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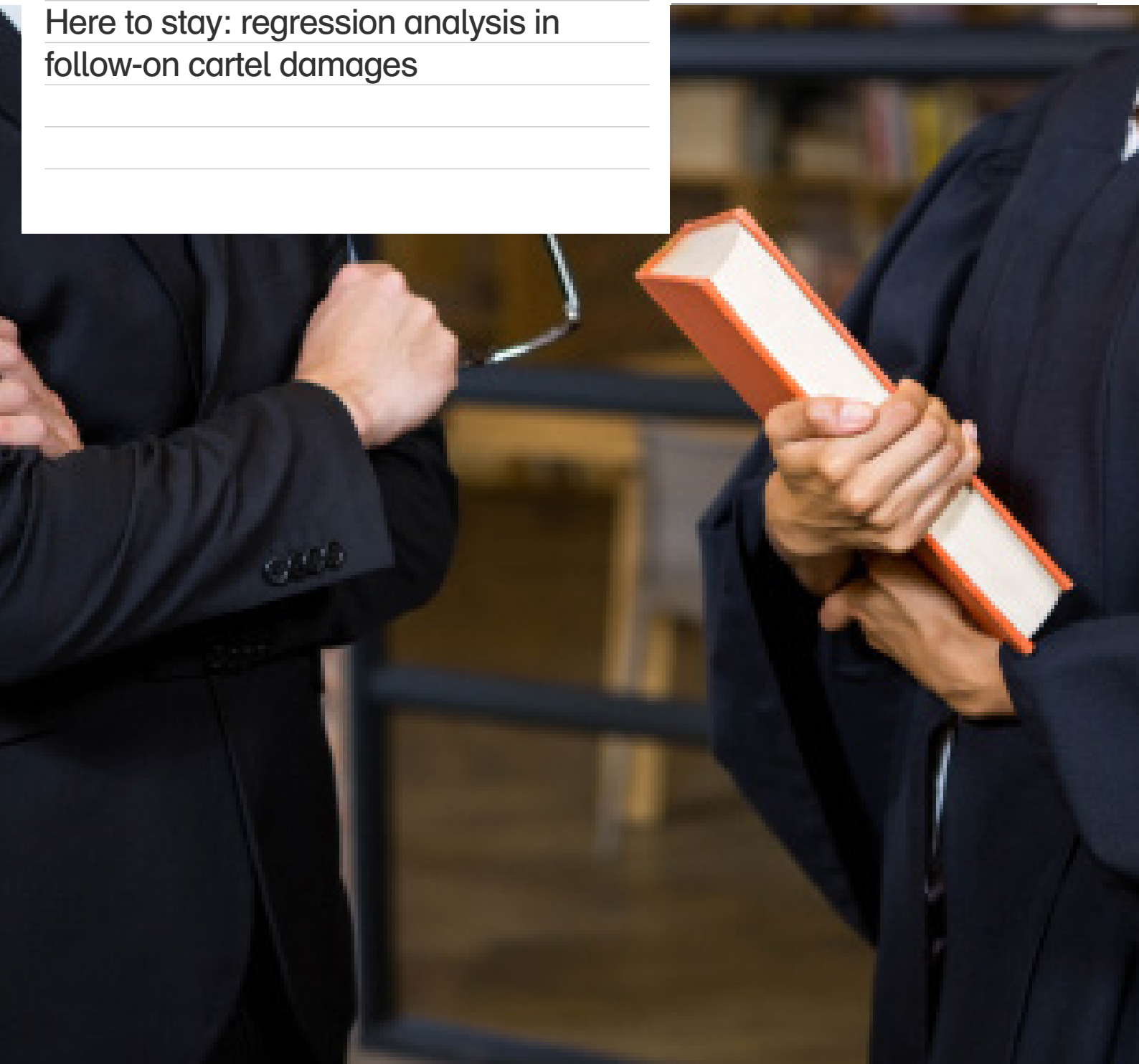
Here to stay: regression analysis in follow-on cartel damages



Contact
Enno Eilts
Partner

Regression analysis is a powerful statistical tool that can be used to estimate the damages caused by competition law infringements. In recent years, this type of analysis has increasingly been used to quantify follow-on damages claims in Europe. However, this trend is not yet reflected in final judgments by national courts. Why is this the case, and how might this change in the future?

