The Use of Expert Witnesses for Penalty Determinations in Criminal Antitrust Cases: A Study of United States v. AU Optronics

BY DEIRDRE A. MCEVOY AND MELISSA R. GINSBERG

THE 2012 TRIAL IN UNITED STATES v. AU Optronics Corp. set an important precedent for the government’s use of expert testimony to secure increased statutory maximum penalties in criminal antitrust cases. AU Optronics was the first trial of a corporate defendant in a criminal price-fixing case in over a decade, and it was the first time the government was required to prove to a jury beyond a reasonable doubt the gains or losses resulting from the underlying antitrust violation. With expert testimony necessary to the government’s success in AU Optronics—and the Supreme Court’s recent decision in Southern Union Co. v. United States—making clear that any fact that increases a statutory maximum penalty must be proved to a jury beyond a reasonable doubt—the government may opt to use expert witnesses more frequently. This article addresses what practitioners need to know to best protect their clients’ interests and the strategic issues at play now that the government may be more likely to present expert testimony in cartel cases.

Deirdre McEvoy is Counsel in Patterson Belknap Webb & Tyler LLP’s Litigation Department and a member of the firm’s Antitrust and White Collar Defense and Investigations Teams. Ms. McEvoy recently served as Chief of the New York Field Office of the U.S. Department of Justice’s Antitrust Division, prior to which she was Deputy Chief of the Criminal Division in the U.S. Attorney’s Office for the Southern District of New York. Melissa Ginsberg is an associate at Patterson Belknap Webb & Tyler LLP.

The Government’s Use of Expert Testimony to Prove Antitrust Overcharges: The AU Optronics Example

The government’s use of expert testimony to prove the cartel’s gains in AU Optronics was novel. Historically, the government had focused on proving the antitrust violation itself. As a result, the government rarely presented evidence concerning the gains or losses resulting from the underlying violation and had no need to retain an expert. In 2012, however, the Supreme Court held in Southern Union that the government must prove to a jury beyond a reasonable doubt any fact that increases a statutory maximum penalty. Within the context of criminal antitrust penalties, the Supreme Court’s decision in Southern Union means that if the government seeks to increase the statutory maximum beyond the $100 million fine that normally applies under the Sherman Act, it must prove the pertinent facts beyond a reasonable doubt. Thus, in order to use the alternative fines provision in 18 U.S.C. § 3571(d)—which allows penalties of up to “twice the gross gain or twice the gross loss” associated with the violation—the government must prove those gains or losses to the jury.

Strategic issues concerning how the government would prove gains or losses were recently at play in AU Optronics, in which the government alleged that AU Optronics was part of a price-fixing conspiracy in the liquid crystal display (LCD) flat panel industry. The government alleged that the participants in the LCD cartel gained in excess of $500 million, and sought to impose a penalty on AU Optronics approaching $1 billion. The district court held that the alternative fines provision of § 3571(d) would only be available, however, if the government actually proved those gains to the jury beyond a reasonable doubt. The Department of Justice’s Antitrust Division chose to satisfy this burden by presenting expert testimony.

The government retained Dr. Keith Leffler, a long time economics professor at the University of Washington, who had previously qualified as an expert in state and federal antitrust cases. As will no doubt be the case for many experts retained by the government in such matters, Dr. Leffler had substantial experience in price-fixing and other conspiracy cases and in estimating damages based on regression analysis. Expert Testimony at Trial. At trial, Dr. Leffler testified about the antitrust overcharge—i.e., “the extra amount companies are able to earn because they have engaged in an activity that’s alleged to be anticompetitive." Notably, Dr. Leffler never calculated a specific dollar amount of overcharges in the United States (“I never did a U.S. estimate of total overcharges. I’ve never done that. That wasn’t my assignment.”). Instead, he testified that the six participants in the LCD conspiracy were paid overcharges (and thus received gains) “in excess of $500 million.”

