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Economic Evidence of Common Impact for Class Certification in Antitrust Cases: A Two-Step Analysis

BY HAL J. SINGER

ECONOMISTS ARE TRAINED IN THE scientific method, which requires hypothesis testing. When retained for the purpose of proving an antitrust violation, the expert economist's role typically is to test whether the anticompetitive hypothesis best explains the data or whether some alternative, procompetitive (or competitively neutral) hypothesis does a better job. In an antitrust class action, however, an expert economist may also play a role at the class certification stage of the case. At that stage, the economist is asked a different question; specifically, assuming that the anticompetitive hypothesis is true, would all or nearly all of the members of the proposed class suffer antitrust injury?[1] Accordingly, at the class certification phase, the expert must presume the anticompetitive hypothesis—that the challenged conduct occurred—and demonstrate instead that class-wide antitrust impact can be proven with evidence common to the class.[2] An economist retained to testify on class certification issues still must undertake a thorough analysis to avoid having his or her testimony discarded by the court. In other words, accepting the anticompetitive hypothesis at the class certification stage does not imply abandoning the scientific method.

To obtain class certification of a damages claim, plaintiffs are required to demonstrate, among other things, that "questions of law or fact common to the class predominate over any questions affecting only individual members."[3] In the antitrust context, that inquiry usually requires an assessment of the nature of the evidence available to prove three principal elements: (1) the existence of a violation, (2) common impact on members of the class, and (3) aggregate damages.[4] Before explaining the elements of a formal proof of common impact, it is worth briefly noting that the other two inquiries—assessing the nature of the evidence necessary to prove the violation and calculating aggregate damages—are generally glossed over at the class certification stage.[5]

Antitrust defendants typically cannot mount much of a challenge to the notion that proof of the violation can be made with evidence "common to the class rather than individual to its members."[6] For example, proof of the relevant product market will often turn on industry-wide elasticity of demand and industry-wide price-cost margins, neither of which varies by class member. Similarly, whether a defendant conspired with its rivals or engaged in exclusionary conduct will be informed by defendant-specific evidence. Common evidence is also readily available to calculate aggregate damages, which can often be expressed as the product of the quantity sold by defendants and the average overcharge. Basic econometric tools, such as regression analysis, which produces average effects attributable to one factor while controlling for others, can be helpful in calculating aggregate damages.

It is for these reasons that proof of common impact is almost always the bone of contention in antitrust cases at the class certification stage. Based on my experience as an economic expert, my review of the case law, and the application of economic principles, proof of common impact involves two basic inquiries: (1) Is there a plausible economic theory (and corroborating evidence) that links the challenged conduct to anticompetitive effects generally, and (2) Is there some mechanism that would reliably transmit these anticompetitive effects (typically in the form of an overcharge) to all or a large share of the proposed class? If, after rigorous analysis, these inquiries can be answered in the affirmative, then the likelihood of getting a class certified increases significantly.[7]

In short, common impact for class certification purposes can be demonstrated with evidence that (step 1) links the challenged conduct to anticompetitive effects generally, and then (step 2) supplies an economically valid and reliable methodology to connect those general anticompetitive effects to members of the class without having to assess their individual circumstances. It is important to keep in mind, however, that the plaintiff's task at class certification "is not to put forth a final method for establishing impact using common evidence, but rather to demonstrate that such a method is possible."[8]

Hal Singer is a Managing Director at Navigant Economics. The views expressed here are entirely his own and do not reflect the views of Navigant Economics or Navigant Consulting. He was the testifying expert for plaintiffs in Johnson v. Arizona Hospital & Healthcare Ass'n *and Meijer, Inc. v. Abbott Laboratories, discussed in this article. For a more extensive treatment of the subject matter of this article, see Hal J. Singer & Robert Kulick,* Class Certification in Antitrust Cases: An Economic Framework, *17 Geo. Mason L. Rev. 1035 (2010).*

Step 1: Is there a plausible economic theory (and corroborating evidence) that links the challenged conduct to anticompetitive effects generally?