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Private enforcement that follows from a competition authority's decision (i.e. a *follow-on* damages claim) aims to compensate those that have suffered harm as a result of a competition law infringement.

In the EU, follow-on claims should place any natural or legal person 'who has suffered harm in the position in which that person would have been had the infringement of competition law not been committed', avoiding excessive compensation.[1] At the heart of private enforcement in Europe, therefore, lies a higher standard for the quantification of damages than in jurisdictions where other standards apply (e.g. punitive damages).

As the European Commission states, '[t]he success of an antitrust damages action [depends also] on the quantification of the harm suffered by the victim [that] can be a quite technical and complex exercise'.[2] In order to assist national courts, in 2013 the Commission published a 'Practical Guide'—based on a 2009 Oxera study for the Commission—which discussed in detail the different tools available for undertaking such an exercise.[3] As noted in that guide, 'econometric techniques can increase the degree of accuracy of a damages estimate and may thus help in meeting a higher standard of proof'.[4]

Econometric techniques—which include regression analysis—are statistical techniques that facilitate the identification of patterns between different (economic) variables and enable different effects to be identified separately. For example, a well-specified damages model allows separate estimation of the effects of production costs and the effects of a cartel on the final price of a product.

This article discusses the usefulness and application of regression analysis in the quantification of damages.

Why use regression analysis?

It has been argued that regression analysis adds complexity to the assessment of follow-on damages and might appear as a 'black box' to legal professionals, making it difficult for judges to rely on.[5] Nevertheless, it is regularly used by economists in the quantification of damages arising from competition law infringements. There are several factors that explain why this is the case, and we discuss these below.

The complexity of price determination warrants richer approaches

The price of a product (or service) is typically influenced by a large number of factors that are related to both the demand for and the supply of that product.

For example, imagine that one would like to compare the prices of an ice-cream cartel in a particular local market with those in another, non-cartelised, ice-cream market to understand the impact of the cartel. If certain key factors affect the final product price—say, if milk prices, labour costs, and weather conditions (since warmer weather is associated with higher demand for ice cream) differ between the two markets—a simple comparison of ice-cream prices could be misleading and under- or overestimate the impact of the cartel on prices.

This is where the power of regression analysis comes in. As explained in the Commission's Practical Guide '[r]egression analysis […] makes it possible to assess whether, and by how much, observable factors other than the infringement have contributed to the difference'.[6]

This does not mean that other, simpler, methods (e.g. comparisons of the average profit margin) should never be used. These might be employed, for instance, when there are few differences (aside from the impact of the cartel) between the product of interest and the comparator.[7] As shown in the 2009 Oxera study mentioned above, a range of techniques are available for quantifying damages, and the most suitable technique for a particular case will depend on factors such as data availability and the current stage of the legal process for the case in question.

Regression analysis is fit for purpose

Regression analysis has a number of features that make it suitable for damages estimation in a range of situations.

First, regression analysis generates results that can be tested against the factual (i.e. the observed) outcomes. The estimated effect of each factor on, for example, price can be identified and compared with the original expectation. For example, if a regression analysis predicted that organic ice cream with whole fruits was less expensive than plain vanilla ice cream, this would indicate that there is something wrong with the model.

Second, regression analysis can produce robust estimates under uncertain conditions where the observed outcomes vary significantly. Standard statistical tests can be used to check whether observations belonging to two different groups are significantly different (in the statistical sense) from each other and whether the chosen specification of the model is well suited to the observed data.