Dr. Leffler testified that he arrived at his conclusion by first determining that the six cartel participants received approximately $71.8 billion in worldwide revenue for LCD panels.
In light of the district court’s subsequent holding that only U.S.-gains could be used to increase the maximum statutory penalty under § 3571(d), Dr. Leffler further estimated that approximately $23.5 billion of the global revenue from LCD sales (or 32.7 percent) entered the U.S. market. Next, Dr. Leffler testified that to receive gains in excess of $500 million, the cartel would only have to apply an overcharge of 2.1 percent, or approximately $4.30 per LCD panel. Dr. Leffler’s opinion was that the cartel applied an overcharge on LCD panels substantially greater than $4.30 based on three factors: (1) academic literature suggesting that overcharges in cartel scenarios tend to be 15 percent or higher; (2) analysis demonstrating that the cartel obtained margins that were $53 per panel higher during the cartel period than in the post-cartel period; and (3) regression analysis suggesting that the overall overcharges were in excess of $2 billion.

Dr. Leffler’s testimony was not limited to his opinion regarding the cartel’s gains. He also testified concerning other factual matters, including details regarding meetings between cartel participants, that those meetings provided an opportunity for cartel members to set prices, and that the fact that senior management attended those meetings was evidence that important decisions (such as setting prices) were made at those meetings.

The jury returned a guilty verdict, including a finding that the cartel participants gained in excess of $500 million as a result of the antitrust violation. This finding increased the statutory maximum penalty to $1 billion, ten times the statutory maximum that otherwise would have applied under the Sherman Act.

Expert Testimony at Sentencing. The jury’s verdict determined the statutory maximum, but was not the end of the penalty analysis. The district court was still required to make certain factual findings by a preponderance of the evidence during the sentencing phase to calculate the United States Sentencing Guidelines range. Dr. Leffler’s testimony played a key role here as well. Dr. Leffler testified that the volume of commerce affected was $2.3 billion, and, based on this testimony, the district court calculated the Guidelines range at $936 million to $1.872 billion. The district court imposed a fine of $500 million.

Implications and Strategic Considerations for Practitioners

Benefits and Risks to the Government of Retaining Experts. While expert testimony itself is not required by Southern Union, in many cases retaining an expert will be the most practical way to prove a conspiracy’s gains or losses to a jury. Moreover, the government’s success in AU Optronics demonstrates the potential strategic advantages to the government from presenting expert testimony. For example, an expert may be allowed to present his opinion regarding the significance of certain key facts, thereby offering a summary of key evidence that would otherwise be limited to attorney argument.

This strategy is not without risk, however. While an expert can help the jury understand the facts, expert testimony also has important limitations. For example, defendants may argue that experts should generally not be permitted to opine as to the ultimate issues of fact. Although the Federal Rules of Evidence do allow expert testimony concerning the ultimate issue, in practice, courts are somewhat more circumspect. In United States v. Garcia, the Second Circuit noted that testimony should not “usurp the fact finding function of the jury” and “condemned the practice of having a case agent offer a summary opinion as to culpability before any evidence to support such a conclusion has been presented for jury review.” Although Garcia concerned testimony from a law enforcement officer, it is likely that courts will reach similar conclusions concerning expert testimony. Moreover, many courts may determine that an expert’s testimony concerning the ultimate issues, although not automatically precluded, is not helpful to the jury.

Presenting affirmative evidence of gains or losses through an expert may also expose weaknesses in what would otherwise be a fairly simple trial, in which the government need only prove the fact of a cartel. Faced with extensive expert testimony concerning complicated calculations, a jury may become confused and believe that if it finds the evidence insufficient to demonstrate an overcharge, it must also find that there was insufficient evidence of an antitrust violation.

Strategic Considerations for Defendants in Cases Where the Government Presents Expert Evidence. Defense attorneys should anticipate the government’s possible use of experts in criminal cartel cases and think through the strategic issues at each stage of an investigation and litigation. AU Optronics’ treatment of the testimony offered by Dr. Leffler may provide useful examples of approaches other defendants might consider.

Negotiations with the Government. It will likely remain rare for the government or defendants to retain experts and prepare expert reports before charging decisions are made. To the extent experts are retained at the pre-charging stage, they are likely to be retained as consultants who inform arguments and analysis by counsel without any disclosure to the other party.

