

Agenda

Advancing economics in business

Quantifying damages: a step towards practical guidance

The European Commission is promoting private actions for damages by victims of competition law breaches. The number of such actions has been on the rise in courts across Europe, but the lack of clarity about how to quantify damages can be a practical barrier. A study for the European Commission by Oxera and an international team of lawyers, published this month, is a step towards providing guidance to courts

Enforcement of the European competition (antitrust) rules continued at a steady pace during 2009. The European Commission imposed a total of €1.6 billion in fines on six price-fixing cartels that violated Article 101 of the Treaty on the Functioning of the European Union (TFEU) (until recently known as Article 81).¹ Intel, the computer chip maker, was fined €1.06 billion for abuse of dominance under Article 102 TFEU (formerly Article 82).² But fines are not the end of the story for infringers of competition law. Parties harmed by anti-competitive conduct—usually customers or competitors—can also claim compensation before a national court. The Commission has been actively promoting such private actions, as reflected in its April 2008 ‘White Paper on Damages Actions for Breach of the EC Antitrust Rules’.

One of the obstacles to damages actions discussed in the White Paper is the uncertainty over the quantification of the harm suffered. Which types of method are acceptable? What methods are feasible? What is best practice for estimating damages? The Commission intends to draw up non-binding guidance on this to assist courts and parties. The economic and legal study published this month is a step towards such guidance. This article discusses some of the aspects of this study.

Practical approaches that fit within the legal framework

A balance must often be struck between determining the real damage value as closely as possible, and finding approaches that are easy to apply and that fit

within the existing EU and national legal frameworks. Calculating the exact damage would require complete information about what would have happened in a parallel world where the antitrust infringement had not taken place—the ‘but for’, or counterfactual. Such complete information does not exist. Instead, damages estimations approximate the counterfactual with a model. All models are necessarily simplifications of the real world that can vary in the degree to which they take into account possible factors that may influence the counterfactual. This degree of detail and complexity is often driven by data constraints, and by practical constraints within the relevant legal framework.

Many Member States have rules in place which deal with the degree of freedom that judges have in calculating damages in special cases or, more generally, when exact quantification is impossible or very difficult—see the example from Sweden in Box 1 below. These rules mean that the amount of damages does not have to be proven to the last cent, thus giving the court a more efficient and feasible means of awarding damages.

Legal principles—such as causation, remoteness and foreseeability—mean that, in practice, some types of antitrust damages actions are more likely to succeed in courts across Europe than others. For example, any customers who made actual purchases from one of the cartel members are more likely to succeed in their claims for harm from cartel overcharges than those customers who did not make any purchase, but claimed that they would have done ‘but for’ the overcharge. The former are less ‘remote’ from the

The study for the European Commission, entitled ‘Quantifying Antitrust Damages: Towards Non-binding Guidance for Courts’, was produced by Oxera and a multi-jurisdictional team of lawyers led by Dr Assimakis Komninos, and with economic assistance from Dr Walter Beckert, Professor Eric van Damme, Professor Mathias Dewatripont, Professor Julian Franks, Dr Adriaan ten Kate and Professor Patrick Legros. Available at www.oxera.com and www.ec.europa.eu/competition/antitrust/actionsdamages/documents.html.

Box 1 Stockholms tingsrätt (Stockholm District Court), Cases T 32799-05 and T 34227-05, *Europe Investor Direct Aktiebolag and others v. VPC*, judgment of November 20th 2008

Actions were brought before the Stockholm District Court by competitors of VPC, the central securities depository in Sweden—the only company that holds information on the share registers of Swedish limited companies. The claimants argued that VPC's refusal to supply them with full CD-ROM copies of those share registers constituted an abuse of a dominant position and that VPC should be ordered to pay SEK7.6m (approximately €750,000) in damages.

