel. However, the system would then effectively revert to the present one, albeit with an additional 'layer' of economic expertise.

[31] Keynes, J.M. (1933). *Essays in Biography. In the Collected Writings of John Maynard Keynes*, Vol. 10, Cambridge University Press, Cambridge. Available at: https://doi.org/10.1017/UPO9781139524230

5.11 The Tribunal in some recent cases seems to have been particularly concerned about what could be termed 'inconsistency of scope'. By this, we mean economists willing to opine on some broad topics but to retreat behind their professional duty rather than opine on others. This need not – by any means – be the fault of the economist, as it is more often likely to have been imposed by formal instructions or looser conversations with the legal team about the scope of the economist's work. But if an economist opines on – for example – whether it is inherently plausible that a cartel could have had an effect on prices, then it seems to us reasonable for the Tribunal to expect that economist to have a view on what the cartel members thought they were doing.[32] Similarly, in a settled case, one of the authors was criticised in the other side's opening statement for seeking out public evidence in some areas of the case, but simply stating "I see nothing relevant to that in disclosure" in another. With hindsight, that criticism seems to us to be fair. That is: economists might remain narrowly focused or they might go broader, but should be balanced in how they do so. They need not go beyond narrow economic expertise and perhaps they should not, but if they do so in one respect then they lay themselves open to questioning on related matters that push equally (but no further) at the limits of what they should say.

5.12 More generally, it seems to us that it is reasonable to expect an economist to assist the Tribunal to identify the most plausible economic evidence, not merely to criticise another expert's approach. The Tribunal noted that in BGL v Competition and Markets Authority, "*the CMA deployed [Expert A] to conduct a wholly negative attack on [Expert B's] work. We say "wholly negative" because [Expert A] claimed that the job simply could not be done, and so he had not done it. [Expert A] also did not even attempt to grapple with those instances where a similar statistical exercise had, in fact, been carried out. Rather, [Expert A] advanced a series of criticisms of [Expert B's] approach and methodology.*" While taking account of the limitations of the analysis, in line with Expert A's criticisms, the Tribunal accepted that Expert B's work was *"a part of the evidence that we must take into account."*, implicitly rejecting the contention that the job could not be done.

5.13 Budzinski and Christiansen (2007) link this to what they term a "two-sided standard of proof" in which they suggest the approach to assessing evidence should not be merely some fixed standard of proof (such as 'more likely than not'), in part because it is all too easy to sow doubt about any economic analysis.[33] Rather, they note "it would not be enough for the opposing side to raise doubts, instead, the opposing party would be obliged to present a reasonable and at least equally plausible alternative."

5.14 All in all, we suggest that the adversarial process, combined with the over-riding duty to the Tribunal, is the right approach. The over-riding duty allows for an economist's work not to be criticised merely for being wrong but for being unhelpful to the Tribunal – which we would argue is a much tougher standard. There are many ways in which testimony can be unhelpful without being technically incorrect.

6 Case management

6.1 Many of the problems above – and others – are particularly acute when issues are decided only at trial. The Tribunal's 'active case management' approach as well as its status as a specialised tribunal enable it to narrow issues and set of the scope of economic analysis in a way that should

[32] This criticism was levelled, for example, at one expert in *Royal Mail Group Limited v DAF Trucks Limited and Others*, Op. cit. para. 251[13], and at a different expert in Competition Appeal Tribunal (2021). *Lexon (UK) Limited v Competition and Markets Authority, Case No: 1344/1/12/20*. Available at: www.catribunal.org.uk/sites/cat/files/2021-02/1344_Lexon_JUDGMENT_250221.pdf.

[33] Budzinski, O. and Christiansen, A. (2007) *The Oracle/PeopleSoft case: Unilateral effects, simulation models and econometrics in contemporary merger control*. No 157, IBES Diskussionsbeiträge, University of Duisburg-Essen, Institute of Business and Economic Studie (IBES). Available at: https://EconPapers.repec.org/RePEc:zbw:udewwd:157.

be particularly well-suited to dealing efficiently with economic evidence. As a Chair of the Tribunal and former Chair of the Competition Commission put it:

"Third, a specialist court can be speedier and more focussed. Quite apart from not having to learn basic concepts afresh each time, it can develop short cuts and "fast-track processes" as a result of its experience. An example in the CAT is the assignment of a case panel to every case right from the start to oversee and manage the case as it goes along. Fourth, and as a consequence, the specialised court can be more flexible in its procedures, as it can tailor these to competition cases, and does not have to take account of knock on effects on other types of case. Procedures to reconcile apparently conflicting economic evidence are an example of this."[34]

6.2 In general, the Tribunal is rightly recognised for its active case management, as the alternative - that nothing is decided until everything is decided - is particularly ill-suited to economic evidence. This can be seen when it does not work well and a court has to decide on matters of fact or intermediate aspects of the economic analysis that in effect might render months of expert economists' work irrelevant. A recent High Court judgment complained of having to sort out data issues at trial:

"The forensic accountancy evidence (from [Experts]) was unnecessarily complicated for several reasons including (a) the fact that each expert used different data in their unpacking analyses and (b) they worked to differing definitions of what constituted past sales. As in UPHC at [227], I was presented with 'a blizzard of figures'. […] By the end of the trial, I was left with the strong impression that cases of this type require extensive and much closer case management than occurred in this case, not least in an attempt to ensure that at least there is agreement as to the data which is used for the purposes of analysis."[35]

6.3 The Tribunal's existing case management does not allow it always to escape this. Its judgment in Sainsburys v Mastercard expressed concern about differences between two experts concerning the factual evidence and the legal principles on which they had been instructed to rely.

"In these circumstances, it was incumbent upon the parties to ensure that the experts gave their opinions based upon a common – and if possible, agreed – factual base. That did not occur in this case: […] Their expertise involved considering certain material, and providing their economic analysis in relation to it. To the extent that this material was incomplete, or referred to them late, their analysis was liable to be undermined. "

6.4 And later:

"Because these points were insufficiently clearly articulated and agreed early, both economists found themselves in difficulties that were not of their making. […] Both economists would have benefitted from having, in advance, a clear and agreed formulation of what legal principles they were to follow and what assumptions arising out of these legal principles they were being required to make.[36]

6.5 This seems to us partly to be a problem of timing. Economists come to trial with carefully-constructed edifices that can collapse like a house of cards should the Tribunal decide not to accept some crucial foundation – which could be a matter of economics but is more likely to be factual or legal in nature and therefore outside their competence as experts. Even mere inconsistent

[34] Freeman, P. J., "Competition Decision Making and Judicial Control - The Role of the specialized tribunal", Speech at the Centre for Competition Policy, University of East Anglia, 2013, available at https://www.catribunal.org.uk/sites/cat/files/2018-01/Competition_Decision_Making_and_Judicial_Control-The_Role_of_the_Specialised_Tribunal_06-070613.pdf

[35] *Interdigital vs. Lenovo* (2023). Op. cit.[9]

[36] Competition Appeal Tribunal (2016). *Sainsbury's Supermarkets Ltd v MasterCard Incorporated and Others, Case No: 1241/5/7/15.* Available at: www.catribunal.org.uk/sites/cat/files/1241_Sainsburys_Judgment_CAT_11_140716.pdf.

definitions can lead to needless confusion. Opportunities to identify and consider such matters before trial would not only save time, effort and money but are also likely to lead to economists' testimony at trial being more easily comparable, assisting the Tribunal to decide how to interpret it. The experts themselves have opportunities to address such problems – notably at Joint Expert Meetings – and this can often be very effective, but in some cases, the problems could have been resolved earlier through case management.

6.6 There have typically been two main occasions when economists and the evidence they intend to produce receives some discussion before the Tribunal, earlier in the proceedings. The first is a certification proceeding, which we do not intend to address here as CPO cases are a topic in themselves (addressed at this same conference). However, we wonder whether the Tribunal's requirement that testifying economists identify methods and likely limitations on their analysis for such class certifications could also usefully provide lessons for more vigorous case management in other procedures.

6.7 The other is a Case Management Conference (CMC), which deals with various aspects of the case, typically seeking to define and narrow the issues. Economist experts have generally been involved mainly in discussions of disclosure at this stage. It is, for example, common for expert meetings to be held, for the experts to agree joint statements and to provide testimony (typically in the form of a letter) to the Tribunal, on which they may provide differing views on whether certain kinds of disclosure would be needed to carry out the analysis they expect to conduct.

6.8 In our experience, this stage only occasionally (and almost incidentally) allows for testing of the economists' proposed *methodologies*. We have had the experience, for example, of one economist claiming the need for disclosure to conduct a piece of analysis, when the other claimed that even if disclosure produced an ideal data set for the analysis, it would not be possible to produce relevant results. Clearly, these cannot both be correct and in the event the analysis was not useful, even though the disclosure request was granted. Equally, we are aware of the opposite: experts opining that disclosure would not be justified, when in practice the disclosure and subsequent analysis assisted the Tribunal.

6.9 At the CMC itself, the Tribunal could encourage some tougher testing of proposed economic analysis, for example asking an expert proposing some controversial analysis of disclosed data to provide an example with dummy data of how the technique would work. It could then follow up, were the case brought to trial, requiring explanations of any significant divergences from the expert's initial proposed approach. Similar hard questions could be asked of economists who asserted at CMC that some technique would be impossible or useless, if it turned out to be neither.