This is not to say, however, that potential expert analysis will have no influence on pre-trial negotiations. The evidentiary burden laid down by the Supreme Court in Southern Union may prompt the government to be more conservative in making charging decisions and accept lower fines during negotiated pleas. One factor that may counsel conservatism is the inherent uncertainty in proving gains of a specific dollar amount to a jury beyond a reasonable doubt. Because the relevant dollar amount must be included in the indictment for the government to make use of the increased statutory maximum under § 3571(d), the government will in most cases be forced to specify the alleged gains before undertaking extensive expert analysis.
In *AU Optronics*, the government resolved this issue by charging and presenting evidence that the conspiracy’s gains were in excess of $500 million, rather than presenting evidence concerning the actual dollar amount of the gains. Nonetheless, Dr. Leffler’s testimony at trial illustrates the risks associated with attempting to prove the dollar value of gains beyond a reasonable doubt. Dr. Leffler calculated that the six cartel participants received approximately $71.8 billion in worldwide revenue for LCD panels. Dr. Leffler then assumed that 32.7 percent of those LCD panels entered the United States. This assumption was not based on actual facts concerning any of the LCD panels or specific companies at issue; instead, Dr. Leffler relied on data that approximately 32.7 percent of personal computers sold worldwide entered the United States and that the primary use of LCD panels is in personal computers. Dr. Leffler then assumed that the cartel participants’ overcharge was greater than 2.1 percent because, among other reasons, academic literature suggested that overcharge rates in cartel scenarios are generally around 15 percent. The *AU Optronics* jury accepted Dr. Leffler’s testimony, including his assumptions. There remains a serious risk to the government, however, that these types of assumptions will be vulnerable to attack given the government’s burden of proof. These risks will be especially high where the defendant has also retained an expert.

**Factors Affecting Disclosure.** Another significant tactical issue that both the defense and government will have to confront is the timing of expert disclosures. The Federal Rules of Criminal Procedure do not dictate a specific procedure for expert disclosures substantially in advance of trial. Rule 16(a)(1)(G) requires only that the government “give to the defendant a written summary of any testimony that the government intends to use” that describes “the witness’s opinions, the bases and reasons for those opinions, and the witness’s qualifications.” In *AU Optronics*, the district court’s Standing Order for Pretrial Preparation in Criminal Cases provided for limited disclosure by requiring the government to disclose the witnesses it might call, together with a brief summary of the anticipated testimony for each witness, only three days prior to the final pretrial conference.

The district court did order earlier expert disclosures in *AU Optronics*, but, even then, the disclosure deadline was set only six weeks before the then-scheduled trial date. This schedule left little time for the use of expert evidence prior to trial itself and, aside from motion practice concerning the admissibility of expert evidence at trial, there was no substantive use of expert testimony prior to trial.

**Motions to Exclude Expert Testimony.** In *AU Optronics*, the defendant filed three motions to exclude the government’s economic expert. While the district court denied each of these motions, they are instructive to practitioners contemplating the use of expert testimony in a cartel case. For example, *AU Optronics* filed a motion to exclude Dr. Leffler’s testimony in its entirety pursuant to *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, arguing that Dr. Leffler’s opinions were unreliable and inadmissible. The government responded that Dr. Leffler’s opinions were reliable because, among other reasons, he relied on established economic theory; examined transaction data to find a close relationship between the prices discussed and actual prices charged; concluded that the conspiracy participants received higher margins during the conspiracy period than in the post-conspiracy period; and determined that the conspiracy participants had sufficient market power because of substantial barriers to entry in the market. The district court denied the motion, finding that Dr. Leffler was academically qualified, used standard economic analysis, and provided information and opinions that may be relevant at trial.

*AU Optronics* also filed a motion to exclude all testimony from Dr. Leffler regarding any alleged overcharge as a sanction for the government’s failure to timely comply with its Rule 16 disclosure obligations. The district court denied this motion after the government agreed to produce Dr. Leffler’s revised analysis immediately and refrain from putting on Dr. Leffler’s testimony for three weeks. Upon reviewing Dr. Leffler’s revised analysis, *AU Optronics* again moved to exclude Dr. Leffler’s testimony pursuant to *Daubert*, arguing primarily that his regression methodology and results were not reliable. The district court denied this motion, too, finding that the objections to the reliability of Dr. Leffler’s regression methodology were “the kind of things that can be cross-examined on, and therefore it goes . . . to the weight, not the admissibility of Dr. Leffler’s testimony.”

