Monopsony 2013: Still Not Truly Symmetric

Many commentators have pointed out that monopoly and monopsony are mirror images of the same market distortion. In this article, Jon Jacobson observes that the courts have consistently authorized conduct by buyers that symmetric treatment would prevent and that there are important real-world economic differences between monopoly and monopsony. He argues that the more lenient treatment of buyer-side power in the case law is generally consistent with sound economic analysis.

Group Buying—A Canadian Case Study

Neil Campbell, Jun Chao Meng, James Musgrove, and François Tougas offer an analysis of a recent Canadian case, 321665 Alberta Ltd. v. ExxonMobil Canada Ltd. and Husky Oil Operations Ltd., dealing with monopsony. The authors find that although the outcome in the case is correct, the reasoning used by the courts relied on notions of fairness rather than a rigorous economic approach like that in the Canadian Competition Bureau’s guidelines.

Martin Gaynor, Director, FTC Bureau of Economics: A Review of His Recent Economic Research

Editor Kevin Christensen reviews the writings of Martin Gaynor, who began serving as the Director of the FTC’s Bureau of Economics on October 1, 2013. Much of Dr. Gaynor’s work relates to health care quality, uncertainty, and consolidation in the hospital industry. This review of his papers concludes that Dr. Gaynor is a careful, thoughtful researcher and applied econometrician who diverges from prevailing antitrust enforcement norms by often considering social welfare rather than consumer welfare.

Aviv Nevo, Deputy Assistant Attorney General for Economic Analysis: Interpreting Data Under the Guidance of Economic Theory

Nauman Ilias assesses the published research of Aviv Nevo, the Antitrust Division Deputy Assistant Attorney General for Economic Analysis since April 1, 2013. In this appraisal, Dr. Nevo is called a pioneer in the use of data to analyze consumer behavior as well as the application of the findings from such research to competition policy questions. With Dr. Nevo at the helm, it is predicted that the economists at the DOJ are more likely to supplement their traditional economic analyses of mergers and market power with structural estimations and merger simulations.
Monopsony 2013: Still Not Truly Symmetric

Jonathan M. Jacobson

We have been assured for years that “monopoly and monopsony are symmetrical distortions of competition,”¹ and that statement is precisely true. But the conclusion some commentators have told us to draw, that symmetric legal and economic treatment is necessarily required,² is sometimes quite wrong. Despite the superficial appeal of symmetric outcomes, economic analysis frequently yields a different result. And, indeed, the case law over many decades has been consistent in authorizing conduct by buyers that symmetric treatment would prevent. To that end, the courts routinely uphold practices like purchasing cooperatives whose counterparts are invariably condemned as unlawful per se on the selling side.³ And to this day, no reported case has found a firm guilty of unilateral monopsonization, notwithstanding the numerous occasions in which single-firm conduct has been held to constitute unlawful monopolization under Section 2 of the Sherman Act.⁴

The purposes of this article are, first, to explain the important real-world economic differences between monopoly and monopsony and, second, to analyze why the outcomes in the relevant case law are generally consistent with sound economic analysis. As I explain, the economic reasons why symmetric outcomes are often unwarranted are complex and the courts have never specifically discussed them. Instead, the courts—while maintaining their ability to distinguish purely naked restraints from conduct that may in fact benefit consumers—appear guided by the simple intuition that buyer power tends to reduce prices, and that lower prices are good. That intuition does not always hold true. But it is correct often enough, and it has led to case law results that, in the main, promote antitrust’s goal of preserving competition for the benefit of consumers.

Economics of Monopsony

The important way in which monopsony and monopoly are similar is that both impair welfare by reducing market output below competitive levels. The monopolist uses its market power as a seller to restrict its production so that its customers have to bid a higher price per unit. The monopolist, similarly, uses its market power as a buyer to reduce the quantity it purchases so that sellers must reduce their prices in order to make a sale. In both instances, there is a misallocation of resources resulting from the below-competitive levels of output, a wealth transfer (to the monop-

⁴ See generally ABA SECTION OF ANTITRUST LAW, ANTITRUST LAW DEVELOPMENTS 240–318 (7th ed. 2012).
olist from its customers or to the monopsonist from its suppliers), and associated consumer harm.\(^5\)

A competitive equilibrium in an input market is shown in Figure 1. The supply curve, \(S\), represents the supply of the product being purchased, effectively the sum of the cost curves for the sellers of the product. The demand curve, \(D\), is derived from the demand for the final product sold in the downstream market, as the product being purchased is typically an input into that final product. Price and quantity in equilibrium are at the competitive level, where supply and demand intersect.\(^6\)

The textbook monopsony outcome is shown in Figure 2. Here, the monopsonist buyer recognizes that, because of its market power, its buying decisions can influence the average price per unit for its total purchase. Thus, the monopsonist maximizes its profits at the expense of its suppliers by reducing purchases to the point where its marginal input cost (i.e., the change in the monopsonist's average cost per unit, after purchasing an additional unit at the margin, given the total number of units in its entire purchase), as represented by the line MIC, intersects with the market demand curve. The result is that the quantity purchased by the monopsonist is reduced from \(Q_c\) to \(Q_m\), and price is lowered from \(P_c\) to \(P_m\). Resources are misallocated by the output reduction and wealth is transferred from the suppliers to the monopsonist buyer. This result holds irrespective of whether the monopsonist has market power or not in the downstream market into which its products are sold.\(^7\)

An important point to note, however, is that, if the monopsonist has no market power as a seller in the downstream market for the final product, and if there are ready substitutes for the input product sold by the monopsonist in this downstream market, price and quantity for the final product in the downstream market will not be impaired. Other sellers, using their own inputs, will

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\(^{7}\) See Jacobson & Dorman, Joint Purchasing, supra note 6, at 6–8.
replace any quantities lost from the monopsonist. Consequently, any harm in that context will be felt only in the upstream market in which the monopsonist buys.8

Figure 2

What if the monopsonist also has market power or monopoly power as a seller in the downstream market? Those consequences are depicted in Figure 3. Here, the monopsonist reduces its purchases to the point where the marginal revenue received for its sales of the input product in the downstream market (MRP or marginal revenue product) intersects with its marginal cost for the input (MIC) in the upstream market. Again price (Pm) and quantity (Qm) are below competitive levels Pc and Qc in the upstream market. And, indeed, output in the upstream market may be restricted even further than in the case where the downstream market is competitive.

Figure 3

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8 See Jacobson & Dorman, Monopsony Revisited, supra note 5, at 153.
All this is common ground and not controversial. But note the common thread throughout Figures 1 through 3. It is that the outcome in each diagram depends on having supply and marginal input cost curves that are upward-sloping. That is a condition that, although critical to monopsony analysis, does not always hold in the real world.

**Key Differences Between Monopoly and Monopsony**

The traditional reasons for visualizing market supply curves as upward-sloping are straightforward. An industry supply curve is the sum of the cost curves of the various producers in the market. Goods are scarce. Buyers will seek to obtain the lowest cost goods first, leaving the higher cost goods for later. At the margin, other things being equal, a buyer must therefore pay more per unit to obtain additional units. That scarcity value, other things being equal, translates into a supply curve with an upward slope. But other things are not always equal. If economies of scale are present, or if the marginal costs of supplying or producing the input are otherwise flat or decreasing, incremental units of a good may be produced at constant (or even decreasing) per-unit costs despite resource scarcity, causing the supply curve to flatten out (or even decline).

There are a large number of empirical studies of cost and supply conditions in manufacturing industries. These studies provide evidence that, at prevailing levels of production, industrial market supply curves are typically flat. That is the conclusion reached years ago by Professors Scherer and Ross following a careful review of dozens of firm and industry studies, and is echoed by the Carlton and Perloff textbook today. Professors Stigler and others have reached the same conclusion in their separate analyses. And flat or downward-sloping supply curves are by no means limited to traditional manufacturing. Very important sectors of our new economy also exhibit high initial fixed costs accompanied by zero to trivial incremental costs. Software, semiconductors, and pharmaceuticals are prime examples.

Of course, not every market is associated with flat or downward-sloping cost curves, and there are many other types of markets where supply curves do tend to slope upwards. Perhaps the best example is labor markets, where the resource scarcity that causes costs to increase is readily apparent. Indeed, economics texts often use labor markets to illustrate monopsony issues. Another type of industry historically believed to exhibit upward-sloping supply curves is agriculture, although modern farming techniques (with their attendant economies of scale) make this a varying and empirical question today. Not surprisingly, a large proportion of the reported cases

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finding joint buyer conduct unlawful under the antitrust laws involve labor markets\textsuperscript{16} or agricultural markets.\textsuperscript{17}

If the supply curve is not upward-sloping, the consequences for monopsony analysis are significant. As Figure 4 illustrates, an effort to reduce the market price paid by restricting the monopsonist’s purchases will fail. The monopsonist cannot lower its purchasing costs by reducing the quantity of its purchases: with a flat input supply curve the monopsonist pays the same price per unit of input regardless of how much it buys.\textsuperscript{18} However dominant the purchaser may be, it cannot unilaterally cause the market price for the input to decline. Trying to force lower prices would require sellers of the input to price below cost, a situation unsustainable over time. If the supply curve is downward-sloping due to economies of scale past a certain quantity threshold of production, a monopsonist’s reduction in purchases theoretically could even lead prices to increase as economies of scale disappear.

\begin{figure}[h]
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\caption{Figure 4}
\end{figure}

This is where the symmetry between monopoly and monopsony breaks down. In contrast to monopsony, where the relevant (supply) curve’s slope may vary, the relevant curve for monopoly (or seller) analysis is the demand curve. Demand curves invariably slope downwards, and so a conclusion that an output reduction means a price increase—and, in fact, is the means to achieve


\textsuperscript{17} See, e.g., Mandeville Island Farms, Inc. v. Am. Crystal Sugar Co., 334 U.S. 219, 235 (1948); Been v. O.K. Indus., 495 F.3d 1217 (10th Cir. 2007); Reid Bros. Logging Co. v. Ketchikan Pulp Co., 699 F.2d 1292 (9th Cir. 1983); In re Beef Industry Antitrust Litig., 600 F.2d 1148 (5th Cir. 1979); United States v. Champion Intl Corp., 557 F.2d 1270 (9th Cir. 1977); Cackling Acres, Inc. v. Olson Farms, Inc., 541 F.2d 242 (10th Cir. 1976); Nat’l Macaroni Mfrs. Ass’n v. FTC, 345 F.2d 421 (7th Cir. 1965); Live Poultry Dealers’ Protective Ass’n v. United States, 4 F.2d 840, 841–43 (2d Cir. 1924); United States v. Rice Growers Ass’n, 1986-2 Trade Cas. (CCH) ¶ 67,287 (E.D. Cal. 1986); Bray v. Safeway Stores, Inc., 392 F. Supp. 851 (N.D. Cal.), vacated following settlement, 1975-2 Trade Cas. (CCH) ¶ 60,533 (9th Cir. 1975); United States v. Olympia Provision & Baking Co., 282 F. Supp. 819 (S.D.N.Y. 1968), aff’d mem., 393 U.S. 480 (1969).