The first step involves identifying a well-received theory of harm from the economic literature that fits the fact pattern of the case. Economic models of anticompetitive effects tend to focus on consumer welfare and not on higher prices. While the antitrust laws are designed to protect consumer welfare, the inquiry at the class certification stage typically focuses on narrower questions about whether members of the proposed class of buyers overpaid or, in the case of monopsony or a buyer-side conspiracy, whether members of the proposed class of sellers were underpaid. Identifying prior applications of the theory of harm to the industry at hand bolsters the credibility of the proposed model. For example, economic literature that shows how competition among hospitals tends to increase nurse wages would bolster a claim that a wage conspiracy among hospitals suppressed wages.[9] Similarly, identifying literature that shows how competition among prescription drugs tends to decrease drug prices would bolster a claim that exclusionary conduct increased drug prices.

In certain types of antitrust cases, higher prices are part of the challenged conduct, making this first step of the two-part inquiry easier to satisfy. Consider a bundled-rebate monopolization case, in which part of the challenged conduct is that the defendant set a penalty price for the tying product in excess of the stand-alone monopoly price. Assuming that the anticompetitive hypothesis is true (and that the challenged conduct occurred), there is little dispute that at least some class members paid higher prices for the tying product relative to the but-for price.

The first element is generally easier to satisfy in price-fixing conspiracies as well, in which higher prices are also part of the challenged conduct. This is not to say that all price-fixing cases naturally lend themselves to class-wide analysis; the controversy in these cases will merely shift from whether prices were elevated in general to whether they were elevated for large swaths of the proposed class (step 2 of the analysis).

In cases where higher prices are not directly implicated by the challenged conduct, the plaintiffs' expert must offer a credible economic model for the step one analysis that links the challenged conduct to higher prices generally. In economic terms, the expert may establish such a link by showing that the challenged conduct caused customers to be less sensitive to price increases by the defendants relative to fringe suppliers (that is, rendered the residual demand for defendant's products or services less elastic), typically by degrading the choices of its customers.

For example, in a tying case in which the defendant has never sold the tying product separately there may be no direct evidence that the defendant's conduct caused customers to pay anticompetitive prices or that lower prices would have prevailed in the absence of the challenged tying arrangement. Although the economic literature offers several theories that connect tying to higher prices in the tied markets,[10] the economist must demonstrate that at least one of those theories applies and that common evidence can be used to establish that the necessary conditions of that model are satisfied.

It bears noting that demonstrating the plausibility of an economic theory that links the challenged conduct to higher prices generally does not necessarily entail sophisticated regression analysis. Although the economist may be expected to reach into his or her empirical toolkit at the class certification stage, proffering a viable economic theory and demonstrating that the necessary conditions of that theoretical model are empirically satisfied requires a different skill set (and a small library of industrial organization textbooks). As mentioned above, regression analysis is most helpful in the area of computing aggregate damages, which can be expressed as a function of average effects.

The case law highlights the importance of linking the challenged conduct to higher prices generally in a rigorous way. For example, in *In re New Motor Vehicles Canadian Export Antitrust Litigation*, the First Circuit vacated a class certification decision in favor of a nationwide class of new car purchasers because the plaintiffs' expert failed to satisfy this first element of the proof of common impact.[11] The challenged conduct did not involve higher prices directly; instead, the plaintiffs argued that a horizontal conspiracy among car makers to limit Canadian imports (via no-export clauses and other penalties) led to higher prices.[12] The court observed that, although "[i]njury in price-fixing cases is sometimes not difficult to establish," the "novel and complex" nature of plaintiffs' theory demanded additional scrutiny.[13] Specifically, the court stated: "As plaintiffs themselves note, without a very large number of cars poised to cross the border, a nationwide impact on the automobile market of the sort required by plaintiffs' theory is implausible, and the theory collapses."[14] The court concluded that plaintiffs had failed to articulate a plausible theory that linked the defendants' conduct to higher prices generally.[15]

Step 2: Is there a mechanism that would transmit these anticompetitive effects to a large share of the members of the proposed class?

The second part of the two-part inquiry focuses on how higher prices are transmitted to the proposed class members. Is the class sufficiently "cohesive" such that the challenged conduct adversely impacted a large share, or even all or nearly all, of its members? In antitrust cases, plaintiffs seeking class certification have often been successful when they have been able to prove that the prices paid by all class members are linked by a common element of pricing and that this common element has been materially affected by the conduct in a way that is harmful to class members.[16] Accordingly, the second element is generally easier to satisfy in industries where (1) defendants use list prices, (2) all buyers pay list prices or some discount off of list prices, and (3) buyers are atomistic[17] (which limits the scope of bargaining). Again, this is not to say that all such industries naturally lend themselves to class-

wide analysis; other elements of the proof of common impact must also be satisfied. Yet even in *Hydrogen Peroxide*, discussed more fully below, the court considered the empirical tendency for prices charged to individual customers to move together, suggesting that such an approach (when actually bolstered by corroborating evidence) may establish class cohesion with respect to pricing.[18]