The motion practice in *AU Optronics* illustrates both common grounds for motions to preclude expert testimony—including challenging its reliability under *Daubert*, although the specific reasons for doing so are generally case specific—and also illustrates that such motions may be unlikely to see significant success. As in *AU Optronics*, many courts will find that flaws in expert testimony go to the weight of the testimony rather than whether it is admissible.

**Whether to Retain a Defense Expert.** One of the more difficult questions for defendants will be whether to retain an expert to counter the government’s expert testimony. The obvious advantage to retaining a defense expert is to present the jury with a counterpoint to the government’s expert, introducing reasonable doubt on an important issue.
There are, however, also risks to the defense presenting expert evidence, especially on the question of overcharges. Presenting evidence that the overcharges are lower than the government suggests may undermine the fundamental argument that there were no overcharges or underlying antitrust violation. It is likely this concern that prompted AU Optronics to refrain from presenting expert testimony contradicting Dr. Leffler’s opinion on overcharges. Nonetheless, AU Optronics did retain experts to testify on issues concerning the underlying antitrust violation, including that the market for LCD panels was competitive; that AU Optronics had not realized any financial gain as a result of its participation in the alleged cartel; and that AU Optronics’ prices were generally lower than the price to which the co-conspirators had agreed.

**Whether to Seek a Bifurcated Trial.** Defendants may consider whether to seek a bifurcated trial, in which the jury is asked to return a verdict on the underlying antitrust violation before being presented with evidence concerning the defendant’s gains or losses. A bifurcated trial may present substantial benefits for a defendant by allowing the defendant to vigorously contest liability without having to simultaneously contest the government’s evidence concerning gains or losses. Where the government’s evidence concerning overcharges is weak, bifurcation may benefit the government, allowing it to establish a per se violation of the Sherman Act without the complication of proving the cartel’s overcharges. On the other hand, where the government’s evidence concerning overcharges is strong, the government may believe that such evidence bolsters the conclusion that there was an underlying antitrust violation.

In *AU Optronics*, the government requested that the court bifurcate the trial into a guilt phase and a penalty phase. However, this was before the Supreme Court issued its decision in *Southern Union* and was driven by the government’s position that it did not need to prove the cartel’s gains to a jury to avail itself of the increased statutory maximum available under the alternative fines provision, 18 U.S.C. § 3571(d). As discussed earlier, the district court rejected this argument, and held that the government was required to prove any such gains to a jury. Having so ruled, the district court saw little benefit to bifurcation, and denied the motion.

Many courts are likely to be similarly hesitant about conducting a bifurcated trial, based on the belief that such a trial will require duplicative presentations of evidence and may require more of the court’s and the jury’s time. To succeed on a motion for bifurcation, practitioners should highlight the prejudice likely to be suffered absent bifurcation and also attempt to present the court with a proposed trial structure that will allow efficient proceedings.

**Considerations for Cross-Examination.** The particulars of cross-examination will depend on the facts of a given case and the vulnerabilities of the relevant expert’s opinion. A review of the cross-examination of Dr. Leffler is instructive nonetheless.

**Expert’s Lack of Credibility:** Fertile grounds for cross-examination include that previous courts have questioned or rejected the expert’s testimony and that the expert has generally testified on behalf of plaintiffs seeking to establish antitrust violations. AU Optronics used this technique extensively, pointing out errors Dr. Leffler made in other cases and other courts that rejected portions of his testimony.

**Expert Compensation:** Defendants may be wary about cross-examining the government’s expert strenuously on the amount of compensation he or she has received. First, many experts will (as Dr. Leffler did) charge the government a reduced rate as compared to their regular hourly rate. Second, in many cases the government expert’s compensation will be lower than the defendant’s expert. For example, Dr. Leffler testified that he received approximately $250,000 for his work on *AU Optronics*, but one of the defense expert teams was paid more than $6 million.