\textsuperscript{18} See, e.g., ROBERT PINDYCK & DANIEL RUBINFELD, MICROECONOMICS 377–78 (7th ed. 2009).
The distinction has important real-world consequences. Key sectors of the economy, including manufacturing, software, semiconductors, and pharmaceuticals, are often the subject of important competition concerns from the selling side perspective. Yet monopsony or other buy-side problems in these areas are likely to be quite rare because the supply curves are not necessarily upward-sloping.

The often differing nature of supply and demand curves carries these important practical implications and is the principal reason the idea of "symmetric" treatment of monopoly and monopsony does not work. It is, however, not the only difference. In addition, buying-side markets are typically less concentrated than selling-side markets. To be sure, there is the occasional monopsony buyer. But, as a general matter, there are typically many more buyers than sellers in a given market. As a consequence, buyer combinations are less likely in general than seller combinations to create or exercise market power.\(^{20}\)

The upshot is that there are at least two obstacles to symmetric treatment of buying- and selling-side conduct. First, in the many industries facing flat or declining costs at prevailing levels of production, and hence similarly shaped supply curves, a monopsonist’s effort to reduce prices by restricting purchases will not work; prices will stay the same and the monopsonist buyer(s) in question will just get less of the input at issue without any necessary deadweight loss or associated reduction in consumer welfare. Second, buyer combinations are, in general, less likely to create or exercise market power because buyers typically tend to outnumber sellers significantly in a given market. As a result, adverse welfare effects are inherently less likely in buy-side contexts than in sell-side cases.

**Monopsony in the Courts**

One can search the case law at length for any articulation of the distinctions just discussed, but nothing will be found. There is nothing about the slope of the supply curve, nothing about comparative levels of concentration. Still, the cases are quite consistent in their outcomes with these distinctions. Buyer-side conduct is regularly treated more leniently than equivalent conduct on the selling side. Antitrust is concerned with both collusion (i.e., joint conduct) and exclusion (unilateral conduct). A discussion of both will be useful.

**Joint Buyer Conduct.** Arrangements among competing sellers to use a common sales agent or otherwise to purchase at an agreed-upon price have long been condemned as illegal per se in the absence of a very significant integration of resources.\(^{21}\) The law as to buyers is entirely dif-

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19. Cases where a price increase is associated with an output increase—such as an increase in the price of perfume to signal quality—are generally not viewed as exceptions. The higher perceived quality is viewed as having shifted the demand curve to the right. Following the shift, the demand curve retains its downward slope. To visualize the point, think of a perfume sold at $5 a bottle, garnering little if any sales. Price is increased to $150 a bottle with an accompanying marketing campaign, causing dramatically increased sales. The demand curve has shifted outwards to the right. Assume that, later, retailers are allowed to give customers a “bargain” at $145 and that sales pick up again. That is the (new) downward-sloping demand curve at work.

20. The unusual situation where the selling-side is monoploid while the buying-side is monopsonized is referred to as “bilateral monopoly.” In that context, the outcome is indeterminate, with price depending on the respective bargaining abilities of the buyer and the seller. This indeterminate outcome is typically better for consumers than either pure monopoly or pure monopsony. See PINDYCK & RUBINFELD, MICROECONOMICS, supra note 18, at 380; Jacobson & Dorman, Joint Purchasing, supra note 6, at 19.

21. See, e.g., Va. Excelsior Mills, Inc. v. FTC, 256 F.2d 538, 540 (4th Cir. 1958); ANTITRUST LAW DEVELOPMENTS, supra note 4, at 89 (cases “have summarily condemned agreements among competitors to use a common sales agent to fix prices”); cf. Broadcast Music, Inc. v. CBS, Inc., 441 U.S. 1, 19–23 (1979) (blanket license for music licensing subject to rule of reason treatment as a single price was necessary to market the product).
ferent as joint purchasing is routinely upheld and almost never subject to per se analysis. For example, the Department of Justice and Federal Trade Commission Statements of Antitrust Enforcement Policy in Health Care, issued in 1996, place many joint purchasing arrangements in a broad safety zone, without even examining particular efficiencies:

The Agencies will not challenge, absent extraordinary circumstances, any joint purchasing arrangement among health care providers where two conditions are present: (1) the purchases account for less than 35 percent of the total sales of the purchased product or service in the relevant market; and (2) the cost of the products and services purchased jointly accounts for less than 20 percent of the total revenues from all products or services sold by each competing participant in the joint purchasing arrangement.

Judicial outcomes generally have been pro-buyer as well. The Supreme Court addressed a joint purchasing cooperative in *Northwest Wholesale Stationers v. Pacific Stationery & Printing Co.* The Court upheld the arrangement by pointing to “economies of scale in both the purchase and warehousing of wholesale supplies.” Notably, while scale economies in warehousing are traditionally cognizable efficiencies from any perspective, “economies of scale in purchase” sounds much more like a simple aggregation of buying power—power that, on the selling side, would count against, not in favor, of the arrangement. Several lower court cases uphold joint buying arrangements on similar reasoning. At least in the absence of a large share of the market in issue, the cases are consistent in this respect.

This is not to say that all buyer combinations are benign. Notwithstanding *Northwest Wholesale* and the breadth of the agencies’ Health Care Statements, it is clear that some collective buyer agreements are subject to per se condemnation. Thus, in *Mandeville Island Farms, Inc. v. American Crystal Sugar Co.*, the Supreme Court condemned, per se, an agreement to fix buy-side prices among three sugar refiners that comprised roughly the entire market collectively. Similarly, in *National Macaroni Manufacturers Association v. FTC*, an agreement among the largest sellers of macaroni to limit the amount of higher-quality (and higher-priced) durum wheat they purchased—allowing them to substitute lower-quality wheat in the finished macaroni—was also held

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23 Id. Statement 7, available at [http://www.ftc.gov/bc/healthcare/industryguide/policy/statement7.pdf](http://www.ftc.gov/bc/healthcare/industryguide/policy/statement7.pdf). Note, however, that the agencies’ 2000 Competitor Collaboration Guidelines have no such provision. They provide, instead, a “safety zone” for competitor collaborations that are (1) not purely naked restraints of trade, and (2) formed by firms with a market share of 20 percent or less. These Guidelines do not distinguish in this respect buyer arrangements from seller arrangements. U.S. Dep’t of Justice & Fed. Trade Comm’n, Antitrust Guidelines for Collaborations Among Competitors §§ 3.31(a), 4.2 (2000), available at [http://www.ftc.gov/os/2000/04/ftcdojguidelines.pdf](http://www.ftc.gov/os/2000/04/ftcdojguidelines.pdf). The Health Care Statements have never been withdrawn and remain effective as agency policy. Curiously, the agencies have never explained the reasoning behind the differences on this issue.


25 Id. at 286–87.


27 334 U.S. 219 (1948); see also Vogel, 744 F.2d at 601 (“[B]uyer cartels, the object of which is to force the prices that suppliers charge the members of the cartel below the competitive level, are illegal per se.”) (citing *Mandeville Island Farms*, 344 U.S. at 223–24).

illegal per se. And agreements by auction participants to set agreed-upon bid prices have been prosecuted criminally.\textsuperscript{29}

Much of the analysis of joint buyer arrangements has come in the context of business review letters or advisory opinions from the federal antitrust agencies.\textsuperscript{30} A recent review was in response to a request from the STARS Alliance LLC,\textsuperscript{31} a group of seven electric utilities operating nuclear facilities. Together, STARS operates 13 of 69 pressurized water nuclear plants in the country—roughly 19 percent. They proposed to procure jointly a variety of specialized services, including turbine maintenance, reactor coolant pump maintenance, and radiation protective services. Participation was voluntary, but any participation would be associated with minimum purchase requirements. The Justice Department approved the request, relying on the participants’ aggregate market share of less than 20 percent and on the fact that the participants were not competitors on their selling sides (although they did compete on the buy side).\textsuperscript{32} Had the firms been selling-side rivals, it is difficult to believe that the Justice Department would have so readily approved a similar agreement to set selling prices—at least not without some significant resource integration.

Although no court has articulated the distinction precisely this way, the cases and agency determinations can all be reconciled if one concludes that buyer arrangements require a lesser showing of efficiencies to avoid per se condemnation than a comparable arrangement on the selling side. Truly naked arrangements with no efficiency justifications whatsoever, such as those in Mandeville Island Farms or the auction-rigging cases, will be condemned without regard to the defendants’ collective market shares (or market power).\textsuperscript{33} But even minor efficiencies, such as “economies of scale in purchasing” will be enough to avoid per se treatment and require, at a minimum, a showing that the defendants’ collective market shares are substantial. Joint selling arrangements, in contrast, are not treated so leniently.\textsuperscript{34}

**Single-firm Conduct.** Numerous types of conduct can be alleged to constitute exclusionary conduct under Section 2 of the Sherman Act. Predatory pricing, certain types of refusals to deal with customers or suppliers, exclusive dealing, bundling, loyalty discounts, tying, most-favored-nations clauses, and denials of access are the most prevalent.\textsuperscript{35} Of all of these, however, the only cases involving allegations of genuine buy-side monopsony abuse—a strategy designed to lower


\textsuperscript{32} Id.

\textsuperscript{33} See Mandeville Island Farms, 334 U.S. at 225–26 (buying agreement among three refiners allegedly eliminated their competition as to performance, ability, and efficiency, and was devoid of any of the “efficiency that consolidation into one corporation might bring”); Seville Industrial Machinery Corp., 696 F. Supp. at 989–91.


\textsuperscript{35} ANITRUST LAW DEVELOPMENTS, supra note 4, at 240–89. For a discussion of buyer conduct designed to exclude selling-side rivals, see Steven Salop, Anticompetitive Overbuying by Power Buyers, 72 ANTITRUST L.J. 669, 670, 679–82 (2005).
prices and reduce output—are those involving predatory below-cost pricing. And in no instance has any court ever found a violation.36

The case that got furthest—a jury verdict for the plaintiff sustained by the court of appeals—was *Weyerhaeuser Co. v. Ross-Simmons Hardware Lumber Co.*37 Weyerhaeuser was the dominant purchaser of alder logs in the Pacific Northwest. It converted the logs into lumber products, which were then sold in a broader geographic market (in which Weyerhaeuser was not alleged to have market power). Its smaller rival, Ross-Simmons, alleged that Weyerhaeuser drove it out of business by overbidding for logs. The jury agreed that Weyerhaeuser “purchased more logs than it needed, or paid a higher price for logs than necessary,” and the trial court and Ninth Circuit upheld the plaintiff’s verdict on that basis.

