

Best practices for the submission of economic evidence and data collection: Some comments

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1. Introduction

On 6 January 2010 the Directorate General for Competition of the European Commission (“DG Comp”) published its “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” (“Best Practices”).² The Best Practices acknowledge the increasing importance of economic analysis in competition enforcement. Their aim is to improve the probative value of the submissions of economic evidence and increase the effectiveness of the exchange of facts and evidence between the parties and the Commission. To that end, they provide (i) recommendations regarding the content and presentation of economic and econometric submissions and (ii) guidance on responding to Commission requests for quantitative data.

In this note we focus our comments on the Best Practices’ recommendations on the content and presentation of economic and econometric submissions in competition cases. In particular, Section 2 presents our overall assessment of the proposed approach. Section 3 discusses some areas in which we think there is room for further improvement and clarifications and Section 4 contains some detailed comments. Finally, we also provide some suggestions regarding the Best Practices’ guidance on responding to requests for quantitative data in Section 5.

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² DG Competition. 6 January 2010. Consultation document “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”. This was published together with “Best Practices in antitrust proceedings” and “Hearing Officers’ Guidance Paper”.

2. Overall assessment

LECG's European Competition Policy group welcomes the Commission's initiative and the opportunity to comment on its proposals. Economic and econometric evidence is now regularly submitted in many of the competition policy cases analysed by the DG Comp and reviewed by the Community courts.³ Such evidence is submitted both by the parties and the Commission's services (in particular, by the Office of the Chief Competition Economist) and it is now widely agreed that the effective enforcement of competition policy requires the rigorous use of economic principles, concepts and tools. Empirical analysis, in particular, has a crucial role to play. It complements other types of evidence, including document reviews, interviews, surveys, etc. Furthermore, unlike some of these methods, empirical analyses relying on statistical and/or econometric methods are objective, quantitative, reproducible and provide measures of precision.

Recent experience suggests that it is time to provide guidance:⁴

- to practitioners (those involved in the generation of economic evidence for use in competition policy cases) on how to develop and present their studies so that competition authorities and courts can determine how much weight to place on them; and
- to decision makers (those with the responsibility to decide competition policy cases) on how to (i) identify and discard baseless economic arguments and (ii) deal with seemingly inconsistent expert opinions.

We regard DG Comp's Best Practices as a timely initiative meant to enhance the evidentiary value of economic analysis and the standards of admissibility of economic evidence in these proceedings, following the example from other competition authorities.⁵

As noted above, we welcome this document and take the opportunity to express our broad agreement with its main propositions. We are, however, concerned that a strict interpretation of some of the proposed standards may discourage the submission of serious economic and econometric analyses in favour of looser economic arguments and anecdotal evidence. In particular, we note an asymmetry between the standards that the document sets for economic empirical analyses, and the standards (or lack thereof) that apply to other types of evidence. For example, the Best Practices take the position that "very often simple but focused measurement of economic variables (prices, costs, margins, capacity constraints, R&D intensity) will provide important insights into the significance of particular factors". However, the document does not establish any standards on the presentation and interpretation of those "simple" facts. It seems unbalanced to demand standards of excellence from econometric analysis while at the same time allowing arguments to be supported by, for example, the observation of a price differential (over time or cross-sectional) without requiring a thorough exploration of factors that may have contributed to such differential.

³ Lars-Hendrik Röller, "Economic Analysis and Competition Policy Enforcement in Europe", in *Modelling European Mergers: Theory, Competition Policy and Case Studies*, Edward Elgar, ed., 2005. See also Damien J. Neven, "Competition economics and antitrust in Europe", *Economic Policy*, October, 2006.

⁴ "Whatever the system of gathering evidence, a set of rules on handling of economic evidence would prove useful." Neven, *op. cit.*, 2006, page 779.

⁵ Competition Commission, "Suggested best practice for submissions of technical economic analysis from parties to the Competition Commission"

We are not advocating a relaxation of the standards required for the submission of economic and econometric evidence. We simply note that the same or similar standards should apply to other forms of evidence and that DG Comp should avoid falling in the trap of discarding a serious, though not absolutely “perfect”, economic or econometric study, while accepting dubious and perhaps non-robust anecdotal evidence or “business” facts.