Third, regression analysis is readily replicable and allows for 'stress tests'. When results are replicable, they can be scrutinised and challenged by other parties following sufficient disclosure.[8] As is often the case, experts can experiment with variants of the analysis to test whether the evidence leads to robust conclusions.

Economist practitioners as expert witnesses

In civil proceedings, judges may seek the opinion of experts on technical matters in the form of reports, on which (depending on the jurisdiction) the experts might also be cross-examined. For example, physicians or construction engineers might be called in to explain technical issues and provide their professional assessment concerning specific facts.

The role of the expert economist is to concisely and correctly explain the assumptions and results of the economic analysis. This approach should help the court to reach a balanced judgment based on the facts of the case and the evidence (including expert evidence).[9]

The use of regression analysis in the areas of competition and regulation is well established

Finally, the use of regression analysis is well established in public enforcement such as merger control and the regulation of utilities such as gas networks and water companies.

For example, the Commission uses regression analysis to assess the impact of market entry and exit on prices in order to make inferences about the post-merger situation and a merger's impact on competition.[10] Regulators in Europe, such as Ofwat in England and Wales, and ART in Italy, use regression analysis to benchmark companies' costs and set efficient cost allowances.[11]

Use of regression analysis over the lifetime of a case

Regression analysis has been playing an increasing role in follow-on damages, particularly in the last five years and since the transposition of the EU Antitrust Damages Directive by member states.

In this section, we set out how regression analysis is used by both claimants and defendants in the different stages of public and private enforcement.

The competition authority investigation

Public enforcement in Europe considers cartel infringements as 'object' rather than 'effect' cases, and there is no requirement to establish any anticompetitive effects. However, many authorities will nevertheless decide, or be required, to consider effects alongside an object assessment of the conduct in question when setting fines (and the parties involved may follow suit).

For example, the French Competition Authority has explicitly considered overcharges during cartel investigations.[12] Other countries such as Spain, Poland and Hungary have similar provisions in their national competition laws.[13]

Preparing a follow-on damages claim

Regression analysis often features prominently at an early stage in order to provide an understanding of the potential size of a claim. For example, litigation funders might ask economists to estimate the overcharge resulting from a cartel using publicly available information.

Competition lawyers are also increasingly familiar and comfortable with the evaluation of the results of the regression analysis prepared by economists, and with using their evaluations to assist their clients in making strategic decisions.

Pre-trial stage

In most follow-on damage claims, the claimant(s) and the defendant(s) are in contact long before the beginning of the trial. Regression analysis is often employed to assist in early negotiations between the parties. The main reasons for using regression analysis at this stage are to add credibility to the position of the party (claimant or defendant) and to start negotiations with a well-defined damages estimate.

Trial stage

If settlement discussions fail to resolve a dispute, the case will usually proceed to trial. The reliance on experts in different jurisdictions, and the way they participate in the court proceedings, varies across the EU, but there is a growing tendency to allow the economic experts to 'have their day in court' to explain, and defend, their econometric analysis.[14]

In any case, the court (or court-appointed expert) will have to assess all submitted evidence, including the conclusions drawn from regression analysis contained in expert reports.

Increase in the use of regression analysis

In this section, we discuss a number of reasons why we expect growth in the use of regression analysis. We also outline possible reasons why this widespread application of regression analysis is not yet extensively reflected in final judgments in Europe, and consider how this may change in the future.

Decisions of national courts in Europe to date

There are a limited number of studies that have analysed the way national courts in Europe have ruled on cartel overcharges. Among these are the studies undertaken by Jean-François Laborde.[15] Although these studies do not cover out-of-court settlements, which are likely to account for the majority of cases,[16] they do provide interesting insights.