The Supreme Court reversed 9–0. The Court said that “more than needed” was an unacceptable standard, and that predatory buying should be evaluated under a standard analogous to the selling-side standard articulated in *Brooke Group v. Brown & Williamson Tobacco Corp.*38 Specifically, the Court said that a buyer may be held liable only if (1) “the predator’s bidding on the buy side [has] caused the cost of the relevant output [in the downstream market] to rise above the revenues generated in the sale of those outputs,”39 and (2) “that the defendant has a dangerous probability of recouping the losses incurred in bidding up input prices through the exercise of monopsony power.”40

The Court’s rejection of the “higher than needed” standard, and its insistence on a variant of the *Brooke Group* below-cost pricing standard, were expected and not controversial. Nor were many eyebrows raised by the Court’s statements about “the economic similarity between monopoly and monopsony,”41 or its citations to commentator suggestions for symmetric treatment.42 What has been little remarked, however, is that the Court’s standard actually raises higher hurdles for the plaintiff than does the *Brooke Group* rule on the selling-side.43

To see this point, consider first the sell-side predator. If it sells below cost, it necessarily incurs losses on those sales. But the buy-side predator does not. If the monopsonist firm has market power as a seller in the downstream market, predatory overbidding will not lead it to incur losses, because it can, at the same time, raise prices to its customers in the downstream market. There is no “below cost” buying under the standard the Court has set out. And under *Weyerhaeuser*, those sell-side profits do not count as “recoupment” to satisfy the second prong of the test. The decision requires instead recoupment “through the exercise of monopsony power,” meaning the ability to recoup prong 1 selling-side losses through the exclusion of buy-side rivals and resulting lower prices on the buy-side. Importantly, the *Weyerhaeuser* Court’s heightened

36 Most-favored-nations clauses can be viewed as involving buyer-side abuse, but the harm in these cases is traditional sell-side harm, the exclusion of rivals to raise selling prices. See generally id.; Jonathan M. Jacobson & Daniel P. Weick, Contracts that Reference Rivals as an Antitrust Category, ANTITRUST SOURCE, Apr. 2012, at 4–8, http://www.wsgr.com/publications/PDFSearch/jacobson-0412.pdf.
37 549 U.S. 312 (2007).
38 Id. at 318–22 (citing Brooke Group v. Brown & Williamson Tobacco Corp., 509 U.S. 209 (1993)).
39 549 U.S. at 325.
40 Id.
41 Id. at 322.
42 Id.
standard appears to favor the monopsonist about which we should be most concerned—the one with market power as a seller in the downstream market.

Although some have questioned whether the Court truly meant to impose a heightened standard on plaintiffs in predatory buying cases, the language of the opinion shows that the Court did indeed mean to do just that:

[P]redatory bidding presents less of a direct threat of consumer harm than predatory pricing. A predatory-pricing scheme ultimately achieves success by charging higher prices to consumers. By contrast, a predatory-bidding scheme could succeed with little or no effect on consumer prices because a predatory bidder does not necessarily rely on raising prices in the output market to recoup its losses.

The determination to protect the predatory buyer seems quite intentional from this text.

Case Law Is Consistent with, but Does Not Fully Account for, the Distinction Between Monopoly and Monopsony

Despite the often-stated expression that monopsony and monopoly are two sides of the same coin, the cases do not treat them that way. Weyerhaeuser appears to be explicit in that respect, and it is also the clear implication of the cases involving joint purchasing arrangements. So what is motivating these outcomes? Clearly, it is not some great empirical analysis of seller versus buyer concentration or some deep investigation of the slope of industry supply curves. It is, quite simply, the fact that buyer conduct tends to lower prices (at least as a first order effect), consistent with the courts’ long-held belief that “[l]ow prices benefit consumers regardless of how those prices are set, and so long as they are above predatory levels, they do not threaten competition.”

Buyer power without true monopsony power—the power to reduce prices by restricting quantity—may indeed benefit consumers through the lower prices the buyer is able to achieve. If sellers singly or collectively are pricing above competitive levels, buyer power can push prices down without restricting output, and where these are the facts, consumers are better off. This may often be the case in the many important markets with flat or downward-sloping supply curves. Sellers in those industries may be able to price in excess of marginal cost and, if so, an exercise of buyer power will generally benefit consumers. These real-world experiences appear, perhaps not consciously, to motivate the intuition underlying the courts’ treatment of buyer conduct as generally benign.

Monopsony can, however, be a real-world problem in a number of other industries. In some cases, the monopsonist’s downstream selling market may be competitive. If so, downstream effects depend on the availability of substitutes for the monopsonized product. On the facts of Weyerhaeuser, for example, Weyerhaeuser was alleged to have monopsonized a regional market for the sale and purchase of trees. The downstream market for lumber products, however, was much broader geographically, and Weyerhaeuser’s downstream share was too small to affect price or quantity downstream. If Weyerhaeuser succeeded in restricting output of logs in the regional input market, rival sellers in the broader output market could make up the volume with logs purchased elsewhere. (Similarly, in Mandeville Island Farms, the monopsony buyers could have restricted output of the beet sugar they were buying, but the defendants would still have to

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44 Harrison, supra note 43, at 11.
45 549 U.S. at 324 (citing Salop, supra note 35, at 676).
compete against cane sugar in their output markets.) If price and quantity downstream are not affected, then downstream consumers will not be harmed.47

Lack of harm to downstream consumers is not the whole story, however. Even if price and output downstream are not affected, an exercise of monopsony power can still harm consumers. Consumers are harmed, for example, by an output reduction and associated misallocation of resources if the production of logs in the Pacific Northwest is reduced or if reduced quantities of beet sugar are available.48 In these instances, moreover, wealth is improperly transferred from the sellers to the buyers. The effects in broader downstream selling markets may be too dispersed to be felt, but cognizable harm remains nonetheless.

If the monopsonist has power downstream and the input market supply curve slopes upwards, consumers are necessarily harmed by an exercise of monopsony power. Output is reduced in both the input and downstream markets, and prices downstream will rise. If one thought that predatory buying was prevalent, then this would be the one context in which the rule laid down in *Weyerhaeuser* might be thought to go too far. Still, the fact that there have been so few predatory buying cases in the Sherman Act’s 123-year history, coupled with the fact that predatory buying can harm consumers only in those markets where input supply curves slope upwards, provides some measure of comfort that the underinclusiveness of the *Weyerhaeuser* rule will not cause too much harm.49

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In the end, there is ample reason to believe that joint purchasing and unilateral efforts to exercise buyer power will, in fact, yield lower consumer prices quite frequently. The outcomes in the case law are consistent with that view—even if the associated analysis is not as sharp as one might hope.


49 Cf. Been, 495 F.3d at 1230–32 (sustaining monopsony claim of “unfair practices” under the Packers and Stockyards Act).
Group Buying—A Canadian Case Study

Neil Campbell, Jun Chao Meng, James Musgrove, and François Tougas

Historically, group buying has been treated more leniently under Canadian competition law than coordination between competing sellers. This is, in part, because such arrangements are often viewed as procompetitive. However, a recent (and rare) group buying case had challenged this generally accepted view before the case was overturned on appeal. In 321665 Alberta Ltd. v. ExxonMobil Canada Ltd. and Husky Oil Operations Ltd. (Husky Oil), the Alberta Court of Queen’s Bench ruled that two joint purchasers unduly lessened competition and contravened the conspiracy offense; the Alberta Court of Appeal disagreed.

Although the final outcome was correct, both decisions rely on some non-germane factors and fail to provide a coherent framework for assessing the competitive effects of purchaser collaborations. In our view, the case should have been analyzed using a coherent economic framework, such as the Competition Bureau’s enforcement guidelines, which, with perhaps one exception, properly take into account the procompetitive effects that often arise from group buying.²

Legal Framework

Husky Oil arose prior to the 2010 amendments to the conspiracy offense in the Canadian Competition Act (Act). While the amended provision appears to remove purchaser collaborations from the scope of the criminal conspiracy offense,³ a new civil provision was enacted to deal with non-cartel collaborations between competitors, including group buying. Under the civil provision, where an agreement or arrangement “prevents or lessens, or is likely to prevent or lessen, competition substantially in a market,” the Commissioner of Competition (Commissioner) may apply to the Competition Tribunal (Tribunal) for a prohibition order.⁴ This operative statutory language has not changed and has consistently been interpreted to mean the ability to exercise market power.⁵

² The Competition Bureau adds a caveat to its general position by noting that it may also be concerned about cases where there is no ultimate decrease in output but only a wealth transfer. See Competition Bureau Canada, Competitor Collaboration Guidelines ¶ 3.4 n.23 (2009), available at http://www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/eng/03177.html; Competition Bureau Canada, Merger Enforcement Guidelines n.47 (Oct. 6, 2011), available at http://www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/eng/03420.html. The authors disagree with this reliance on wealth transfer effects.
⁴ Id. § 90.1.

The stakes have also changed for purchaser collaborations, from the potential for fines and incarceration under the pre-amendment criminal conspiracy offence to the possibility of a cease and desist order under the current civil provision. Note that an identical test applies to mergers, abuse of dominant position and certain other reviewable distribution practices.
Thus, despite the intervening statutory change, the *Husky Oil* decision is still relevant to the overall analysis of buy-side collaborations.

**Background**

The plaintiff, which carried on business as Kolt Oilfield (Kolt), provided fluid hauling services in Rainbow Lake, Alberta. Kolt’s only effective competitor in the area was Cardusty Trucking (Cardusty). Husky Oil Operations Ltd. (Husky) and ExxonMobil Canada Ltd. (Exxon) carried on oil and gas businesses in the Rainbow Lake area. Husky was Kolt’s largest customer, accounting for approximately half of its business. Exxon was a much smaller Kolt customer. (Exxon also co-owned the Husky assets in the Rainbow Lake area, but these assets were operated by Husky.)

In late 1995, Husky and Exxon formed a “collaborative, strategic relationship” with respect to their Rainbow Lake operations and determined that efficiencies could be achieved by better utilization and coordination of their fluid hauling requirements. Husky and Exxon sent letters to Kolt and Cardusty, indicating that they were considering using only one fluid hauler. A meeting with Kolt and Cardusty was held, after which Husky and Exxon developed an evaluation process to determine whether a single fluid hauler would be feasible, and assessed both companies against these metrics. In November 1996, Husky and Exxon advised Kolt that it would no longer be retained to provide fluid hauling. Less than one year later, in May 1997, Kolt shut down its fluid hauling operations and sold off its assets.

**The Trial Court Decision.** Kolt brought an action against Husky and Exxon, alleging that their joint purchasing unduly lessened competition in contravention of the conspiracy offense (as well as other related torts). The Alberta Court of Queen’s Bench agreed and awarded Kolt C$5 million in compensatory damages and C$1 million in punitive damages.

The trial court used as its starting point the Supreme Court of Canada’s decision in *R. v. Nova Scotia Pharmaceutical Society (PANS)*. PANS involved a conspiracy in the supply of prescription drugs and pharmacist dispensing services. The Court set out two major elements for assessing undue lessening of competition: (1) the structure of the market, and (2) the behavior of the parties to the agreement. In practice, the first element evaluates market power, not just market structure. Relevant considerations included market share, concentration of competition, number of competitors, geographical distribution of buyers and sellers, degree of integration among the competitors, product differentiation, barriers to entry, any countervailing power, and demand cross-elasticity. The behavioral examination considered the objective of the agreement and the manner in which it was carried out, as well as any other behavior that tended to reduce competition.

While the trial court recited this framework, it failed to apply it rigorously. To begin with, the trial court determined that the relevant market was the provision of (rather than the demand for) fluid hauling services in the Rainbow Lake area. It noted that Husky was a dominant oil and gas producer in the area and, along with Exxon, had “enormous degrees of market power over fluid haulers” as demonstrated by the fact that they were able to eliminate Kolt as a service provider.