The Stockholm District Court agreed that VPC had abused its dominant position, but awarded damages of only SEK3.9m (approximately €384,000) since the claimants had not presented full proof with respect to the extent of damages incurred. For example, in relation to rental and employee costs, the court considered that it could not be ruled out that office space and staff could have been used by other parts of the claimants' business

Source: Oxera et al. (2009), 'Quantifying Antitrust Damages: Towards Non-binding Guidance for Courts', study prepared for the European Commission, December.

that were not affected by the abuse. Similarly, because the economy as a whole was in recession during the period when the abuse took place, the claimants were unable to precisely identify which part of the losses was the result of the defendant's abusive conduct, and which part was caused by the general economic downturn. As a result, the District Court made its own estimate of the claimants' damages (at half the amount sought). This was in accordance with Section 35:5 of the Swedish Code of Judicial Procedure, which gives the court discretion to calculate the damages within the limits of reason (where insufficient evidence is available or when proof of the exact extent of the loss entails costs or inconvenience disproportionate to the size of the loss).

The defendant has appealed against the District Court's judgment and the case is currently pending before the Swedish Court of Appeal.

infringement than the latter (even if, in theory, both may have suffered economic harm).

Likewise, in the case of exclusionary conduct (eg, refusal to supply), affected parties may claim both actual loss (eg, they had to purchase the good elsewhere at a higher price; this is known as *damnum emergens*) and lost profit (eg, the refusal meant that they could not enter a market successfully; this is known as *lucrum cessans*). Conceptually these two forms of harm can be analysed in a similar way. In practice, however, claims for actual loss tend to have a greater likelihood of success than claims for lost profit (or loss of chance)—Box 2 gives an example from France. Consequently, claimants may not always be able to prove the causal link between the unlawful conduct and the alleged lost profit because of difficulties in establishing whether such losses were due to the anti-competitive practice of an infringer or to

other factors (eg, incompetence, lack of resources, luck, or external economic factors).

Classification of methods and models

The economics and finance literature has developed a wide array of methods and models that can be used for quantifying damages. Figure 1 below presents a classification of these.

There are three main classes of approaches.

- **Comparator-based approaches** use data from sources that are external to the infringement to estimate the counterfactual. This can be done in three ways: cross-sectional comparisons (comparing different geographic or product markets, also referred to as the 'yardstick' or 'benchmark' approach);

Box 2 Cour d'Appel de Paris (Paris Court of Appeal), *S.A. Mors v. S.A. Labinal*, judgment of September 30th 1998

In a 1993 judgment, the Paris Court of Appeal found that Labinal had entered into an agreement contrary to Article 101(1) and abused its dominant position contrary to Article 102, with the sole purpose of eliminating its only competitor, Mors, from a tender to supply tyre pressure measuring equipment to British Aerospace.

Subsequently, in a 1998 judgment, the Paris Court of Appeal ruled on the amount of damages, awarding Mors FF34.2m in damages for the losses caused by Labinal's infringements. The calculation of damages was based exclusively on the report of the court-appointed expert—with the court confining itself to assessing whether the expert's conclusions were reasonable and supported by statements made, or documents supplied, by the parties.