3. General comments

We believe that the document could be further improved in the following ways:

- it should explicitly state the value of economic analysis in contexts like restrictions by object and State Aid, in which the current document seems to imply that economic analysis has no (or a very limited) role to play;
- it should explain how DG Comp intends to deal with the submission of sound and rigorous empirical analyses producing seemingly contradictory results;
- it should adopt a more pragmatic approach in connection with the admissibility of economic and econometric submissions. The current document gives the impression that no economic or econometric submission will be accepted unless each and every one of the conditions stated in the Best Practices is met. This appears to us to be exceedingly rigid, as in many instances it could lead to the rejection of studies which, though not “perfect”, would provide valuable evidence in competition cases. This is particularly important since, as DG Comp no doubt will understand, the time available to develop such analyses is often too limited to deliver the “perfect” empirical model; and
- it should state whether DG Comp intends to apply the same standards to its own economic analysis and describe the mechanisms that DG Comp will put in place to foster communication with the parties’ economic advisors, especially at the early stages of an investigation.

We discuss these concerns and suggestions in the remainder of this section.

The value of economic analysis in restrictions by object and State Aid

The Best Practices document acknowledges that in many competition cases substantive economic analysis is needed. However, it suggests that there are some exceptions, most notably the infringements by object, in which “the empirical evidence has shown that they generally lead to serious anti-competitive effects.”⁶

We believe that this exception is incorrect, since restrictions by object can be exempted under article 101(3) TFEU and economic analysis must play a key role in the assessment of the four limbs of that provision. This is true in the context of horizontal cooperation agreements and vertical restraints.

Furthermore, we note that the document refers to submissions of economic evidence collection in cases concerning the application of Article 101 and 102 TFEU and in merger control. We are surprised to see no reference to State Aid cases as well.

⁶ Best Practices, footnote 1.

Assessing the merits of seemingly contradictory evidence

In our view, the Best Practices should contain a discussion on how the Commission will deal with seemingly inconsistent expert opinions and with situations in which the economic evidence leads to conclusions which contradict other qualitative evidence.

In some cases, apparently sound, but contradictory, analyses are developed and submitted. This often leads to scepticism about the usefulness of economic and econometric analysis. This scepticism is often unjustified. It is based on the understandable, but incorrect, belief that the application of scientific methods to the facts of a competition policy case should always produce unambiguous and consistent results.⁷ However, those apparent contradictions may result from differences in the data, differences in the approach to economic modelling or in the assumptions used to interpret the data, differences in the empirical techniques and methodologies, or may be the result of unintentional mistakes. The history of economic analysis exhibits numerous such controversies.⁸

When alternative studies produce contradictory conclusions, their relative merits should be carefully investigated. The right approach cannot be to discard them all as if they were equally incorrect or unscientific, because some of those analyses may contain valuable information and may help to improve the decisions of the competition authorities and courts. In fact, it may well be the case that all those studies prove valuable in spite of their apparent contradictions. Those inconsistencies may simply reflect some inescapable “ambiguity”. That is, they may evince that several alternative hypothesis are plausible and consistent with the facts of the case at hand. As Professor Manski counsels “[w]e need to develop a greater tolerance for ambiguity. We must face up that we cannot answer all of the questions that we ask”.⁹

If the analyses submitted to test a given proposition in a competition policy case produced contradictory results but (i) all of them were scientifically valid and (ii) none of them could be considered intrinsically superior to the other(s), the only legitimate conclusion would be that the available evidence can neither validate nor falsify or refute that proposition “beyond reasonable doubt”. However, if most of those analyses pointed in the same direction and the exceptions were not methodologically or otherwise superior to the studies providing a congruous result, the proposition would be established as “more likely than not”, i.e., it would be supported by a “preponderance of evidence”. It should be clear, therefore, that whether economic evidence allows the fact finder (competition authority or court) to conclude in favour or against a given proposition depends not only on the facts available to the researcher and the methods deployed to interpret those facts but also, and fundamentally, on the required standard of proof.

An additional concern is related to the merits of the results of econometric analyses relative to the conclusions drawn from qualitative and anecdotal evidence. In our view, there is an advantage to econometric analysis that should be acknowledged when weighing different pieces of evidence with seemingly contradictory implications. The conclusions drawn from traditional modes of antitrust analysis (interviews, review of

⁷ Charles F. Manski, *Identification Problems in the Social Sciences*, Harvard University Press, 1995.

⁸ Such as for example the (lack of) relationship between unemployment and inflation. See The Phillips Curve at http://en.wikipedia.org/wiki/Phillips_curve. See also Joseph A. Schumpeter, *History of Economic Analysis*, 1954, reprinted by Routledge, 1997.