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6 The Competition Act applies to joint owners of assets. The appeal court recognized that joint owners must work together and agree on how to properly manage their operations; however, “joint operators in the oil and gas industry can conspire with one another, or otherwise engage in anti-competitive behavior, in a manner that is contrary to the Act.” 321665 Alberta Ltd. (2013), supra note 1, ¶ 30.

The court also considered barriers to entry into the fluid hauling business, noting that start-up costs would be a significant, although not prohibitive, barrier. The court lost sight of the fact that the parties to the agreement were competitors in a market for the purchasing of fluid hauling services, and it failed to consider whether there were other competing purchasers, the market shares in the purchasing market, or the barriers to entry or exit by purchasers.

Under the behavioral element, the trial court found that the defendants had admitted to agreeing to use a single fluid hauler. It rejected the defendants’ argument that their collaboration was motivated by efficiency, cost reduction, and quality improvement objectives, noting that an efficiency defense was not available under the criminal conspiracy provision. Most importantly, the trial court stated that the conspiracy offense seeks to protect opportunities to compete in the marketplace, and “[t]he decision by the Defendants to use Cardusty exclusively for their fluid hauling requirements prevented the Plaintiff from competing for this business.”

The Court of Appeal Decision. The appeal court overturned the trial court decision, holding that the defendants’ conduct did not amount to an undue lessening of competition. Its conclusion was based on a number of errors made by the trial court. However, it provided little useful guidance about the proper legal and economic framework for assessing purchaser collaborations.

The appeal court agreed that the purpose of the Act is to provide market participants with a fair opportunity to compete for business (although neither court cited authority for this proposition); however, it drew a distinction “between the de facto lessening of competition that arises from the ordinary vicissitudes of the free market economy and the artificial lessening of competition due to conduct that ‘unduly’ prevents or lessens competition.” It observed that the evidence showed both Kolt and Cardusty had been provided “fair and equal opportunity” to be the sole fluid hauling service provider and that the trial court had overlooked this fact. The appeal court also noted that the defendants’ evaluation process had focused on the quality and suitability of the competing fluid haulers, not price or volume, again without authority as to relevance.

The appeal court was also concerned that the trial court’s decision ignored the meaning of the word “unduly,” which has been interpreted in the jurisprudence to mean “improper, inordinate, excessive or oppressive.” It noted that if the defendants had decided to stop using fluid hauling altogether (for example, if they had outfitted their facilities with pipelines instead), Kolt still may have been forced to shut down its operations, but the defendants’ decision would not have been (even though that would be an irrational way for buyers to exercise market power).

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8 321655 Alberta Ltd. (2011), supra note 1, ¶¶ 133–139, 145. For a commentary on the decision, see James Musgrove & Lisa Parliament, Buying Groups as a Criminal Offence: 321665 Alberta Ltd. v. ExxonMobil Canada Ltd. and Husky Oil Operations Ltd., 8 COMPEITITION LAW 866, 866 (2011). While buying groups expect lower prices for increased purchase volumes, it is not in their interest to drive a supplier out of business. It leaves them with fewer choices, a potential shortage of supply, and risks conferring market power upon the remaining suppliers in the market.


12 Id. ¶ 20.

considered an “unfair lessening” of competition. The latter comment suggests that the appeal court may have been as motivated by concepts of fairness as the trial court, but simply perceived them differently. Another concern was the practical implications of the trial decision, which could have impeded buyers from using joint purchasing to rationalize their activities in order to promote efficiencies and reduce unnecessary costs. Both courts’ reliance on “fairness,” as opposed to a more rigorous economic analysis illustrates the need for the latter in order to achieve sound and consistent adjudications of market power issues.

The Assessment of Purchaser Collaborations

In many situations, a single firm that purchases in larger quantities will receive lower pricing than a firm that purchases smaller quantities of the same product. Smaller purchasers may seek to buy on a group basis so as to also benefit from volume-based pricing. The key antitrust question is: when does such buyer collaboration result in a problematic lessening of competition? In our view, the concern should be about the exercise of monopsony (or oligopsony) power in economic terms—that is, the ability to reduce the input price below the competitive levels by decreasing the quantity of the input purchased (and therefore produced and supplied) in a relevant market. Such a concern would normally not arise unless there is a corresponding reduction in downstream output of the collaborating purchasers (that is, those with alleged monopsony power). This approach generally has been endorsed by the Competition Bureau, although it reserves the possibility to also take enforcement action where there has not been an output reduction.

Neither the trial court nor the appeal decision in Husky Oil provides a clear framework for assessing monopsony power. Both were also silent regarding the important role of output effects in assessing the Husky/Exxon collaboration. Below we explore how the framework in the Bureau’s enforcement guidelines would apply to such purchasing collaborations. We also analyze the relevance of output effects, which the Bureau may not view as a central element to the assessment of monopsony power or the ability or incentive to exercise it.

The Relevant Market. Having defined the relevant market as fluid hauling in Rainbow Lake, the trial court found that Kolt and Cardusty were the only companies offering fleet fluid hauling services in the area, and then went on to examine Kolt’s market share. As the defendants argued on appeal, the trial judge ought to have looked at whether the agreement resulted in a lessening of competition in the purchase of fluid hauling services. In a similar vein, the inquiry should have been whether the market share of the purchasers was large enough to allow them to exercise market power through joint purchasing. A large market share would be a necessary (although not suf-

14 Id. ¶ 25.
15 Id. ¶ 23. However, as the trial court noted, Canadian jurisprudence has established that efficiencies are not a defense to an otherwise unlawful criminal conspiracy.
17 See, e.g., Competition Bureau Canada, Round Table on Monopsony and Buyer Power ¶ 2, 7 (2008), available at http://www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/eng/02995.html [hereinafter Round Table Report]; see also Competitor Collaboration Guidelines, supra note 2, ¶ 3.10.1 n.23; Merger Enforcement Guidelines, supra note 2, ¶ 9.1 n.47.
18 321655 Alberta Ltd. (2013), supra note 1, ¶ 33. The Court of Appeal commented that the trial court’s treatment of this and other issues may have been problematic in some respects, but found it unnecessary to address these points, since it concluded that there was no breach of the conspiracy provision.
ficient) condition for monopsony power to be exercised\textsuperscript{19}—otherwise, an attempt by purchasers to exercise monopsony power by decreasing purchases likely would be met by refusals from sellers to lower prices, possibly also allowing other competitive purchasers in the market to expand their purchase quantities. The Bureau has indicated that purchaser collaborations are generally not a concern where the combined market share of the parties represents less than 35 percent of the relevant purchasing market.\textsuperscript{20}

The market for the purchase of fluid hauling services was not limited to only two firms at the time of the Husky/Exxon collaboration. For example, Canadian National Resources Limited (CNRL) was “[o]ne of Kolt’s biggest customers”\textsuperscript{21} as well. We do not know what portion of the market for fluid hauling purchases in the Rainbow Lake area was held by the defendants. If their combined share exceeded 35 percent, further analysis of the factors affecting the ability to exercise market power would be required. The Act and the Bureau guidelines then would require the adjudicator to consider the effectiveness of remaining competition (including foreign competition), whether a particularly vigorous competitor was eliminated from the purchasing market, countervailing power of the suppliers, the ease of or barriers to entry, whether change or innovation would be expected to provide additional competitive discipline, and any other relevant factor.\textsuperscript{22} With respect to purchaser collaborations, the other key factors relate to the cost structure of firms in the purchasing market as well as the demand and supply conditions in the sell-side markets in which the firms compete to sell their products or services that utilize the purchased inputs. In addition, under the current civil provision, no prohibition order can be made where anti-competitive effects are outweighed by efficiencies.\textsuperscript{23}

**Effective Remaining Competition.** Aside from the reference to CNRL, the trial judge did not review the effectiveness of remaining competing purchasers, since he focused on the availability of fluid hauling services and determined that Kolt and Cardusty were the only suppliers. In addition to the identity and current shares of other competing purchasers, it would have been important to determine whether they would have been likely to increase purchases in response to an attempt by Husky and Exxon to lower purchase prices and volumes. One would expect a connection between a competitive response in fluid hauling purchases and the production or capacity of such oil and gas well operators, as well as their ability to make incremental sales in the markets in which they sell their outputs.

**Removal of a Vigorous Competitor.** Given the focus of the trial court on Kolt’s demise, there was no assessment of whether the Husky/Exxon collaboration resulted in the elimination of a particularly aggressive or otherwise vigorous competing purchaser. The appeal court did observe that the focus of the collaboration was on non-price dimensions of the services being purchased,\textsuperscript{24}

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\textsuperscript{19} Competitor Collaboration Guidelines, supra note 2, ¶ 3.4.2. For a further discussion, see Jonathan M. Jacobson & Gary J. Dorman, Joint Purchasing, Monopsony and Antitrust, 36 Antitrust Bull. 1 (1991) [hereinafter Jacobson & Dorman, Monopsony and Antitrust].

\textsuperscript{20} Competitor Collaboration Guidelines, supra note 2, ¶ 3.4.2. The Bureau will also likely not challenge a purchaser agreement based on a concern relating to a coordinated exercise of market power where the share of the four largest firms in the purchasing market is less than 65%, or the share of the parties to the joint purchasing agreement is less than 10% of the relevant market.

\textsuperscript{21} 321655 Alberta Ltd. (2011), supra note 1, ¶ 23. In the spring of 1997, around the time when Kolt shut down its operations, CNRL connected its wells to a pipeline and thus no longer required fluid hauling services. The trial court noted that this exacerbated Kolt’s losses, but largely ignored its impact on Kolt’s shutdown. *Id.* ¶ 140.

\textsuperscript{22} Competition Act, R.S.C. ch. C-34, § 90.1(2) (1985); Competitor Collaboration Guidelines, supra note 2, ¶ 3.4.

\textsuperscript{23} *Id.* § 90.1(4) (1985).

\textsuperscript{24} 321655 Alberta Ltd. (2013), supra note 1, ¶¶ 8, 20.
which suggests that this factor may not have been particularly important; however, once again the focus was on vigorous competitors in the fluid hauling market rather than the purchasing market.

Countervailing Power. Just as buyer power is a potentially relevant source of competitive discipline when evaluating collaborations (or mergers) between sellers, it is possible that collaborations (or mergers) between suppliers may not allow monopsony power to be exercised if the suppliers have countervailing power. While the trial court did not address this issue, it did find that Kolt and Cardusty were the only two suppliers of fluid hauling services in Rainbow Lake (until Kolt exited the market).

Size and sophistication are often contributors to countervailing power. On these criteria, Kolt and Cardusty appear to pale in comparison to Exxon and Husky, which are large international oil and gas producers.

However, the actual ability to exercise countervailing power is heavily dependent on the availability of alternatives for both the buying and selling parties. In this situation, we do not have good evidence on the options available to Kolt and Cardusty (although Kolt’s eventual exit suggests that it may not have had viable alternatives to replace its lost customers when faced with the possibility of reduced purchases of fluid hauling services by the collaborators). On the other hand, when looked at in aggregate, it is possible that the Kolt/Cardusty duopoly could have had some meaningful countervailing power as the only two suppliers of a critical service needed for oil producers to get their products to market.