**Reliance on Government Data:** One unique area in cross-examining government experts is that they are more likely to rely on government economists, rather than their own team of assistants, to provide support for their work. Dr. Leffler testified that he relied on government staff to develop the numerical data that formed the basis of his opinions. Private experts are more likely to rely on in-house teams of economists they have trained and have worked with extensively on previous cases. This has two key implications: first, that the private expert can supervise the work of his team and develop appropriate procedural controls; and, second, that an expert’s staff remains an outside, neutral party while government economists are employed directly by one of the parties to the litigation. Effective cross-examination will emphasize the extensive nature of the government’s involvement in the expert’s analysis and conclusions.

**Reliability of Data and Methodology:** Practitioners should take care to examine the reliability of the data the expert relies on, whether the expert selects data from an appropriate time period or cherry-picks specific months or years to support his or her conclusion, and the reliability of the methods the expert uses to analyze that data.

**Difficulty Calculating Exact Overcharge:** The difficulty in proving gains of a specific amount beyond a reasonable doubt may provide ammunition for cross-examination. If the government chooses to follow the strategy it did in *AU Optronics*—by having the expert testify simply that the cartel’s gains were over $500 million, without specifically identifying a particular amount—there may be room to undermine the expert by noting his or her inability to calculate the gain with any precision.

**Admissions:** Cross-examination can also be used to secure admissions from the government’s expert that are favorable to the defense. For example, AU Optronics emphasized that the price for AU Optronics’ LCD panels was consistently lower than the price charged by other cartel participants. AU Optronics used this fact to argue that AU Optronics’ executives attended the meetings at issue so that they could
learn how other LCD manufacturers were pricing and then set their own prices below that point to build market share.

**Strategic Guidelines for Summation.** With respect to expert testimony, summation should generally crystallize the key points that were established on cross-examination, including any critiques of the expert’s results along with any helpful admissions. For example, AU Optronics used summation to emphasize that judges in other actions had criticized Dr. Leffler’s methodology and rejected his opinions and that AU Optronics’ LCD panels were consistently priced lower than the LCD panels of other alleged cartel participants.

As with the decision concerning whether to present expert evidence on overcharges, defendants will have to make a difficult decision concerning whether to argue that the correct calculation of overcharges is lower than the government suggests. AU Optronics made a strategic decision to avoid discussing overcharges by making the following argument to the jury during summation:

If you look at the evidence in this case—if you look at the economic evidence, if you look at what [the defense expert] did—I don’t think you can be firmly convinced of AUO’s guilt, and so we’re not here to talk about overcharge. I’m not going to address that with you, because I don’t think it’s relevant.

While avoiding the discussion of overcharges can be an effective strategy, it also means that if the jury does reach a guilty verdict as to the underlying antitrust violation the jury will have little basis to reject the government’s calculation of overcharges. Defendants may have to choose whether to focus their efforts on a defense against the underlying antitrust violation itself or instead to risk diluting that defense by responding to the government’s evidence concerning overcharges.

**AU Optronics’ Pending Appeal**

AU Optronics has not challenged the admissibility of the government’s expert evidence on appeal. Nonetheless, issues pertaining to the sentence imposed on AU Optronics—a key reason for the government’s presentation of expert evidence in the first place—are the subject of extensive appellate briefing.

First, AU Optronics has challenged the district court’s application of the alternative fines provision in a multi-defendant case. The district court held that the maximum statutory penalty for each of the cartel participants is twice the collective gains of all defendants and co-conspirators, including those of larger corporations such as Samsung and LG Display. On appeal, AU Optronics argued that the maximum fine it can be sentenced to is twice its own gains. AU Optronics further noted that Dr. Leffler did not testify—and the government presented no other evidence—demonstrating specifically the gains to AU Optronics.

Second, AU Optronics argued that even if the statutory maximum for cartel participants is twice the collective gains of all conspiracy participants, the collective fine imposed on the conspiracy participants should not exceed that number. Prior to AU Optronics’ sentencing, the government had recovered fines totaling $715 million from other participants in the LCD conspiracy. AU Optronics thus argued that, because the statutory maximum was $1 billion, the government could recover only an additional $285 million from AU Optronics.

The Ninth Circuit heard argument on AU Optronics’ appeal on October 18, 2013, but has not yet issued a decision. Regardless of how the Ninth Circuit rules, expert evidence concerning defendants’ gains—whether individually or collectively—will remain relevant, and AU Optronics is an instructional case for practitioners confronting the possible use of expert evidence in criminal cases in the future.