Some have argued that there is no basis in economic theory to support the proposition that inflation of a common element of pricing harms all consumers whose prices are linked to that common element.[19] The economics of price discrimination suggests otherwise. Price dispersion among customer segments for the same product is known as "third-degree price discrimination," in which a firm with market power charges varying prices to different segments of the marketplace, based on variations in elasticities of demand.[20] Through price discrimination, firms can increase profits by charging higher prices to the less price-sensitive segments of the market. In some cases, firms may even be able to tailor their prices on a customer-by-customer basis; this is referred to as "first-degree price discrimination." To implement a discriminatory pricing strategy, however, a firm typically needs to know the individual elasticities of each of the various segments (or individual customers). Because such knowledge is generally not available to the firm *ex ante*, it may post a starting price based on the aggregate demand elasticity of its customers and then negotiate downward based on the revealed price sensitivities (and bargaining power) of individual customers or segments. Indeed, in the U.S. economy it is common for firms to charge customers list prices accompanied by private discounts.[21] Assuming the individual discounts from the common base price are not affected by the challenged conduct, inflation of this common element of pricing should harm all customers.

Even where the conduct may affect the individual discounts, inflation of a common element of pricing should harm all customers. In an antitrust case, the challenged conduct potentially imposes harm by limiting the substitution opportunities available to customers.[22] Because any private discount relative to a base price would tend to shrink with the restriction of opportunities to substitute alternative products, it is highly unlikely that the presence of private discounts will ever offset any inflation in the common base price caused by anticompetitive conduct.[23] Accordingly, evidence that the common base price was inflated by the conduct (along with evidence that the individual prices are generally linked to the base price) is evidence of common impact, and thus generally sufficient to establish cohesion—even if the private discount varies across class members.[24] Among other ways, the economic expert may establish that individual prices are generally linked to the base price by computing the percentage of putative class members who paid the list price or who purchased at least one unit from the defendant at the list price. In *Meijer, Inc. v. Abbott Laboratories*, the district court certified a class of drug wholesalers in part because each class member purchased at least one unit of the prescription drugs at issue at the list prices, which were alleged to have been inflated by the challenged conduct.[25]

In cases where few actually pay the list price (think of buying a car), there might be strong evidence that list price drives the transaction prices. There, the expert may establish that individual prices are generally linked to the base price by estimating simple correlation coefficients. For example, in *Johnson v. Arizona Hospital & Healthcare Ass'n* (AzHHA), plaintiffs alleged that a group of hospitals in Arizona conspired to set bill rates for both per-diem nurses and travel nurses. Hospital members of AzHHA paid travel agencies a common bill rate, and agencies would pay their nurses a percentage of that bill rate, the ratio representing the agency's pass-through rate. The district court certified a class of per-diem nurses in part because the expert's (the author's) data indicated that bill rates (the list prices) were positively correlated with pay rates for six types of temporary nursing staff.[26] Once again, heavy-duty regression analysis may not be necessary to satisfy this second element.[27] If there is an empirical link between base prices and transaction prices, it should be readily apparent through basic empirical techniques, such as correlation analysis.[28] (That labor markets involve monopsony power rather than monopoly power does not invalidate the path to common impact outlined above, as many of the same attributes—common list prices, atomistic sellers, suppressed wages as part of the challenged conduct—can be found there.[29])

In many cases, direct evidence of a consistent correlation between list prices and prices paid by members of the class may not be available, either because discovery of the data has not occurred or list prices are simply not used. There, the economist must rely on indirect evidence to show that customers who make up the class must have suffered some antitrust injury due to the challenged conduct, typically by paying higher prices than they would have paid absent this conduct. In these cases, the economist could rely on the defendant's internal planning documents that explain how prices are formulated, or on the defendant's pricing schedules that explain how prices vary across customers or geography. In addition, testimony from marketing or pricing teams at defendant companies might inform this inquiry. In these cases, proof of the second prong tends to be more complicated for testifying economists. Regardless of how proof of the correlation between the anticompetitive conduct and prices paid by class members is made (whether by using direct evidence of pricing data or through more indirect proof), an economic expert now requires more data and case facts than were previously required to develop and test economic models of common impact that fit the market in question, thereby loading fact discovery to the front end of litigation.