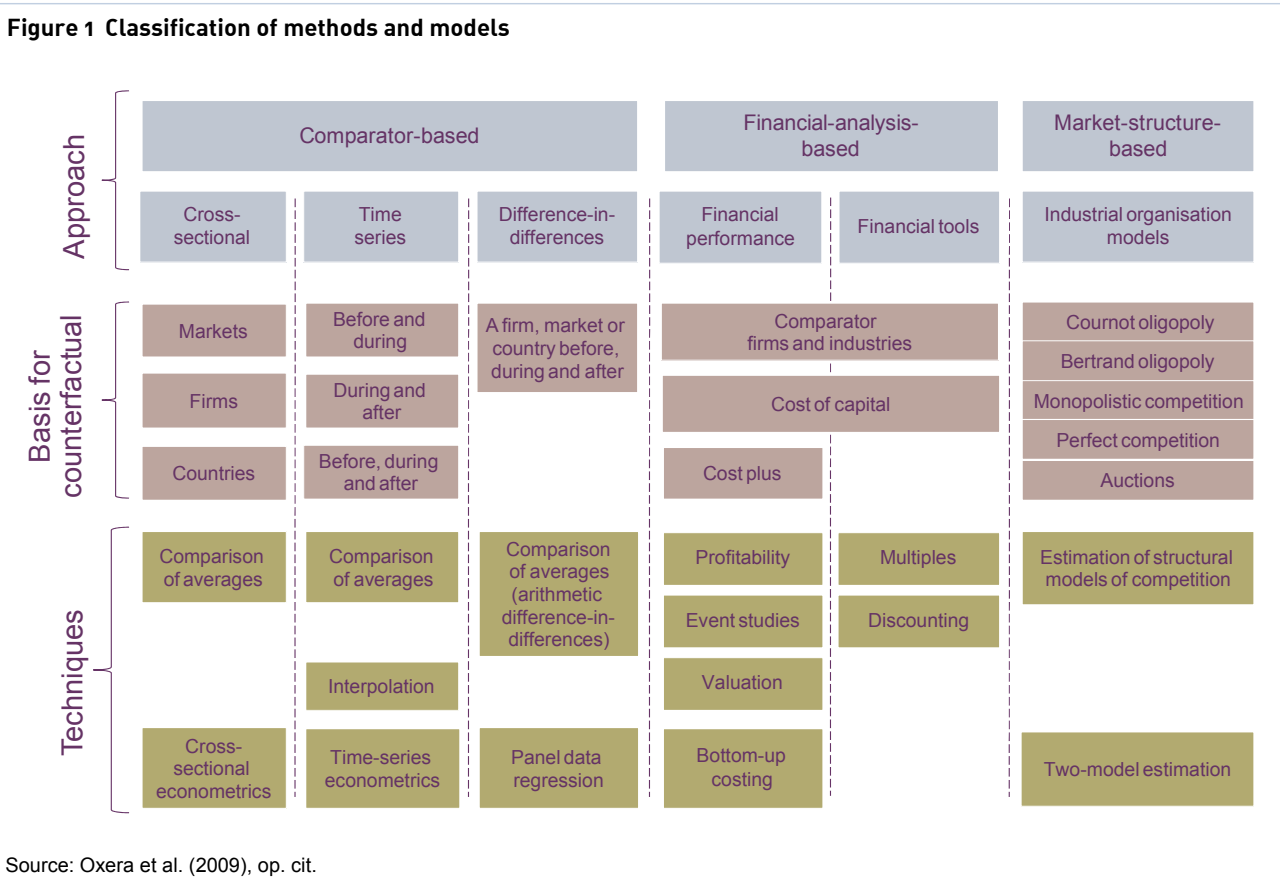
Source: Oxera et al. (2009), op. cit.

The expert used the 'but for' test—ie, asking what Mors's position would be in the absence of Labinal's anti-competitive conduct—and considered that Mors had incurred the following harm:

- additional administrative and commercial costs;
- loss of opportunity to participate in other tenders; and
- the inability to recover one-off costs.

However, the expert did not consider that Mors should be awarded damages for loss of opportunity to enter adjacent markets, since it had failed to prove that it would have entered these other markets had Labinal's anti-competitive practices not taken place.

Figure 1 Classification of methods and models



Source: Oxera et al. (2009), op. cit.

time-series comparisons (analysing prices before, during and/or after an infringement); and combining the above two in 'difference-in-differences' models.

- **Financial-analysis-based approaches**—developed in finance theory and practice, these models use financial information on comparator firms and industries, benchmarks for rates of return, and cost information on defendants and claimants to estimate the counterfactual. There are two types of approach that use this information. First, those that examine financial performance, including assessing the profitability of defendants and/or claimants and comparing this against a benchmark; and bottom-up costing of products to estimate a counterfactual price. The second type are general financial tools, such as discounting and multiples, which are used in combination with other approaches.
- **Market-structure-based approaches** use a combination of theoretical models, assumptions and empirical estimation to determine the counterfactual (rather than comparisons across markets or over time). This involves identifying models that best fit the relevant market (competition, oligopoly) and using them to provide insight into how competition works in the market concerned and to estimate the counterfactual price (or volumes).

In principle, each of these three approaches can be used to quantify damages for any type of antitrust infringement. They are not mutually exclusive. In fact, they typically complement each other—the most effective quantifications can be achieved through a combination of insights from competition economics (industrial organisation), finance theory, and quantitative economics (econometrics and modelling).