For example, it appears that claimants are increasingly able to secure redress for the harm suffered as a result of a cartel. In the last couple of years, more than two-thirds of court judgments (59 judgments) have either awarded damages to the claimants or established liability; in contrast, before 2015, the majority of claims were dismissed.[17]

However, according to Laborde, none of these 59 positive judgments were explicitly based on regression analysis. This finding might be surprising given the discussion in the previous sections, and is contrary to Oxera's experience.

Why might it be that in their final judgments, national courts in Europe appear not to reflect the trend toward the increased use of regression analysis? A definitive answer would require a careful consideration of the casework that underlies the judgments on which the Laborde study is based, which is beyond the scope of this article. Nevertheless, we are able to offer two possible explanations.

First, by their nature, cases that make it to court and do not settle beforehand tend to be cases in which the parties have a very different view on the damages *and* the way in which those damages should be calculated. Therefore, the finding that regression analysis has not yet been explicitly relied on by courts in awarding damages might be linked to the fact that such analyses are unlikely to be submitted to the court in the first place. This appears to be the case for many judgments in Laborde's sample.[18]

Second, many of the Laborde cases were concluded before the EU Antitrust Damages Directive was implemented by the member state in which the court was located. For example, around half of the French judgments (which make up nearly 40% of the total sample) were handed down before France implemented the Directive.[19]

Therefore, even if the decision of the court might rely explicitly on simpler analyses, this does not necessarily mean that the judges have not considered the findings from regression analysis when reaching their conclusions.[20]

What does the future hold?

Looking forward, we see a number of reasons to expect greater use of regression analysis in future cases, especially for cases that go to court.

First, in most EU member states, the EU Antitrust Damages Directive has made substantial changes to the ability of claimants to achieve redress for the harm caused by cartels. We are only just starting to see a difference in the way courts are dealing with such cases, since the Antitrust Damages Directive was only transposed into national law relatively recently by most member states.

Second, many judges might not yet be comfortable engaging with complex economic analysis. This is likely to change. As the number of cases increases, judges will gain experience of understanding and challenging regression analysis. To assist this process, the Commission is actively supporting the training of national judges.[21]

Last but not least, the potential for regression analysis to be used in cases is growing with the complexity and amount of available data. For example, competition infringements in data-rich areas such as digital platforms need to be addressed with

suitable analytical techniques. Statistical analysis of some form is needed to process the information correctly (and expeditiously), and regression analysis helps us to draw correct inferences from such large and rich databases.

Contact

enno.eilts@oxera.com

Enno Eilts

barbara.veronese@oxera.com

Dr Barbara Veronese

stefan.witte@oxera.com

Dr Stefan Witte

[1] See Directive 2014/104/EU on certain rules governing actions for damages under national law for infringements of the competition law provisions of the Member States and of the European Union ('Antitrust Damages Directive'), [2014] O. J. L 349/1, Article 3, para. 2.

[2] Commission Staff Working Document, 'Practical guide quantifying harm in actions for damages based on breaches of Article 101 or 102 of the Treaty on the Functioning of the European Union' (SWD(2013) 205). See the European Commission's 'Practical Guide', https://bit.ly/35xqD7b.

[3] Oxera and a multi-jurisdictional team of lawyers led by Dr Assimakis Komninos (2009), 'Quantifying Antitrust Damages: Towards Non-binding Guidance for Courts', study prepared for the European Commission, Directorate General for Competition, December, https://bit.ly/3ktObQE.

[4] 'Commission Practical Guide', https://bit.ly/3dZUWal, para. 92, footnote 2.

[5] The term 'black box' is often used in critiques concerning the perceived opaqueness of regression analysis: see, for instance, Paha, J. (2011), 'Empirical methods in the analysis of collusion', **38**:3, *Empirica*, pp. 389–415, https://bit.ly/34tufrs.

[6] 'Commission Practical Guide', https://bit.ly/3dZUWal, para. 69, footnote 2.