The case law offers several examples in which an economist has failed to establish this second element in the proof of common impact. In *Hydrogen Peroxide*, the Third Circuit vacated the district court's decision to certify the class because

there was substantial uncertainty as to whether the plaintiffs' expert's theory was "susceptible to proof at trial through available evidence common to the class."[30] The court cited the defendants' expert's finding that there was no empirical tendency for prices charged to individual customers to move together (or in accordance with price announcements), suggesting that list prices could not be used to measure antitrust impact on a common basis.[31] Importantly, the base-price approach to proving common impact was not rejected in *Hydrogen Peroxide*. Instead, the Third Circuit remanded the case for reconsideration because there was an active dispute between the experts, unresolved by the district court, as to whether such a pricing structure actually existed.[32] Moreover, the court suggested that the obstacles to class certification might be overcome by fashioning product-specific subclasses or by shortening the class period.[33]

Similarly, in *Blades*, the Eighth Circuit upheld a decision not to certify a class of direct purchasers of genetically modified "Roundup Ready" soybean seed or genetically modified "Yieldgard" corn seed because the second step of the impact analysis was not satisfied.[34] The court noted that genetically modified (GM) corn seeds were often sold alongside a corresponding non-genetically modified corn seed and that "[b]ecause no pricefixing conspiracy is alleged as to non-GM hybrids [non-genetically modified seeds], such pairings establish clear list-price premiums for the GM corn hybrids [genetically modified seeds]."[35] Citing uncontroverted evidence that many of the genetically modified seeds at issue were sold at "zero or negligible list price premiums,"[36] the court concluded that the class was not sufficiently cohesive. It bears noting, however, that the Eighth Circuit specifically rejected as a basis for its rationale the district court's finding that farmers buying GM seeds often received varying discounts from the list prices, preserving the path for future plaintiffs to pursue base-price theories.[37]

New Directions in Class Certification

While the two steps to proving common impact discussed above should be considered necessary, they may not be sufficient conditions to obtaining class certification because defendants may present other obstacles to proving common impact. For example, an emerging strategy is for defendants to seize on complementary products sold by the defendant (in a monopoly or seller-side conspiracy case) or on other aspects of compensation paid by the defendant (in a monopsony or buyer-side conspiracy case) that were not subject to the challenged conduct. Under this "offset" theory, defendants may have altered another dimension of pricing (or compensation) in such a way as to offset the antitrust impact flowing from the challenged conduct for at least some members of the putative class.

A recent case involving a class of temporary nurses highlights the use of offsets by defendants to defeat class certification, at least for part of the class. As noted above, in *Johnson v. Arizona Hospital & Healthcare Ass'n*, the court certified a

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class of per-diem nurses in part because the evidence linked all of the per-diem nurse's compensation to the price-fixed bill rate, despite the fact that each per-diem nurse may have been paid a different hourly rate.[38] The court did not certify a class of travel nurses, however, citing the defendants' expert's testimony that travel nurses were compensated with other benefits, such as housing or travel stipends.[39] According to the court's logic, because the alleged conspiracy did not cover these elements of compensation, defendant hospitals may have mitigated the antitrust impact of their conspiratorial conduct by raising the housing or travel stipend. Although the agency bill rate was arguably intended to cover housing and travel expenses, the offset theory persuaded the court not to certify a class of travel nurses.[40]

The offset theory could be applied in pricing conspiracies as well. Consider a case in which two, multi-product firms conspire over the pricing of good 1, but do not conspire over the pricing of good 2. Assume further that good 2 is a complement to good 1. Defendants might argue that each firm would have an incentive to reduce the price of good 2 to mitigate the coordinated price increase for good 1. Because some class members purchase large volumes of good 2 in relation to good 1, some members might benefit by the conduct—that is, the savings on good 2 relative to the but-for price might swamp the overcharges on good 1 for some class members. To make matters concrete, if the conspiracy raises prices of good 1 by $10 but induces the conspiring firms to lower the price of good 2 by $5, a class member who purchased at least twice as much of good 2 compared to good 1 is arguably better off. In such a case, the plaintiff's expert must be prepared to analyze the extent to which proposed class members consume the complementary product in proportion to the product in question, and to segregate the class into winners and losers as needed.