⁹ Manski, *op. cit.*, page 8. See also Charles F. Manski “Partial Identification in Econometrics” in *The New Palgrave Dictionary of Economics*, 2nd edition, McMillan, 2008.

documents, etc.) are subjective and the underlying assumptions not well specified. As a result, two people reviewing the same set of documents can easily reach opposite conclusions. Moreover, a document review cannot provide a quantitative estimate of the effects and efficiencies of a given practice or agreement or a measure of its precision. In contrast, a rigorous and systematic analysis of market data, provides quantitative estimates, measures of precision, and the results are reproducible by another analyst.

Rules for admissibility

The Best Practices contain strict requirements on (i) the consistency of the methodology with the features of the market under consideration and (ii) the robustness of the results to changes in the data, the empirical method and the modelling assumptions. For example, it indicates that:

*An economic model [...] must rely on assumptions that are consistent with the facts of the industry under consideration*¹⁰

We submit that this statement has to be put into context. It is important to recognize that all models abstract from some institutional details of the industry under study as the Best Practices document recognises itself.¹¹ There is no such a thing as a perfect economic or econometric model. All models involve simplifying assumptions and/or are based on imperfect data. However, in many circumstances, those simplifications and imperfections do not have an impact on the quantitative and/or qualitative results of the analysis.

Consequently, “lack of unachievable perfection should not prevent an economic study from being given weight”.¹² Furthermore, mere allusions to those simplifying assumptions and data limitations should not be regarded sufficient to disprove the results of a scientifically valid econometric/economic study. Rather, the party who seeks to rebut that analysis needs to establish that its findings are indeed not robust to changes in the contested assumptions or the underlying data and to assess the implications on the overall conclusions of the study.

Similarly, the Best Practices require that economic and econometric submissions be accompanied by a thorough robustness analysis. We agree that sensitivity analyses should be encouraged. However, a too strict interpretation of this requirement may lead to the incorrect dismissal of certain meaningful and helpful submissions. There is a risk that the otherwise reasonable pursuit of robustness could degenerate in a series of hurdles which could be used to disregard imperfect but useful studies. As in many other occasions, one needs to be aware that the road to hell is full of good intentions.

The parties involved in a competition case must be allowed to discard potential robustness tests if, for example, they concern alternative modelling approaches which are not feasible given the data or the time available or inappropriate from a theoretical or methodological perspective. In our view, DG Comp should motivate its request for further robustness analysis in order to avoid any unnecessary costs and, in any event, should be open to discuss any additional robustness tests with the party which submitted the original analysis.

¹⁰ Best Practices, paragraph 11.

¹¹ See paragraph 12 of the Best Practices.

¹² David Scheffman and Mary Coleman, “FTC Perspectives on the use of Econometric Analysis in Antitrust Cases”, in John D. Harkrider and Daniel Rubinfeld (eds.), *Econometrics*, ABA Section of Antitrust Law, 2005, page 118.

Likewise, DG Comp should avoid using the perfectly reasonable criteria stated in the Best Practices document in a categorical way. For example, the paper states that “a finding that the sign of a particular coefficient is counter to what would be expected by economic theory” may be an indication of specification problems and biases.¹³ Caution is required, however, because in many occasions economic theory will not provide unambiguous guidance. This is likely to be the case when there are competing theories compatible with the econometric exercise (e.g., reduced form regression) being undertaken.

Clarity on the requirements set out in the Best Practices and how they will apply to the Commission and implementation of mechanisms to foster communication

The Best Practices confirm that the parties would have access to data and codes underlying the economic analyses undertaken by DG Comp and/or other parties at the time of access to file.¹⁴ We welcome these statements, which suggest that DG Comp intends to facilitate the replication of its own analyses as well as those of third parties. We note, however, that for this to be a realistic option, DG Comp needs to ensure that the parties’ economists are given sufficient time and provided with the facilities required to rigorously check DG Comp’s analyses as well as those of third parties. DG Comp could increase the efficiency of this process if it were prepared to share the methodologies it intends to use in a particular case as early as possible.

4. More detailed comments

Precise language

Economic evidence comprises numerous techniques and models ranging from relatively simple descriptions of quantitative data (e.g., prices, sales, revenues, margins, capacities) to sophisticated econometric analyses. Econometric models apply “statistical techniques and inferences to observed data in order to evaluate economic theories and their predictions”.¹⁵ The Best Practices document is not always precise in this respect: which recommendations apply to econometric analysis? Which ones to theoretical economic models or to simple descriptive analyses?