Entry. Ease of entry and expansion is an important consideration in the standard sell-side analysis, but may be less compelling in the assessment of many purchaser collaborations. While the trial court considered barriers to entering the fluid hauling market, it is the potential for entry into the Rainbow Lake purchasing market that theoretically could discipline the exercise of monopsony power.

Hypothetically, if barriers were low, new or expanding, purchasers could buy the forgone volumes of the collaborating purchasers and this would mitigate potential anti-competitive effects. However, notwithstanding the role of barriers to entry from a theoretical perspective, decisions to enter or expand in a purchasing market in practice are likely to be driven primarily by the conditions in the sell-side market of the collaborating purchasers. That is, even if there are low or no barriers to entry into the purchasing market, buyers are likely to enter or expand in this market only if additional purchases can be used as an input to help generate additional or more profitable sales in the sell-side market—they will not buy goods or services for the sake of purchasing. In this situation, the relevant inquiry would have focused on the ability of existing oil well operators such as CNRL to expand—for example, by increasing their existing productive capacity or bringing new wells onstream. Similarly, geographic entry or expansion by firms in nearby areas would potentially have been relevant. In addition, it would have been important to consider whether new oil well operators would come onstream in the Rainbow Lake area to take advantage of the availability of fluid hauling services. The courts did not address these possibilities. The trial court noted that fluid hauling was the second largest single cost item for Husky and Exxon, but we do not know what portion of the overall operating cost it represented. Whether fluid hauling services accounted for only a small or more significant portion of total operating costs of oil and gas producers would provide some indication of the likelihood that an attempt by Husky and Exxon to lower prices and purchase volumes (i.e., to exercise monopsony power) would have resulted in entry or expansion by competitors.

Change and Innovation. The possibility that change or innovation is likely to provide competitive discipline is a relevant consideration in theory. In practice, with the exception of technology
markets, it only infrequently plays a decisive role. There is nothing in the court decisions to suggest that change or innovation would have constrained any market power arising from the collaboration between Husky and Exxon.

Factors Specific to Monopsony Power Analysis. The Bureau has indicated that collaborations between competing purchasers will be assessed in a manner similar to mergers between buyers, including consideration of:

1. whether the merged firm can restrict its purchases by an amount that is large enough to reduce the relevant product’s price in the purchasing market;
2. whether upstream supply of the relevant product is characterized by a large number of sellers and low barriers to entry into buying such that the normal selling price of a supplier is likely competitive;
3. whether it seems likely that certain suppliers will exit the market or otherwise reduce production, or will reduce investments in new products and processes in response to the anticipated price decrease;
4. whether a reduction in the merged firm’s purchases of the relevant (input) product is likely to reduce the profits earned by the merged firm in downstream output markets, and, if so, whether the downstream output profit reduction is large enough to reduce the merged firm’s incentive to restrict its purchases; and
5. whether a reduction in the merged firm’s purchases of the relevant product is likely to reduce its access to adequate supply of the relevant product in the long run.25

The fourth item is a key factor and recognizes the interaction between the buy-side and sell-side market conditions. The first and fifth items are also ultimately connected to purchasers’ actions in the sell-side markets for their outputs. Similarly, entry and expansion decisions (item 2) will be significantly affected by conditions in the purchasers’ sell-side market, as discussed above. On the other hand, the focus on supplier numbers and behavior (items 2 and 3) seems misplaced because they have little to do with the ability of purchasers to exercise monopsony power.

Purchase Price and Quantity. Whether a purchaser collaboration is likely to lessen competition in a buy-side market depends on whether it is likely to preserve or enhance the monopsony power of the parties.26 In order for a group of purchasers to depress the purchase price of the relevant product such that it results in a decrease in the overall quantity of the input produced or supplied in a relevant market, the input must be characterized by an upward-sloping supply curve.27 However, in many industries, supply curves are basically flat and not upward-sloping within a relevant production range, with the result that the per unit price is constant.28 Moreover, suppliers sometimes may have downward-sloping supply curves within the relevant range of activity. For most buyers, the purpose of joint purchasing is to lower prices by taking advantage of price discounts for increased, not decreased, purchase volumes. A reduction in purchase price when the

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25 Merger Enforcement Guidelines, supra note 2, ¶ 9.4; see also Competitor Collaboration Guidelines, supra note 2, ¶ 3.10.3.
26 Competitor Collaboration Guidelines, supra note 2, ¶ 3.10.1; see also Round Table Report, supra note 17, ¶ 2. Despite this general definition of monopsony power, the Bureau has indicated that purchaser collaborations may also be problematic where a price decrease below competitive levels does not result in an output decrease but only gives rise to a wealth transfer. See Competitor Collaboration Guidelines, supra note 2, at n.23; Merger Enforcement Guidelines supra note 2, at n.47.
27 See Jacobson & Dorman, Monopsony and Antitrust, supra note 19, 10 & 12–16; see also Round Table Report, supra note 17, ¶ 10.
aggregate purchase quantities remain the same or increase could not constitute an exercise of monopsony power.

**Relationship Between the Sell-Side and Buy-Side Market.** The conditions in the sell-side market have an important impact on the ability and incentive of firms to exercise monopsony power. While the Bureau guidelines have recognized the relevance of the interaction between the sell-side and buy-side markets, the Bureau and Canadian courts have not clarified the importance of output effects and sell-side market power. Instead, they have indicated that concerns may also arise where there are merely wealth transfers between market participants, which has little basis in economic theory. Assuming the purchased inputs required per unit of goods or services supplied is relatively fixed, firms would not be able to exercise monopsony power unless they also had sell-side market power. Where the sell-side market is competitive, a firm that reduces its purchase quantities also would have to reduce the volume of output sold without being able to charge a higher price on the remaining volume that it sells. This would allow competitors in the sell-side market to make up the sales forgone by the aspiring oligopsonist(s). In such cases, the overall output in the sell-side market would be expected to remain stable rather than decrease, and the overall purchases in the buy-side market would also not decline.

The foregoing analysis glosses over potential differences between the geographic or product scope of the markets in question. In theory, it may be possible for purchasers to exercise monopsony power in a narrow buy-side market (i.e., where there are few purchasers of the input) where the broader sell-side market is competitive (i.e., where there are many sellers of the output). However, in practice, the total aggregate output would not be expected to decline if the sell-side market is competitive. Without sell-side market power, any reductions in sell-side output by joint purchasers in one narrow buy-side market likely would be offset by increased output from other competing sellers in the sell-side market who could increase their input purchases from some other buy-side market. Sectors such as agriculture and forestry are possible examples: there may be few purchasers on the buy-side of any particular local geographic market for goods that need to be processed or aggregated for transport, but the sell-side of the market is considerably broader and includes firms that may source from multiple buy-side markets. In the absence of sell-side market power, these are really wealth transfer issues as between participants in different markets.

**Wealth Transfers.** Neither court in *Husky Oil* considered output effects or the conditions in the sell-side market. Although the trial court remarked that Husky was the dominant oil and gas producer in the area, the issue of whether Husky and Exxon had market power on the sell-side of their businesses was not analyzed. In fact, it is widely accepted that oil and gas production is sold into markets that cover large geographies and have a large number of competing sellers. As noted above, where there is no net decrease in sell-side output, any concerns really involve wealth transfers.

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30 For instance, a paper mill may purchase logs and woodchips from a narrow, local, buy-side market due to high transportation costs. The resulting paper products are sold to a much broader geographic market, also served by other sellers who purchase from different, local, buy-side markets.

31 *321655 Alberta Ltd.* (2011), supra note 1, ¶ 133.
Economists generally have difficulty linking wealth transfers to economic harm or benefit. In a prior and oft-noted case, the Tribunal also accepted that wealth transfers do not constitute an anticompetitive effect or misallocation of resources per se, although anti-competitive activity could redistribute income in a way that reduces (or increases) consumer surplus (it did not show any interest in the reverse possibility). In that decision, the Tribunal’s willingness to consider this limited aspect of wealth transfers was based in part on the broad purpose clause of the Act which strives to provide “an equitable opportunity to participate in the Canadian economy and [. . .] to provide consumers with competitive prices and product choices.” Since that decision, the Bureau has amended the Merger Enforcement Guidelines and inserted the curious footnote 47 that expresses a view (replicated in the Competitor Collaboration Guidelines) that wealth transfers can be relevant:

Cases where the supply curve is perfectly inelastic, such that a price decrease below competitive levels does not result in a decrease in output but only a wealth transfer, may also give rise to concerns. This scenario should be understood to be generally included in the category of monopsony. Similarly, an output effect is not required in monopoly cases.

In practice, perfectly inelastic supply curves do not normally exist. However, the Bureau footnote may signal that it is also concerned about wealth transfers in other cases with potentially vulnerable suppliers, which is consistent with some of its enforcement actions in sectors such as forestry and agriculture.

From a legal point of view, it is important to recognize that the Tribunal’s willingness to consider whether redistributive effects of a merger impact negatively on customers who are less well-off than the merging parties’ shareholders is anchored on the purpose clause reference to consumers. The lack of a parallel reference to suppliers suggests that wealth transfers between suppliers should not be a concern. From an economic point of view, we continue to believe that the introduction of fairness or wealth transfer considerations will lead to the type of loose decision-making engaged in by the Alberta courts and that aggregate economic welfare in the buy-side plus sell-side markets in which collaborating buyers operate is the appropriate standard to apply.

Efficiencies.

The new civil framework for competitor agreements expressly creates an efficiency defense. The Commissioner cannot obtain a prohibition order where the likely lessening or prevention of competition arising from a competitor collaboration is outweighed or offset by the efficiencies that are likely to be generated. Efficiency gains can result from a variety of sources including rationalization of production, distribution, sales and marketing functions, and improvements to product quality. In the purchasing context, efficiencies could include the buyers’ overlapping purchasing activities, economies of scale resulting from volume purchasing, and reductions in transportation costs. While there has been only limited jurisprudence analyzing efficiencies, the cost savings from reduced output, service, quality or product choice are not considered efficiencies.

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34 Merger Enforcement Guidelines, supra note 2, at n.47; Competitor Collaboration Guidelines, supra note 2, at n.23.
36 Competitor Collaboration Guidelines, supra note 2, ¶ 3.5.1.
nor are savings that could have been attained through alternative means had a Tribunal order been made.\(^{37}\)

Neither the trial court nor the appeal decision specifies the exact nature of the efficiencies that Husky and Exxon were seeking to achieve. However, the jointly-formed fluid hauling team was investigating “ways of forming relationships with suppliers to improve efficiencies of the fluid hauling business.”\(^{38}\) The objective was to create an enhanced supplier relationship, which involved more of a partnership with the fluid hauler. Husky and Exxon were also trying to achieve greater efficiency in the use of fluid hauling trucks and reduction of overall system costs.

**Conclusion**

Although the court of appeal reached what is, in our view, a more sensible result, it failed to provide useful guidance on the assessment of purchaser collaborations and monopsony power. The result seemed to be strongly influenced by its conclusion that the defendants’ evaluation process provided the plaintiff with a fair opportunity to compete, as well as a desire to avoid the negative implications of the trial court’s decision for purchasers seeking to reduce unnecessary costs.\(^{39}\) It would be economically irrational if purchasers could not jointly purchase in order to increase efficiencies, so long as the resulting benefits outweigh potential anticompetitive harm.