The use of the offset theory raises interesting legal and economic questions with regard to establishing methods to demonstrate that proof of common impact is possible at the class certification stage. Should a multi-product firm enjoy antitrust immunity from class action liability as long as it can point to potential reductions in the price of complementary

products? Should each purchase of good 1 by class members be considered a discrete event for antitrust purposes, so that antitrust injury suffered in one instance cannot be offset by future actions taken by plaintiffs? Or should a class member's purchases be aggregated across all purchases of goods 1 and 2? Economists who analyze common impact in cases with complementary products should understand not only the economic principles and analytical tools that may apply, but also the different approaches that courts may apply to balance allegedly offsetting price effects, which may affect the ultimate conclusion on whether the burden to prove common impact can be satisfied.

Conclusion

Demonstrating that impact on class members may be proven with evidence common to the class, rather than specific to its individual members, is a two-step process: (1) showing a link between the conduct and higher prices in the market generally; and (2) showing that methodologies exist to link the higher prices generally to prices paid by individual class members.

With respect to step 1, the plaintiffs' expert could employ, among other things, a well-received theory of harm from the literature; prior applications of the theory to the industry at hand; and evidence that the challenged conduct rendered the defendant's residual demand curve less price-sensitive.

With respect to step 2, the plaintiffs' expert could employ, among other things, evidence that the common base price was inflated by the conduct; evidence that a significant percentage of proposed class paid the list price or purchased at least one unit from the defendant at the list price; evidence such as estimated correlation coefficients that shows that individual prices typically are linked to the base price; and anecdotal evidence from defendant's internal price-formulation documents and price schedules, or testimony from defendant's marketing or pricing teams that shows consistent pricing practices used with members of the class. Under any of these approaches, an economic expert now requires more transaction data and case facts than were previously required at the class certification stage to develop and test economic models that fit the market in question.

Failure to undertake a thorough economic analysis of these two inquiries can result in the plaintiff's expert's testimony being discarded or of limited use to the parties or the court. The class was not certified in *New Motor Vehicles* for, among other things, failure to satisfy the first step in the analysis; failure to satisfy the second step prevented certification in *Blades* and *Hydrogen Peroxide*. If plaintiffs can satisfy these two evidentiary burdens, then the class will likely be sufficiently cohesive in the sense that proof of the violation at the merits stage will necessarily mean widespread injury to class members. ■

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[1] It is not clear whether the plaintiff's burden is to demonstrate that "all or nearly all" of the members of the class would be impacted by the conduct or whether a lesser showing, such as "widespread injury," is required. *See* Joshua P. Davis & Eric L. Cramer, *Antitrust, Class Certification, and the Politics of Procedure*, 17 GEO. MASON L. REV. 969, 970 (2010).

[2] *In re* Hydrogen Peroxide Antitrust Litig., 552 F.3d 305, 311–12 (3d Cir. 2008) ("[T]he task for plaintiffs at class certification is to demonstrate that the element of antitrust impact is capable of proof at trial through evidence that is common to the class rather than individual to its members.").

[3] FED. R. CIV. P. 23 (b)(3).

[4] *See Hydrogen Peroxide*, 552 F.3d at 311; Cordes & Co. Fin. Servs., Inc. v. A.G. Edwards & Sons, Inc. 502 F.3d 91, 105 (2d Cir. 2007).

[5] Joshua Davis and Eric Cramer point out that, ironically, these two inquiries, and not common impact, get all the attention at the merits stage. Seldom has a defendant argued during summary judgment or at trial that the plaintiffs cannot prevail because "only" 75 percent of the class members were injured. *See* Joshua P. Davis & Eric L. Cramer, *Of Vulnerable Monopolists?: Questionable Innovation in the Standard for Class Certification in Antitrust Cases*, 41 RUTGERS L.J. 355, *382* (2009).

[6] *Hydrogen Peroxide*, 552 F.3d at 312.

[7] *Compare Hydrogen Peroxide*, 552 F.3d at 324–25 (Rule 23 requires a "rigorous assessment of the available evidence and the method or methods by which plaintiffs propose to use the evidence to prove impact at trial").