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1. No. 09-cr-110 (N.D. Cal.) (Illston, J.).
4. Although the trial in AU Optronics took place before the Supreme Court’s decision in Southern Union, the district court concluded that if the government chose to “seek a significantly larger fine based upon the establishment of additional facts, it must do so by following Apprendi’s mandate, and by proving those facts to a jury beyond a reasonable doubt.” United States v. AU Optronics, No. 09-cr-110, 2011 U.S. Dist. LEXIS 77494, at * 13 (N.D. Cal. July 18, 2011) (discussing Apprendi v. New Jersey, 530 U.S. 466, 490 (2000)).
5. Transcript of Proceedings at 3278, AU Optronics (Feb. 9, 2012) [hereinafter 2/9/12 Trial Transcript] (testimony of Dr. Keith Leffler).
7. 2/9/12 Trial Transcript, supra note 5, at 3282.
8. Id. at 3312–13.
9. See id. at 3313–17. Dr. Leffler’s initial expert report concerned the cartel’s overcharges resulting from global sales of LCD panels. In December 2011, however, the district court held that the appropriate measure of commerce and the cartel’s gains from overcharges was not global and instead must be limited to commerce with a nexus to the United States. The dispute concerning whether a defendant may be fined on the basis of monetary gains accruing from anticompetitive sales outside of the United States is part of a larger discussion taking place in academic literature and the courts concerning the scope of the Foreign Trade Antitrust Improvements Act (FTIA). See Motorola Mobility LLC v. AU Optronics Corp., 746 F.3d 842 (7th Cir. 2014); Minn-Chem, Inc. v. Agrium Inc., 683 F.3d 845 (7th Cir. 2012); Animal Sci. Prods. Inc. v. China Minmetals Corp., 654 F.3d 462 (3d Cir. 2011).
10. 2/9/12 Trial Transcript, supra note 5, at 3321–25.
11. Id. at 3323; 3356–57; 3378.
12. See, e.g., id. at 3294–97.
13. The district court considered Dr. Leffler’s testimony for sentencing but held that no additional hearing was necessary because the district court had heard his testimony at trial.
14. See Transcript of Proceedings at 10, AU Optronics, ECF No. 963 (Sep. 21, 2012) [hereinafter Sentencing Transcript]. This range was capped by the statutory maximum of $1 billion.
15. Id. at 38.
Some of this potential confusion may be resolved through use of effective jury instructions. In AU Optronics, the district court provided the following instruction:

The government does not have to prove that anyone derived any particular amount of monetary or economic gain from the alleged conspiracy or that the alleged conspiracy caused any particular amount of monetary or economic harm in order for you to find a defendant guilty of the offense. To find a defendant guilty, all that you must find is that the government has proved the elements of the offense, which I previously described. However, you have heard economic evidence, which includes testimony about the alleged gain derived from the alleged conspiracy. ... The testimony regarding the amount of the alleged gain may be considered by you only if you find AUO or AUO guilty of the charged conspiracy.

Jury Instructions at 14, AU Optronics, ECF No. 829 (Mar. 1, 2012).

See Fed. R. Evid. 702 (permitting expert testimony only where “the expert’s scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue.”); United States v. Boissoneault, 926 F.2d 230, 233 (2d Cir. 1991) (noting “discomfort with expert testimony ... that not only describes the significance of certain conduct or physical evidence in general, but also draws conclusions as to the significance of that conduct or evidence in the particular case”).

On December 5, 2013, after hearing the AU Optronics appeal, a Ninth Circuit panel granted bail pending appeal to two Taiwanese electronics executives convicted of antitrust violations. In its order granting the individual defendants’ motions for bail pending appeal, the Ninth Circuit concluded that the defendants “raised at least one ‘fairly debatable, or fairly doubtful’ question of law or fact” that could overturn their convictions. Although the Ninth Circuit did not identify the “debatable” question, it is anticipated that the Ninth Circuit will provide further guidance concerning the scope of the FTAA and the extraterritorial reach of the Sherman Act. Order, United States v. AU Optronics, Nos. 12-10492, 12-10493, 12-10500, 12-10514 (9th Cir. Dec. 5, 2013).