A rich menu of approaches: from simple to complex

Importantly for the purpose of practical guidance to courts, within each approach there are several different techniques that range from the simple to the complex. For example, comparator-based approaches, where the counterfactual is based on comparable product and/or geographic markets, include the following.

Comparison of averages—this simple technique observes the average price in an unaffected comparator group as an estimate for the counterfactual price. For example, if there are five comparator markets with an average price of €10, then €10 is a simple estimate of the price that would have prevailed in the relevant market in the absence of the infringement. This price can then be compared with the actual price charged in the relevant market (eg, €12) to estimate the overcharge (€2, or 16.7% of the cartel

**Box 3 Landesgericht für Zivilrechtssachen Graz (Regional Civil Court of Graz),
Bundesarbeitskammer v. Powerdrive Fahrschule Andritz GmbH, judgment of August 17th 2007**

This damages claim followed on from a 2005 judgment by the Austrian Cartel Court, which imposed fines of €75,000 on five driving schools for price fixing. The Cartel Court found that, for a period of two months, the schools had charged identical prices for the most popular driving courses, which was an infringement of the Austrian Cartel Act. According to the Austrian courts, the relevant provisions in the Act constitute a ‘protective law’ (*Schutzgesetz*) in terms of Section 1311 of the Austrian Civil Code.

The claim was brought by the Bundesarbeitskammer (the Federal Chamber of Workers) on behalf of customers of

Source: Oxera et al. (2009), op. cit.

the driving schools who had suffered as a result of the cartel. The Bundesarbeitskammer argued that the loss incurred by customers could be quantified as the 22% difference between the price charged by the driving schools during the two months of the cartel’s duration (which was identical for the cartel members) and the lower price once the cartel had ended (based on an average price calculated at that time). In this regard, the court did not elaborate further, but stated that the prices charged by the cartel members fell from around €1,140 to around €900 once the authorities had initiated the investigations.

The judgment was confirmed by the Graz Court of Appeal.

price in this example). It is good practice to present such comparisons with suitable statistical tests that inform about their robustness. Box 3 gives an example from Austria of a damages determination based on simple averages (in this case during and after the cartel period).

Interpolation—this simple method builds on a comparison of averages whereby prices from both the pre- and post-infringement periods are used to estimate the counterfactual price. Interpolation requires joining the price points before and after the relevant period to indicate what the prices would have been in the intervening period.

Regression techniques—these more complex statistical methods can be used to explain the variation in a variable (eg, price) with a number of other explanatory factors. Unlike simple comparisons of averages, they can take into account factors other than the infringement that may cause the price difference. For example, a regression may analyse the effect of characteristics of the firm or its market such as input costs, product quality and size of the firm, in addition to the effect of the infringement itself.

Regression analysis is clearly more complex and requires more data than a simple comparison of averages or interpolation, but it is generally more likely to produce robust results. In this regard it is worth noting that the US courts have accepted the usefulness of regression analysis. In one case it was stated that ‘if performed properly multiple regression analysis is a reliable means by which economists may prove antitrust damages.’¹³ Indeed, courts to some extent appear to expect experts to conduct a regression analysis in order to produce robust estimates: ‘[the] prudent economist must account for differences and would perform minimum regression analysis when

comparing price before relevant period to prices during damage period.’¹⁴ Nevertheless, there may be specific legal contexts where simple approaches are more suitable than regression or other complex techniques.

Which approach to select?

In theory, there is no reason for preferring one type of method or model over another. The methods and models presented in Figure 1 cannot be ranked. Rather, the choice of approach will depend on the details of the specific case—in particular, the availability and quality of data and information, and the required levels of evidence and burden of proof in the relevant legal framework. It may also depend on the stage of a case. At the start, a claimant normally has access to its own internal data and to public data, but not to confidential data from the defendants. Some techniques can be used with that data, but others cannot. As the case proceeds, more information may become available through disclosure, and this could allow for application of more complex techniques. For example, disclosed data on the cartel members’ costs, prices and sales over a long time period may allow the other side to follow a bottom-up costing approach to determine the counterfactual price.