[8] Johnson v. Ariz. Hosp. & Healthcare Ass'n (AzHHA), No. CV 07-1292-PHX-SRB, 2009 WL 5031334 (D. Ariz. July 14, 2009). *See also Hydrogen Peroxide*, 552 F.3d at 12 ("Plaintiffs' burden at the class certification stage is not to prove the element of antitrust impact, although in order to prevail on the merits each class member must do so. Instead, the task for plaintiffs at class certification is to demonstrate that the element of antitrust impact is capable of proof at trial through evidence that is common to the class rather than individual to its members.").

[9] *See, e.g.*, Roger Feldman & Richard Scheffler, *The Union Impact on Hospital Wages and Fringe Benefits*, 35 INDUS. & LAB. REL. REV. 196, 203–04 (1982) (higher concentration ratios were associated with lower wages in analyses of RN and LPN wages); C. Link & R. Settle, *A Simultaneous-equation Model of Labor Supply, Fertility and Earnings of Married Women: The Case of Registered Nurses*, 47 S. ECON. J. 977, 987 (1981).

[10] *See* Einer Elhauge, *Tying, Bundled Discounts, and the Death of the Single Monopoly Profit Theory*, 123 HARV. L. REV. 397, 400 (2009).

[11] *In re* New Motor Vehicles Canadian Exp. Antitrust Litig., 522 F.3d 6, 9 (1st Cir. 2008).

[12] *Id.* at 7–10.

[13] *Id.* at 26–27.

[14] *Id.* at 27.

[15] *Id.*

[16] *See, e.g.*, *In re* Ethylene Propylene Diene Monomer (EPDM) Antitrust Litig., 256 F.R.D. 82, 95 (D. Conn. 2009) ("[T]he plaintiffs have met their burden of demonstrating that the element of injury-in-fact can be proved by evidence common to the class—the six national price lists that ostensibly applied to every customer, in conjunction with the general analysis of the characteristics of the EPDM market, support the notion that the price list increases had class-wide impact.").

[17] Atomistic buyers exhibit passive, price-taking behavior. *See, e.g.*, David E. Mills, Countervailing Power and Chain Stores 4 (Working Paper 2010), *available at* http://www.virginia.edu/economics/Workshops/papers/mills/Countervailing%20Power%20and%20Chain%20Stores.pdf).

[18] As discussed below, the *Hydrogen Peroxide* court noted that "there was an active dispute between the experts as to the 'price structure in the industry'" and it remanded the case because "it is not apparent that the District Court considered, or believed it had the authority to consider, all the evidence in the record with respect to this dispute." 552 F.3d at 326.

[19] *See, e.g.*, David T. Scheffman, Economic Analyses Relevant to Class Certification, Presentation to the Law Seminars International Conference 7 (May 10, 2007).

[20] Hal R. Varian, Microeconomic Analysis 248 (3d ed. 1992).

[21] This point applies to price-fixing cases where the resulting market power permitted the participants to engage in price discrimination.

[22] This point can also be extended to a price-fixing case, where consumers cannot readily switch to a supplier outside of the conspiracy.

[23] *See, e.g.*, Michael E. Porter, *The Five Competitive Forces that Shape Strategy*, Harv. Bus. Rev., Jan. 2008, at 25, *available at* http://www.mktgsensei.com/AMAE/Strategy/HBR%20on%20Strategy.pdf#page=25 (explaining that a buyer's bargaining power is a function, among other things, of its outside choices).

[24] It bears noting that "so long as the common proof can adequately demonstrate *some damage* to each individual," a variation in the amount of damages suffered by each class member would not preclude class certification. *See Hydrogen Peroxide Antitrust Litig.*, 552 F.3d at 325 (quoting Bogosian v. Gulf Oil Corp., 561 F.2d 434, 454–55 (3d Cir. 1977) (emphasis added); *see also id.* ("We do not question plaintiffs' general proposition, which the District Court accepted, that a conspiracy to maintain prices could, in theory, impact the entire class despite a decrease in prices for some customers in parts of the class period, and despite some divergence in the prices different plaintiffs paid.").

[25] 2008 WL 4065839 at *1, *9 (N.D. Cal. Aug. 27, 2008).

[26] *Johnson*, 2009 WL 5031334 at *8. ("In fact, Dr. Singer's data indicates that bill rates were positively correlated with pay rates for six types of temporary nursing staff, both per diem and traveling, at six AzHHA member agencies for all available years. Moreover, it stands to reason that, as the agencies have testified and is revealed by the financial records that have been produced through the course of discovery, if bill rates were to rise, so would temporary nursing wages.") (citations omitted).