The 2010 amendments to the Act have sensibly removed non-cartel conduct, including purchaser collaborations, from the realm of criminal conspiracy and have also added an appropriate efficiencies defense applicable in the civil context. While the new civil provision dealing with competitor agreements and the Bureau’s guidelines provide some guidance on the assessment of purchaser collaborations, the Alberta courts missed the opportunity to provide a clearer legal framework for analyzing whether joint purchasing activities are likely to lessen competition substantially. In our view, such concerns only arise where joint purchasers have the ability and incentive to exercise monopsony power, which requires that they also have sell-side market power. Otherwise, as the Bureau has recognized, “[s]uch arrangements are often pro-competitive.”\(^{40}\)
Martin Gaynor, Director, FTC Bureau of Economics: 
A Review of His Recent Economic Research

Kevin W. Christensen

Martin Gaynor joined the FTC as the Director of the Bureau of Economics on October 1, 2013, replacing Howard Shelanski, who left the FTC to lead the Office of Information and Regulatory Affairs. Dr. Gaynor is a professor of economics and public policy at Heinz College at Carnegie Mellon University, and an affiliate of Analysis Group. He has been a Research Associate at NBER since 1990 and chair of the governing board of the Health Care Cost Institute since 2011.

Since earning his Ph.D. in economics from Northwestern University, Dr. Gaynor has published over 60 journal articles, received numerous research grants, and provided public testimony on competition in the health care industry. He has also provided consulting services to the FTC and DOJ and worked on several antitrust cases in the health care industry.¹

Dr. Gaynor's research is primarily in the health care area. His early work focused on how incentives for groups were derived and how they impact performance. His paper, Moral Hazard and Risk Spreading in Partnerships, won the Kenneth J. Arrow Award for the best published paper in health economics.² More recent work has emphasized competition in health care markets. Dr. Gaynor frequently co-authors papers with other economists, including Dr. Deborah Haas-Wilson (now at Smith College) and Dr. William B. Vogt (now at University of Georgia).

Dr. Gaynor is a careful, thoughtful researcher and applied econometrician. In his papers, he regularly makes use of statistical tools to address and control for identification issues that may affect the data and inference. His research generally relates to health care quality, uncertainty, and consolidation in the hospital industry. It is also common for him to consider social welfare rather than focusing solely on consumer welfare, a divergence from prevailing antitrust enforcement norms.

Given the quantity of research output, this review focuses on selected writings published since 2000 where the techniques, insights, or opinions are noteworthy or generalizable to a larger set of industries. The review begins with a paper that highlights Dr. Gaynor's views on competition, economics, and antitrust enforcement. It continues with a review of seven other papers covering a broad spectrum of issues in health care and competition. Interested readers are encouraged to review his academic CV for more information on his other publications.

² Martin Gaynor & Paul J. Gertler, Moral Hazard and Risk Spreading in Medical Partnerships, 26 RAND J. Econ. 591 (1995).
Martin Gaynor, Why Don’t Courts Treat Hospitals Like Tanks for Liquefied Gases?
Some Reflections on Health Care Antitrust Enforcement

Prompted by the FTC’s and DOJ’s 2004 report on competition in health care, in this paper Dr. Gaynor comments on two issues that often arise in antitrust enforcement in health care markets. First, he considers why the FTC and DOJ have not been successful in recent antitrust enforcement litigation. Second, he considers whether the best alternative to enforcement is to grant antitrust exemptions to create countervailing power.

By Dr. Gaynor’s count, the agencies have had a poor record in enforcement litigation in the health care industry. They have lost six of the seven cases brought between 1993 and the publication of his article. Dr. Gaynor suggests the losses may be due to perceptions that health care is not a conventional product (e.g., storage tanks for liquefied gases), but rather something exceptional that therefore requires different treatment under the law. Dr. Gaynor takes no issue with those noting that the health care industry is different than others; indeed, nearly his entire body of work is dedicated to researching these “distinctive features.” But he does disagree with the argument that antitrust is incapable of dealing with these issues. For Dr. Gaynor, “Antitrust law is sufficiently general and flexible that it can be applied effectively to hospitals, as it is to a wide variety of other markets . . . .”

To counter the pervasive view that health care should be treated differently from other industries, Dr. Gaynor steps outside of the typical role of social scientist and into the role of an enforcer and litigator. He argues that “an important part of the prosecution of such cases is making convincing arguments about . . . the desirability of competition in health care markets in general . . . .” Or more simply, “It is not necessary to make the case that competition is socially optimal in health care. All that is necessary is to make the case that monopoly power is worse than the alternative.” With such a message, Dr. Gaynor suggests that the enforcement agencies may be able to succeed in convincing judges and juries that their arguments will benefit society.

Another of Dr. Gaynor’s concerns is the pursuit of countervailing market power based on the claim that it is possible to offset the effect of anticompetitive behavior by granting the victims an antitrust exemption. In health care, the argument frequently occurs when physicians seek an antitrust exemption so they may collectively bargain in response to the claimed monopsony power of health insurers. Dr. Gaynor disagrees, and argues for the enforcement of antitrust laws: “The

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5 Gaynor, Liquefied Gases, supra note 3, at 499.
6 Id. at 501–02.
7 Id. at 502 (“It is also worth pointing out that, although health care has some distinctive features (differentiated product, uncertainty, information asymmetries, entry and exit barriers, etc.), these are features that are present in many other industries as well. The fact that they are present in health care in a unique combination and degree does not bestow special antitrust status on health care.” (second parenthetical omitted)).
8 Id. at 500.
9 Id. at 502.
10 Id. at 504.
11 Dr. Gaynor is skeptical that there is monopsony power. Id. at 508 (“As I have already indicated, it is far from obvious that there is a monopsony problem . . . .”).
best response to market power on one side of a market is to remove it. If health insurers possess market power as buyers of physician services in some markets, then enforcement agencies should prosecute them.”12 This is because the economic evidence shows bilateral market power is generally not socially desirable.13

Dr. Gaynor’s spirited defense of antitrust enforcement in health care is reminiscent of statements made by his predecessor, Howard Shelanski, in the context of technology industries—existing antitrust laws are sufficient for enforcement in all industries.14 In that sense, there may be continuity in approach at the Bureau of Economics.


Moral hazard—a problem that arises when someone does not bear the costs of risks or actions he or she takes—is a recurring theme in Dr. Gaynor’s research. This is due, in part, to the ubiquity of moral hazard in health care markets. Consumers generally pay a fraction of the cost of their care, with an insurance company paying for the difference. Because the full cost of treatment is not borne by the consumer, “insured individuals will consume medical services past the point at which the marginal utility of an additional service is equal to its marginal cost . . . .”16

Some have used the distorting effects of moral hazard to suggest that models of perfect competition do not provide an appropriate benchmark with which to evaluate competition in health care industries. They go on to suggest that conventional antitrust enforcement cannot rightly be applied to the health care industry. Dr. Gaynor and his co-authors take issue with this assertion. They extend a standard model of insurance to show that “moral hazard in medical markets is not, per se, an argument for prices higher than marginal costs in the medical market; thus it is not an argument for laxity in antitrust enforcement or for blockading entry in medical markets.”17

**Martin Gaynor & William B. Vogt, Competition Among Hospitals**18

Some have argued that the absence of a profit incentive causes not-for-profit hospitals to respond differently to market power than would for-profit hospitals. This is because they are “motivated by community interest rather than by profit.”19 A merger of not-for-profit hospitals, it is argued, would not result in harm to consumers even if it would result in the ability to raise prices. Courts faced with this claim have had mixed views. Some have argued that not-for-profit hospitals are “above

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12 Id. at 507.
13 Id.
16 Id. at 993.
17 Id. at 1001.
19 Id. at 765.
collusion” while others have noted “no one has shown that [not-for-profit status] makes the enterprise unwilling to cooperate in reducing competition . . . .”\textsuperscript{20}

Drs. Gaynor and Vogt try to shed light on this debate by simulating the price effects of a merger when the merging firms are either both for-profit or both not-for-profit. Specifically, they simulate the effects of the 1997 merger between Tenet Healthcare Corp and OrNda Healthcorp—two for-profit national hospital corporations—in San Luis Obispo County, California, an area where the FTC expressed concern that the merger would likely result in market power.\textsuperscript{21} Their analysis begins with a theoretical model that “suggests that the principal behavioral difference between for-profit and not-for-profit firms is that not-for-profit firms behave like for-profit firms with different cost functions . . . .”\textsuperscript{22} The difference is directly tied to the not-for-profit firms’ interest in the good of the community. They then use patient discharge data to econometrically estimate the price elasticities used in their merger simulation.

Their simulation predicts that an unconditional merger between Tenet and OrNda would have yielded price increases of as much as 53 percent. With the divestiture of one hospital, their simulation predicts that prices would be roughly equivalent to what they were, pre-merger. But their most interesting result is apparent when they simulate the merger as if Tenet and OrNda were not-for-profit hospitals. Their simulation predicts that, without a divestiture, the not-for-profit merger would yield roughly the same price effects as would a for-profit merger.\textsuperscript{23} That is, a merger of not-for-profit hospitals would be just as detrimental to consumers as would be a merger of for-profit hospitals. Dr. Gaynor’s research thus concludes that enforcement agencies should apply the same rigorous approach to not-for-profit mergers as they would to for-profit mergers.

\textbf{Martin Gaynor, Competition and Quality in Health Care Markets. What Do We Know? What Don’t We Know?} \textsuperscript{24}

Dr. Gaynor often discusses health care quality in his research. This is, in part, because “the effect of health care quality on an individual’s well-being can be very great, and often will be more important than the quality of other goods or services.”\textsuperscript{25} The presence of insurance may also increase the importance of quality since consumers do not bear the full expense of their decisions. In this paper, Dr. Gaynor reviews the theoretical and empirical literature exploring how quality changes in response to changes in the competitive landscape. His exploration is prompted in part because “[t]he courts and the antitrust enforcement agencies have not dealt with quality in a uniform manner . . . .”\textsuperscript{26}

Because health care quality is viewed as a differentiated product, Dr. Gaynor reviews the literature covering both horizontal and vertical differentiation. As foretold by its title, the paper is a sum-

\textsuperscript{20} Id. (quoting HCA v. FTC, 807 F.2d 1381 (7th Cir. 1986) (Posner, J.).
\textsuperscript{21} Tenet Healthcare Corp., FTC No. C-3743 (May 20, 1997) (Decision and Order), available at http://www.ftc.gov/enforcement/cases-and-proceedings/cases/1997/07/tenet-healthcare-corporation. The Tenet-OrNda merger was allowed to go through. However, the FTC required, via consent order, that the merged firm divest one hospital (French Hospital Medical Center). Gaynor & Vogt, supra note 18, at 781.
\textsuperscript{22} Id. at 767 (emphasis added).
\textsuperscript{23} Id. at 783.
\textsuperscript{24} Martin Gaynor, Competition and Quality in Health Care Markets. What Do We Know? What Don’t We Know? 15 ÉCONOMIE PUBLIQUE 3 (2004) [hereinafter Gaynor, Competition and Quality].
\textsuperscript{25} Id. at 5.
\textsuperscript{26} Id. at 6.
mary of an incomplete and sometimes inconsistent literature. Indeed, “Economic theory does not provide an unambiguous answer to the question of whether competition is welfare enhancing in markets with product differentiation . . . .”27 Nevertheless, Dr. Gaynor concludes that the presumption that competition improves quality in health care markets should not be overturned and that antitrust analysis should include changes in quality. This is especially true in the United States, which relies on markets for health care delivery and financing. But even in Europe, where financing is centralized, competition policy is relevant to assuring quality is not adversely affected.