In addition to the methods and models in the economics toolkit, courts may rely on further insights provided by the theoretical and empirical economics literature. Examples of questions that such insights can address are:

- under what conditions are customers of the cartel likely to have passed on the cartel overcharge to their own customers?
- what does the existing market structure suggest about the possible magnitude of the overcharge?

- what effect may the exclusionary conduct have had theoretically on the price paid by buyers in the market?

These further insights from economics can serve as general background information. In specific cases they may be used as a cross-check of the damages estimate, or to provide initial insight into the likely nature and scope of the damage in advance of the use of methods and models. Courts sometimes take a pragmatic approach based (implicitly or explicitly) on such insights. A simple example is given in Box 4, which shows how a German court took the view that, as economic theory would suggest, a cartel price is typically higher than the undistorted market price.

In any given case it is often possible to apply more than one approach, using different models—and different assumptions within those models—and taking advantage of a range of available information. Furthermore, both claimants and defendants may offer differing estimates, perhaps using different approaches. However, ultimately, the court needs to decide on the specific amount of damages (if any) to be awarded. Two main solutions are available for selecting a single value.

- **Identifying the most appropriate method or model for the case at hand.** The output from this model is then used as the best estimate of the harm.
- **Pooling model results.** This involves combining into a single value the results of each of two or more of

the methods and models. One approach—which, according to the empirical economics literature, has been shown to be robust—is simply to take the mean average of the available forecasts. For example, if three robust models predict that the damages award should be €10.1m, €11.2m, and €12.0m, the pooled model result, using a simple mean average, would be €11.1m. This combined value can then be used as the best estimate of the actual harm.

While pooling has several advantages, it does need to be applied with care. It is most frequently used in cases where a single forecaster is attempting multiple approaches (eg, an expert in a damages action pooling across all estimates), or where multiple forecasters are all attempting to estimate the same value for the same purpose (eg, a group of court-appointed experts).

Concluding comments

A range of methods and models, from the simple to the more complex, can be used for estimating the harm arising from antitrust infringements. Courts across Europe are increasingly encountering, and familiarising themselves with, such methods. There is much to learn about suitable ways to quantify damages, not just from economic theory and empirics, but also from experiences that courts in different jurisdictions already have, both in competition law and in damages actions under other types of legislation, such as contract and tort law. Indeed, the methods and models presented here can be used for damages estimations in those different legal contexts as well.

Box 4 Landgericht Dortmund (Dortmund Regional Court), Case Number 13 O 55/02, *Kart – Vitaminpreise*, judgment of April 1st 2004

This damages claim followed on from a 2001 decision by the European Commission, which imposed fines of more than €850m on eight vitamin producers for price fixing and market sharing. The claimant was a confectionary producer that purchased synthetic vitamins from a cartel member.

As to the quantification of damages, under German law all parties must prove the facts in their favour, which usually involves providing evidence of the differential between the real economic situation and the counterfactual (according to the *Differenztheorie*). In this case, however, the Regional Court applied Section 287

of the German Code of Civil Procedure, according to which a court can establish, based on its best judgment and by assessing all the circumstances of the individual case, whether and to what extent damages have been incurred. The court followed the assumption that a cartel price is normally higher than the undistorted market price and, accordingly, took as the basis for its calculation of damages the difference between the price charged by the defendants during the cartel and the lower price once the cartel had ended.

An appeal was lodged, but the case was ultimately settled between the parties.

Source: Oxera et al. (2009), op. cit.

¹ <http://ec.europa.eu/competition/cartels/statistics/statistics.pdf>.

² European Commission (2009), 'Antitrust: Commission Imposes Fine of €1.06 bn on Intel for Abuse of Dominance Position; Orders Intel to Cease Illegal Practices', press release, May 13th.

³ *Petruzzi's IGA Supermarkets, Inc. v. Darling-Delaware Co.*, 998 F.2d 1224, 1238 (3d Cir. 1993).

⁴ *In re Aluminum Phosphide Antitrust Litig.*, 893 F.Supp. 1497, 1507 (D. Kan. 1995).

If you have any questions regarding the issues raised in this article, please contact the editor, Gunnar Niels: tel +44 (0) 1865 253 000 or email g_niels@oxera.com

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