[27] Based on the preliminary results of a simple benchmarking model, the court was persuaded that it was possible to demonstrate impact using common evidence. *Id.* at *10 ("Dr. Singer's Report explains that, in this case, benchmarking would involve comparing the changes in prices for temporary nurses in Arizona to the changes in prices for temporary nurses in other states. . . . Dr. Singer's report states that he has 'not yet determined a precise benchmark for the but-for price of temporary nurses in Arizona during the class period,' as he would also need to incorporate other factors such as 'a shortage of nurses, demographic change, macroeconomic trends, and national health policy.' *However, Plaintiffs' task at this stage in the litigation is not to put forth a final method for establishing impact using common evidence, but rather to demonstrate that such a method is possible*.") (emphasis added) (citations omitted).

[28] Correlation analysis does have its limits because correlation can be present even in the absence of a causal link. Regression analysis is a more powerful tool because it allows one to control for other factors not at issue in the case that may affect prices, but it is also involved and expensive. As a result, correlation analysis may be an acceptable alternative in many cases here.

[29] For an alternative view, see John H. Johnson, Jesse David & Paul A. Torelli, *Empirical Evidence and Class Certification in Labor Market Antitrust Cases*, Antitrust, Fall 2010, at 60–61 (citing the "complex factors that drive hiring and compensation outcomes"). It bears noting that the authors agree that when the challenged conduct directly involves prices or wages, then the analysis is more conducive to class-wide methods. *Id.* at 63 ("Thus, allegations of naked wage-setting pacts are perhaps the most analogous to the typical price-fixing cases in output markets. The empirical methodologies presented by plaintiffs in these cases, including the benchmark and regression approaches described above, are therefore more likely to support class certification than in other types of labor market cases.").

[30] 552 F.3d at 325.

[31] *Id.* at 314.

[32] *Id.* at 325. The "price structure" approach used by the plaintiffs' expert in *Hydrogen Peroxide* has been criticized as "junk science" in an article appearing in this magazine. *See* John H. Johnson & Gregory K. Leonard, *In the Eye of the Beholder: Price Structure as Junk Science in Antitrust Class Certification Proceedings*, Antitrust, Summer 2008, at 108, 109 (2008). As the authors describe the approach: "To determine whether a 'pricing structure' exists in an industry, an expert combines his or her 'knowledge' with 'visual inspection' of graphs of the average prices paid by different customers and for different products to see whether prices 'move together' over time." *Id.* at 108. Johnson and Leonard appear to be less critical of a "pricing structure" approach as a concept (i.e., the relevance of establishing that customer-level prices move together over time) as they are with the "testing procedure" employed to test the hypothesis of the pricing structure, i.e., "visual inspection" of the data. *Id.* ("A specific implication of the price structure hypothesis is that we should observe customer prices moving together in a tight pattern over time. The price structure hypothesis would appear to be generally testable using rigorous methods when customer-level transaction price data are available. However, in our experience, the testing procedure typically used by experts to test the hypothesis of price structure is limited to a simple "visual inspection" of graphs of average prices against time."). In contrast to a "visual inspection" approach to demonstrating the existence of a correlation between base or list prices and transaction prices, this article suggests that empirical techniques such as correlation analyses can be utilized to make this link.

I am not aware of any case that rejected (on a theoretical level) an approach to proving common impact that empirically links list prices to transaction prices. In a recent case decided after *Hydrogen Peroxide*, the court rejected the plaintiff's expert's evidence of a "pricing structure," not because the approach was theoretically unsound, but because the defendants' expert's conclusion that a pricing structure did not exist was more persuasive. *See In re* Plastics Additives Antitrust Litig., No. 03-CV-2038, 2010 WL 3431837 at *13–15 (E.D. Pa. Aug. 31, 2010) ("[T]he evidence shows that prices did not behave similarly for all products and customers and the pricing structure analysis set forth by [plaintiffs' expert] therefore cannot serve as proof of impact common to the class.").

[33] *Id*. at 325 n.26.

[34] Blades v. Monsanto Co., 400 F.3d 562 (8th Cir. 2005).

[35] *Id.* at 573.

[36] *Id.*

[37] *Id.* at 572.

[38] 2009 WL 5031334 at *8.

[39] *Id.* at *9.

[40] *Id.*