[7] This might be the case, for instance, if high-quality and comparable information (i.e. prices, revenues and costs) is available during a period unaffected by the infringing conduct, or if profit margins analysis can be expected to produce a reasonable estimate of the cartel overcharge, under the assumption that the illicit conduct affected prices but did not affect costs. For more details, see Oxera (2015), 'Margins of error? Prices vs margins in cartel overcharge estimation', *Agenda in focus*, May, https://bit.ly/31HhFTZ.

[8] The practice of providing sufficient data disclosure is increasingly observed across jurisdictions, even in those countries where there are no formal requirements to do so (e.g. Netherlands, Germany, Finland and Italy).

[9] Effective cross-examination can be complemented by joint statements between the economic experts to identify areas of agreement and disagreement. Other ways to assist the court in dealing with regression analysis include teach-in sessions and the use of court-appointed experts. For a more detailed discussion, see Niels, G., Noble, R. and Shi, M. (2014), 'Economic experts on trial: Can courts rely on the evidence?', *Global Competition Review*, 14 April, https://bit.ly/3mtWvkd; or Oxera (2019), 'The butcher, the baker and the economist: factual and expert witnesses in court cases', *Agenda in focus*, February, https://bit.ly/34wgYyG.

[10] For example, see Case M.6663 *Ryanair/Aer Lingus III* (decision of 27 February 2013).

[11] For example, see Ofwat (2019), 'PR19 final determinations: Securing cost efficiency technical appendix', 16 December, https://bit.ly/2HCrues. Econometric analysis is often considered by regulatory authorities, such as Ofcom (UK), ART (Italy) and Eurocontrol.

[12] See, for example, Autorité de la Concurrence (2015), 'Décision n°15-D-03 du 11 mars 2015 relative à des pratiques mises en œuvre dans le secteur des produits laitiers frais', 11 March, https://bit.ly/3osnWwn.

[13] Autorité de la Concurrence (2015), 'Rapport Annuel 2014', 'Étude thématique: le dommage à l'économie', https://bit.ly/3ooYGXU, p. 61.

[14] For example, experts in the UK have an overriding duty to the court and are often required to produce a joint statement that summarises areas of agreement and disagreement. In contrast, experts in Germany are party-appointed and have no overriding duty to the court, but the court may appoint its own expert to assess the evidence provided by different party-appointed experts. The Italian system is similar to the German as there are also court-appointed experts.

[15] Laborde, J.-F. (2019), 'Cartel damages actions in Europe: How courts have assessed cartel overcharges', *Concurrences* N° 4-2019, https://bit.ly/3moQmWs.

[16] Laborde (2019) notes, at para. 23, that many UK cases 'settled before any judgment on the merits' (para. 18) and that the 70 cases in which German courts established liability but did not address the question of damages tended to be followed by settlements: https://bit.ly/2HxW894.

[17] See Laborde (2019), https://bit.ly/3mAHgWL, paras 15 and 24.

[18] For example, of the 23 judgments considered by Laborde before 2017, for those cases that likely originated before the implementation of the EU Antitrust Damages Directive, overcharge estimates based on regression analysis had only been submitted twice. Based on J.-F. Laborde (2017), 'Cartel damages actions in Europe: How courts have assessed overcharges', *Concurrences* N° 4-2017: https://bit.ly/3jsWGKv.

[19] Laborde (2019) mentions 23 French cases where damages were awarded: https://bit.ly/35DwmbA. However, as shown in Laborde (2017), ten of these were awarded before March 2017—i.e. before France implemented the EU Antitrust Damages Directive: https://bit.ly/31Hx9at.

[20] This is particularly likely to be the case where technical content, such as econometric estimations of overcharges, is examined by a court-appointed expert supporting the court, on behalf of the judge, in a dedicated expert's proceedings phase—e.g. in the Italian 'CTU' stage of damages cases, following a dialogue with the parties' experts.

[21] See, for example, European Commission, 'Training of national judges and judicial cooperation in the field of EU competition law', https://bit.ly/37H5p9H.