Data relevance and reliability

The Commission emphasizes the need for the data employed in an empirical analysis to be reliable and relevant.

Our concern in this respect is twofold. On the one hand, there is a grey area (which the Best Practices acknowledge) in which the analysis of data which is not perfectly suited to answer the research question or which contains anomalies and coding errors is still valuable and provides useful insights for a case. It is unclear how the Commission will deal with such situations. On the other hand, while we agree that analysts should try to

¹³ Best Practices, paragraph 36.

¹⁴ It is unclear whether this includes the results of surveys carried out by DG Comp. We would suggest that the BP include an explicit reference to these.

¹⁵ John D. Harkrider and Daniel Rubinfeld (eds.), *Econometrics*, ABA Section of Antitrust Law, 2005.

ensure that the data they employ is appropriate to respond to the relevant questions under investigation and be familiar with any potential data limitations, the paper does not provide a clear definition of when the data will be considered reliable and relevant and when it won't, and who should be in charge of certifying the quality of the data. This leaves lots of discretion to the Commission and introduces uncertainty in the process.

Adjusting the data (para. 22)

This is an example where a case-by-case approach is preferable to the application of strict rules. The Best Practices suggest that the data needs to be adjusted when anomalies due to miscoding or other errors are found. Although data adjustment may sometimes be possible, it is not the standard approach to dealing with anomalies. The process of gathering additional data involves significant costs in terms of time and effort and many measurement errors or inconsistencies simply cannot be corrected. Sometimes this is because there is no better way of measuring the variables of interest. In others, it is because it is impossible to trace back how the raw data was collected and processed: for example, the people that inputted the data may no longer be available. The statistical techniques mentioned in para. 23 of the Best Practices and a thorough robustness analysis is most often the best approach.

Model assessment (para. 40)

The Best Practices indicate that econometric or economic models need to be consistent and reasonably predict observed past outcomes and behaviour. In some cases, the best econometric model is not one that predicts best in sample or out of sample but rather one that is capable of delivering economically and statistically rigorous estimates of the parameters of interest (e.g., the elasticity of demand).¹⁶

Economic significance (footnote 17)

The Best Practices document seems to confuse the relationship between economic and statistical significance. Contrary to what is stated in footnote 17, it is not correct that results that are economically significant likely will be statistically significant in large enough datasets. We note this relatively small point because it may be misinterpreted in the following way. Suppose an expert concludes that a given business practice produces no effect on consumers on the basis of an econometric study that shows that such practice did not have a statistically significant effect, even though the point estimate of that effect is large and, hence, could be taken to be economically significant. Our concern is that such finding could be construed, according with footnote 17, as evidence of an effect by asserting without proof that the absence of statistical significance is simply caused by the limited size of the underlying dataset.

¹⁶ See Wooldridge, J.M., *Econometric analysis of cross section and panel data*, MIT Press, 2002, p. 465.

5. Comments on the guidance on responding to requests for quantitative data

The Best Practices also provide general guidance to undertakings on responding to the Commission's requests for quantitative data. This guidance is most welcome. Our experience is that the production of quantitative data to respond to the Commission's requests often imposes significant costs on undertakings. Increased transparency should facilitate the efficiency of this process and ensure that the Commission obtains timely and relevant input for the investigations. With this purpose in mind, we believe that the document's recommendations could be further improved in the following ways:

- General motivation for data requests (Paragraphs 51-54): We suggest that the Commission motivates its requests for quantitative data explaining their purpose and how it proposes to use the data. This will help ensure that undertakings provide the data the Commission needs, avoid misunderstandings which increase the costs of the data collection process and create delays and contribute to foster communication as discussed above.
- Consultation on a Draft Data Request and data samples (Paragraphs 74-75): In our view, these consultations should be standard practice. The Commission should routinely discuss with the parties the data it requires before sending a formal data request. This will help the Commission understand what data exists and allow it to explain to parties why it requires the data and what it proposes to do with it.
- Paragraphs 63, 65 and 79: The steps to manage the quality of data set out in these paragraphs are certainly desirable. In practice, however, these standards will often be disproportionate, especially if the data is not central to the Commission's analysis. In many cases, they will also not be possible given the short deadlines often set by the Commission in its data requests.