Throughout the paper Dr. Gaynor refers to “welfare” as the measure of competitive impact. He uses the term in the economic sense (social welfare), rather than the antitrust sense (consumer welfare). As a result, recommendations for antitrust enforcement (and their economic justifications) are not clearly stated. That said, it is clear from this and other writings that Dr. Gaynor believes both quality and price can be affected by competition, and antitrust enforcement should consider both.

Several of Dr. Gaynor’s papers consider changes to the UK health care system meant to improve hospital operations. In 1997 the UK government began to reverse the policy of favoring competition between geographically close hospitals by consolidating operations. The amount of consolidation in the industry was non-trivial. During the ten-year period analyzed, the median hospital market went from seven to five hospitals and an average of 20 mergers occurred each year.29 The logic behind the merger wave was to replace the boards of failing hospitals with those of more successful ones. In so doing, the policy was intended to inspire more efficient administration through reductions in management and back office costs.30 This emphasis of “cooperation over competition” is interesting, given the presumption (at least among antitrust practitioners) that competition can facilitate quality improvements in health care. In this paper, Dr. Gaynor and his coauthors investigate whether or not state initiated efforts to improve quality by eliminating competition can also be successful.

Estimating the effect of the consolidation on quality is not a straightforward task, especially since low quality is one reason for consolidation in the first place. This “selection bias” makes it unclear whether observed differences in quality are due to the policy of consolidation or due to some unobserved characteristic of the hospitals chosen to merge. Choice of an appropriate benchmark is important to disentangle these two effects. Had hospitals been randomly chosen to merge it would be possible for all unmerged hospitals to be used as the benchmark or control group. In this case, mergers were not chosen randomly.31 To deal with this problem, the authors use a subset of unmerged hospitals to serve as a benchmark based upon a “propensity score”

27 Id. at 32.
29 Id. at 528, 530.
30 It was not to reduce clinical costs or to explicitly achieve economies of scale.
31 The authors note that “while the case for a merger is made by the Department of Health on the grounds of performance, whether a merger actually takes place or not can be affected by national politics.” Gaynor et al., Merger Mania, supra note 29, at 530.
designed to measure similarity to the merged hospitals. Propensity score matching is a statistical technique often used by applied economists to aid causal inference.

As noted above, the argument behind consolidation was that it would reduce hospital size, save administrative costs, and improve hospital efficiency. The regression results in the paper indicate only one of the three was actually achieved:

[We] find that whilst the effect of merger was to shrink the combined size of the merged hospitals, other than this reduction in size and associated fall in activity, the merger does not appear to have brought benefits. Labour productivity does not appear to have risen, the merger has not stemmed the increases in size of deficits and there are no indications of an increase in quality (in fact there is one indicator of a fall in measures of clinical care). 32

Even so, hospitals have appeared to change some of their operations post-merger. For example, the authors observed staff composition changes such that there is an “increase in the share of staff who are not permanent employees of the hospital.” 33 Overall, the authors find that the policy has achieved little more than reducing the number of hospital admissions and changing the employment status of staff.

The research is interesting for several reasons. First, it is evidence that competition remains the more plausible (but by no means certain) mechanism through which hospital quality improves. Second, it provides a different type of merger retrospective than those usually performed. Retrospectives generally focus on a single merger. In contrast, this study considers all mergers that occurred over ten years. The empirically estimated effects are the average effects of consolidation across all hospitals, not just a single merger. Thus, the findings are more generalizable across the industry. Finally, it provides an example of Dr. Gaynor’s creative use of statistical tools to overcome data “imperfections.”

Asako S. Moriya, William B. Vogt & Martin Gaynor, Hospital Prices and Market Structure in the Hospital and Insurance Industries 34

In this paper, Dr. Gaynor and his co-authors evaluate the effects of consolidation of health insurers and of hospitals on prices. Unlike other research on the topic, their paper considers the effect of both levels of consolidation rather than considering only one or the other. Their analysis “is best thought of as an empirical exploration of the idea that more concentrated markets [have] less price competition . . . . ” 35

Their results indicate that insurer concentration has a greater impact in reducing prices for health services than hospital concentration does in increasing prices. Using point estimates from the regressions, they estimate the effects of two types of hypothetical merger: the “standard merger” (five firms to four) and “the typically challenged merger” (three firms to two). A merger of two out of three hospitals with similar starting market shares is estimated to yield hospital price increases of 1.5 percent, while a “standard” insurer merger is estimated to decrease hospital prices by approximately 6.7 percent. Similarly, a “typically challenged” hospital merger is estimated to increase prices by 4.2 percent while a “typically challenged” insurer merger is estimat-

32 Id. at 537.
33 Id. at 535.
35 Id. at 464.
ed to decrease prices by 18.7 percent. However, the results are not particularly stable, making their broader application limited. For example, excluding Georgia and Michigan from the data produces estimates that are much smaller and not substantially different between insurers and hospitals (e.g., for a “standard merger” the insurer and hospital effects are estimated as 0.67 percent and 0.08 percent, respectively). The estimates of hospital price effects are also not generally statistically significant.

This paper is noteworthy because of differences in the approach and assumptions made relative to Dr. Gaynor’s other published work. Generally speaking, Dr. Gaynor’s publications have tended to use a structural econometric approach—that is, a theoretical model is first established and then tested. This paper has no such explicit theoretical model and instead uses a “reduced form” approach.\(^{36}\)

The paper also uses HHI as a measure of market power. The emphasis on concentration in general and HHI in particular is interesting given the 2010 Horizontal Merger Guidelines, which downplay the effectiveness of HHI calculations as a “rigid screen to separate competitively benign mergers from anticompetitive ones,”\(^ {37}\) especially in the context of differentiated product markets like health care.\(^ {38}\) Even so, the paper does include some of the hallmarks of Dr. Gaynor’s other work, such as accounting for quality of care and taking a normative view that “it is necessary to consider not only [market concentration’s] effects on prices but also its effects on other aspects such as quality of care, the amount of consumer choice, biomedical innovation and provision of charity care to the poor.”\(^ {39}\)

Jean Marie Abraham, Martin Gaynor & William B. Vogt, *Entry and Competition in Local Hospital Markets*\(^ {40}\)

Some of Dr. Gaynor’s research has been influenced by the spate of U.S. hospital mergers that occurred between 1994 and 2000. Consolidation of this magnitude may have implications for both prices and quality and lead to consumer welfare loss, especially in the case of small markets where the resulting merger may lead to monopoly. Indeed, according to Dr. Gaynor, “This industry is [ ] one in which competition is a real issue . . . .”\(^ {41}\) In this paper, Dr. Gaynor and his co-authors build upon earlier research to estimate the competitive impact that each additional hospital may have on a market. They find that the largest change in competition occurs when a second or third hospital enters the market. They conclude that for the average market it is best to have no fewer than three hospitals.

\(^{36}\) Structural econometrics is an approach to statistical analysis wherein economic theory and formal statistical models are explicitly used to aid in model specification, data analysis, and interpretation of results. This is in contrast to reduced form models which are not as explicit in the underlying theory. Both approaches use economics to identify what factors influence a dependent variable (e.g., health care quality). However, because a structural model includes an explicit economic theory, the researcher is able to also describe the mechanisms through which the dependent variable is affected.


\(^{38}\) In earlier work, Gaynor has modeled the hospital industry as a horizontally differentiated product, especially with respect to quality of health care. See Gaynor, *Competition and Quality*, supra note 24.

\(^{39}\) Moriya, Vogt & Gaynor, *Hospital Prices and Market Structure*, supra note 34, at 476.


\(^{41}\) Gaynor, *Competition and Quality*, supra note 2, at 5.
To reach this conclusion they construct a measure of the marginal competitive effect each new hospital has on the market. To enter the market, it is assumed that each entering hospital must be able to achieve revenues sufficient to cover its variable costs. Incumbent hospitals must also earn enough to offset their variable costs or else they will exit the market. This implies that there is a minimum (threshold) level of revenues necessary to sustain a specific number of hospitals in the market. The authors estimate this threshold value on a per firm basis.

The threshold value is not particularly interesting in isolation. What is interesting is how the threshold changes when adding a second, third, fourth, etc. hospital. Dr. Gai
or and his co-authors indicate that a threshold value rising with the number of entrants is a sign that the market is getting more competitive. Intuitively, this is because “tougher competition shrinks profit margins and therefore requires a larger population to generate the variable profits necessary to cover entry costs.” The hospital data used in their analysis shows that is indeed the case. They conclude that “on average, mergers which take local hospital markets to duopoly or monopoly likely cause significant harm to competition and consumers.” This means that the observed consolidation in the hospital industry may have harmed consumers, especially those in small markets where the mergers resulted in monopoly.

The analysis is also interesting from the perspective of antitrust enforcement because the methodology used may be widely applicable. First, the theoretical framework on which it is based has also been used to evaluate competition in broadcast radio markets and daily newspapers. It may also be possible to expand the framework to other industries with similar fact patterns, specifically those where merging firms have a national presence but local markets. Second, the data necessary to evaluate the model are usually publicly available. These two aspects mean the approach could have broad appeal in evaluating the competitive effects of proposed mergers.

This method would not require data collected as part of a second request but would still be more rigorous than some screening tools being used (e.g., upward pricing pressure). Indeed, the authors optimistically state that “[t]his approach can be implemented for industries where there are good data available on quantity in addition to market structure. Such data are commonly available.”


Dr. Gaynor continues to investigate the litigation record of the DOJ and FTC in more recent work. He and his co-authors find the agencies’ poor performance is “due largely to the inability of the antitrust authorities to convincingly define a geographic market that supports their case. In the eight cases brought to the courts [between 1994 and 2005] the primary reason given for denying the government’s request in six of these cases centered on geographic market [definition].”

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42 Abraham, Gaynor & Vogt, Entry and Competition, supra note 40, at 266.
43 Id. at 286.
44 In their conclusion the authors note that their data included “[t]hree out of the 11 hospital mergers cases that the U.S. antitrust enforcement agencies prosecuted from 1985–2004 . . . .” Id.
45 Id.
47 Id. at 246.
finding prompts Dr. Gaynor and his co-authors to explore the techniques used by the agencies to define relevant markets and to test whether or not they yield reliable results against benchmarks. They find that the “ad hoc” techniques used by the agencies tend to overstate the size of geographic markets for hospitals and imply elasticities ranging between 2.4 and 3.4 times larger than those calculated using their benchmark. The overstatement leads to the erroneous conclusion that markets are more competitive than they are in fact. Therefore, reliance on these techniques unnecessarily weakens the position of the agencies in court when mergers are challenged. This weakness is especially detrimental in the hospital industry which “has seen more merger litigation in recent years than in any other industry.”