6.10 We suggest that the process could help economists to carry out their analysis in a more objective fashion through making more use of the following approaches.

a. Stages at which some initial matters of fact and legal points on which economists' testimony will rely could be decided - or if not decided, at least discussed. For example, the Tribunal could require the two parties to submit the instructions they propose to give experts, in order to expose any differences. Possibly, this stage could also serve the purpose we understand Sir Marcus to be advocating in his *Mars and Venus* paper discussed earlier: of separating matters of factual evidence from matters of economic analysis.

b. Seeking as much clarity as possible and a degree of pre-commitment by the economists themselves on methodological and data-handling decisions they would need to consider when undertaking analysis (especially econometrics). This can help avoid the problems of unconscious bias discussed above, as methodology is developed iteratively, in the light of intermediate results.

6.11 Consistent with the principle of sticking to professional expertise, we stop short of proposing specific changes to case management processes to implement such changes. We do not know how feasible or desirable it would be for the Tribunal to decide more of the case before it reached final trial: we understand that there are drawbacks to interim rulings, not least the danger of appeals delaying proceedings. Furthermore, any such changes would need to work with the grain of the adversarial process. As The Tribunal has noted "It is not for us to attempt an articulation of a positive case on behalf of the Proposed Class Representative (PCR). That is not our function. We operate in an adversarial system, where it is the function of the Tribunal to decide cases that are articulated before us."[37]

6.12 However, we suggest that the Tribunal can assist a more effective challenge to economists' work if it further developed its active case management to allow more intermediate stages in the process, particularly on technical matters on which the testifying economists propose to opine. Decisions taken at an earlier stage can help focus the subsequent analysis and narrow the scope of disagreement. A more sequential process can also allow the economists to resist temptations towards conscious or unconscious bias, by enabling them to make commitments to good practices before they have seen the consequences of those commitments for the outcome of the case.

7 Still early days

7.1 Finally, we suspect that many of the disputes between testifying economists that the Tribunal currently finds frustrating may become easier in future, as experience builds up. Private actions even for follow-on damages are still new, standalone cases and CPOs still newer. The vast majority settle without coming to trial, so there is less established precedent than might be expected.

7.2 Because of this, economists have scope to argue over quite fundamental matters. They also have scope to propose methods that other economists might consider unsound – and to do so in case after case. The Tribunal can resolve some of this and should be reassured that the universe of possible approaches is not infinite. There is a limited set of techniques that can fairly reliably be used in cartel damages actions to favour one side or another, for example, some of which could fairly be described as 'cheap tricks' that would not be used again if ever the Tribunal criticised them.

7.3 To take just one recent case, the Tribunal's Royal Mail v DAF judgment considered whether pass-on to end-consumers in regulated sectors could be dealt with through an award to the regulated firm, which would then be required by the regulator to compensate consumers through lower prices. The judgment did not need to reach a conclusion on that proposal, since pass-on was rejected for other reasons but that same issue has arisen in other follow-on actions in the power industry, so a definitive judgment would have reduced the debate around pass-on in those (settled) actions.

7.4 When things are novel, there is much debate on basic principles. Throughout the 1990s, following major privatisations, the Monopolies and Mergers Commission (as it was) had to consider widely differing views on how assets should be valued, in price control reviews. Then this issue settled down and largely went away. Similarly, the cost of capital is an example of an issue for which the Tribunal has settled on a view on appropriate methodologies. Discussions around the quantification of the Weighted Average Cost of Capital typically centre on the quantification of the CAPM parameters than more fundamentally on the method itself.

[37] Competition Appeal Tribunal (2023). *Dr Liza Lovdahl Gormsen v Meta Platforms, Inc. and Others, Case No: 1433/7/7/22*. Available at: https://www.catribunal.org.uk/sites/cat/files/202302/2023.02.20%201433%20Gormsen%20v%20Meta_FINAL.pdf (para.56).

7.5 We suspect that several issues that have been fiercely disputed between testifying economists in recent years in the Tribunal may similarly settle down.

8 Concluding thoughts

8.1 In short, therefore, with continued pressure on testifying economists and their instructing law firms to respect their over-riding duty to the Tribunal, with case management being used both to streamline and police econometric analysis and finally as more experience builds up of issues on which economists have so far been arguing from first principles, there is every chance that economists will seem less like aspiring masters of the universe and more the 'humble competent people, like dentists' that Keynes wished for.

8.2 However, litigants and lawyers hoping for lower bills from the consulting firms may be disappointed. A survey of expert witnesses in the US in 2021 reported average hourly fee rates for economists at $499.[38] Dentists averaged $604.

[38] Mangraviti, J., Wilbur, K. and Donovan, N.N. (2021) *Survey of Expert Witness Fees*. SEAK, Inc. Available at: https://www.testifyingtraining.com/wp-content/uploads/2021/03/2021-Fee-Survey-E-Book.pdf (p. 44).