Since at least the 1982 Horizontal Merger Guidelines, the relevant geographic market has been defined using the smallest group of products or firms for which there are no close substitutes, thus allowing a hypothetical monopolist to profitably impose a small but significant and non-transitory increase in price (SSNIP). “Though there are still differences in the implementation aspect of market definition analysis, the basis for these disagreements is typically methodological rather than the fundamental theoretical question of what defines a market. To this day the SSNIP criterion continues to be the standard by which courts define antitrust markets.”

The two quantitative methods used in almost all of the merger cases challenged between 1994 and 2005 to define a relevant market with respect to hospitals are Elzinga-Hogarty (EH) and Critical Loss Analysis (CLA). Dr. Gaynor and co-authors criticize these methods because, the authors claim, they lack sufficient economic justification, are subject to potential bias leading to the definition of overly broad or narrow markets, and are often misused by practitioners. In short, these ad hoc models “suffer from serious flaws . . . .” What is not known, and what the authors seek to quantify, are the consequences of these flaws, including the magnitude of the errors. To measure the magnitude of the flaws the authors use two structural models of the hospital industry as benchmarks. The authors argue that the structural models provide suitable benchmarks because they “both enable an approach to merger analysis that explicitly accounts for price changes and are thus based more closely on the method set forth by the antitrust authorities in the merger guidelines.”

Using data from California’s Office of Statewide Health Planning and Development the authors estimate the relevant geographic markets under CLA and EH, and compare the results to the

48 Generally economists consider both relevant product and geographic markets. In this paper, the authors focus on geographic markets because “In only one of the last eight cases brought by the government has failure to convincingly define a product market been a deciding factor in a hospital merger case . . . .” Id. at 249.

49 Id. at 285.

50 Id. at 245.

51 Id. at 248 (parenthetical omitted).

52 Id. at 249, 251.

53 Id. at 252.

54 Id. at 253.

55 Id. at 254.

56 Id. at 244.

57 Gaynor & Vogt, Competition Among Hospitals, supra note 18 (which was based in part on Steven Berry, James Levinsohn & Ariel Pakes, Differentiated Products from a Combination of Micro and Macro Data: The New Car Market, 112 J. Pol. Econ. 68 (2004)) and Cory Capps, David Dranove & Mark Satterthwaite, Competition and Market Power in Option Demand Markets, 34 RAND J. Econ. 737 (2003).

58 Gaynor et al., Market Definition, supra note 46, at 256.
benchmarks.\textsuperscript{59} They find that using local markets as defined under CLA, the median number of hospitals is 16, and 13 for EH. Under the structural benchmark they find the median number of hospitals is 3. The estimated HHIs are also substantially different: 1,194, 1,499, and 3,814 for CLA, EH, and the benchmark, respectively.\textsuperscript{60} Using San Diego as an example for estimating price effects, the estimated own price elasticities under the structural benchmark imply a price increase resulting from a hypothetical merger between two hospital systems could be as much as 17.48 percent.\textsuperscript{61} This is in contrast to the predictions of the ad hoc measures, which found unilateral effects unlikely to occur.

Definition of a relevant market is an important piece of antitrust analysis and, historically, has been closely scrutinized by the courts.\textsuperscript{62} In the case of hospital mergers, that scrutiny has rarely resulted in success for U.S. enforcement agencies. Dr. Gaynor and his co-authors have found that the ad hoc market definition methods relied upon by the FTC and DOJ substantially underestimate concentration and thereby undermine their abilities to block mergers that will likely adversely affect competition. The authors’ results “illustrate the importance of economic modeling for defining markets” and show that a structural approach “should be emphasized when assessing the extent of market power in [hospitals] and other differentiated product industries.”\textsuperscript{63}

Conclusion

Dr. Gaynor appears to view the health care industry as one “with unique attributes,” but he also finds that “nothing about the specifics of the health care industry suggests that the unregulated use of market power in the industry is socially beneficial. As a consequence, the antitrust laws should be enforced here as in any other industry.”\textsuperscript{64} Similarly, Dr. Gaynor’s research, including techniques and conclusions, should not be viewed narrowly. Much of what he has done can be (and has been) applied to other industries beyond health care. As such, his rich research experience in the health care industry prepares him well to analyze all manner of industries and investigations arising during his tenure.

\textsuperscript{59} The authors distinguish between the effects of multi-hospital systems merging from those of individual hospitals merging. Hospital systems are assumed to collectively bargain which creates some problems in estimating a SSNIP. The HHIs and elasticities reported here are for multi-hospital systems. To learn more about the complications of multi-hospital systems and how those complications were resolved, see \textit{id.} at 268, 279–84.

\textsuperscript{60} \textit{id.} at 269.

\textsuperscript{61} \textit{id.} at 284.

\textsuperscript{62} Not everyone agrees that market definition is necessary. See, e.g., Louis Kaplow, \textit{Why (Ever) Define Markets?} 7124 \textit{Harv. L. Rev.} 437 (2010).

\textsuperscript{63} Gaynor et al., \textit{Market Definition}, supra note 46, at 285.

\textsuperscript{64} Gaynor, \textit{Liquefied Gases}, supra note 3, at 497.
Aviv Nevo, Deputy Assistant Attorney General for Economic Analysis: Interpreting Data Under the Guidance of Economic Theory

Nauman Ilias

Aviv Nevo, a Professor of Economics at Northwestern University, joined the Antitrust Division at the U.S. Department of Justice (DOJ) in April 2013 as the Deputy Assistant Attorney General for Economic Analysis. Professor Nevo received a Ph.D. in economics from Harvard University in 1997, taught at the University of California, Berkeley, between 1997 and 2003, and has been teaching at the Department of Economics at Northwestern University since 2004. Professor Nevo’s academic work sits at the boundary between industrial organization economics, marketing, and econometrics, and he has been active in all of these fields. Professor Nevo has been a pioneer in the use of data to analyze consumer behavior as well as the application of the findings from such research to competition policy questions. Much of his research has focused on econometrically estimating demand for consumer packaged goods and its implication for price competition, mergers, and marketing. He has also studied the real estate brokerage, academic journal and, more recently, the hospital industries. Given Professor Nevo’s research interests, it is expected that the economists at DOJ will increasingly rely on sophisticated econometric and merger simulation tools to analyze issues related to competition policy when data and time permit.

Preference for Structural Methods

The overarching theme apparent in Professor Nevo’s research is the use of “structural” methods to analyze data. Structural modeling seeks tight links between economic theory and econometrics—using an explicit model from economic theory to guide the econometric analysis and then using the results of the econometric analysis to pin down the details of the theoretical model. Thus, instead of taking an agnostic approach on what drives the observed patterns in consumer or firm data, structural models interpret the data in light of an underlying economic theory that is assumed to govern the patterns in the data.¹ Although structural estimation has a long tradition in economics, the availability of richer data sets, powerful computers, and improved econometric methods have rendered these models more accessible to economists in recent years.

In describing the benefits of structural modeling, Professor Nevo explains that once the parameters of the model are estimated using the available data, the model can then be used to conduct

¹ For example, as discussed later in this article, in one of his papers, Professor Nevo assumes that prices, output, and margins observed in the cereal industry are determined by “Nash-Bertrand” competition in which firms set prices independently without any type of coordination with each other. See Aviv Nevo, Merger with Differentiated Products: The Case of the Ready-to-eat Cereal Industry, 31 RAND J. Econ. 395 (2000) (hereinafter Nevo 2000).
counter-factual experiments to predict the response of consumers or firms to possible changes in policy surrounding them.\(^2\) This may be particularly important in assessing policy questions, including the impact of various approaches to competition policy. The other type of models used by economists to predict the impact of policy changes is “reduced-form” models. These models are “reduced-form” in the sense that there is no presumption about the distribution of the parameters in the model. For example, “natural experiment” models may provide an alternative to structural modeling if there exists previous policy changes that offer good analogs to the change under consideration. In that case one could compare the before and after difference of the previous policy change on the group directly impacted by that change while controlling for shifts unrelated to the policy that may have occurred during that timeframe. However, there are always concerns about the generalizability of results from natural experiment studies. In particular, there is often no exact historical precedent for the policy change that is of interest. Therefore, one has to be careful in extrapolating lessons from other related events to the policy change under consideration. As Professor Nevo points out, one would not want to predict the effects of a merger in the gasoline industry based on the effects of a merger in the cereal industry.\(^3\) In fact, even a past merger in the gasoline industry may not provide the appropriate benchmark since circumstances of the industry could have changed or the characteristics of the merging firms may differ from those in the previous merger.

Structural modeling may prove helpful in such instances because once a model of consumer choice and firm behavior is calibrated, it can provide a way to predict responses to potential policy changes by using information on shifts in choice and behavior due to previous changes in policies. The tradeoff is that structural modeling is data, time, and computation intensive. In addition, the predictions from such model critically hinge on the assumptions about consumer demand and nature of competition in the industry. To the extent that the assumptions do not comport with reality, the predictions based on them will also be biased. For this reason, Professor Nevo considers the structural analysis not as a substitute for analyses based on natural experiments or other methods, but rather as complement to other empirical methods, with the key being to match the method to the question and the data at hand.

To estimate structural models of demand, Professor Nevo has extensively relied on an advanced econometric technique known as the “random-coefficient discrete choice model.” This methodology can be used to reliably estimate the demand in a differentiated product industry for a large number of products using market data, while allowing for flexibility in substitution patterns among the products. The measurement of substitution patterns among the products plays a key role in antitrust analysis. For example, the magnitude of potential unilateral effects in a differentiated product merger depends critically on the degree of substitutability between the products of the merging parties. However, many of the standard models of demand available to economists, such as the logit model, depend on the restrictive assumption that substitution between products is driven completely by market shares and not by how similar the products are to each other. The random-coefficient model relaxes this assumption by allowing for heterogeneity in consumers’ preferences and estimating the unknown parameters governing the distribution of this heterogeneity. Professor Nevo has made a significant contribution to empirical economics literature by

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\(^3\) Id. at 73.
demonstrating the use of this approach to industry data and also making the technique more accessible to econometricians.\textsuperscript{4}

\textbf{Mergers and Market Power in Ready-to-Eat Cereal Industry}

Professor Nevo's empirical work using data from the ready-to-eat cereal industry exemplify the application of structural estimation to solve problems in industrial organization economics. In particular, Professor Nevo has used structural methods to simulate the price effects of hypothetical mergers in the cereal industry and also identified the sources of market power in that industry.

To implement merger simulations, Professor Nevo assumed that the cereal industry operated under a certain form of oligopolistic competition, namely the “Nash-Bertrand equilibrium” in which firms set prices independently without any type of coordination with each other.\textsuperscript{5} He then used scanner data collected at supermarket checkout counters for 24 cereal brands in 45 cities over 20 quarters to estimate demand for each cereal brand. With these data, he estimated the nature of consumer demand, including: (1) own-elasticity which quantifies the responsiveness of demand for a particular brand to changes in its own price; and (2) cross-price elasticities which quantify the responsiveness of demand for a particular brand to change in prices of competing brands.

Professor Nevo next imputed estimates of the marginal cost of production for each brand using the demand parameters and his assumption about the nature of competition in the industry. Finally, the estimated marginal costs and demand parameters were used jointly to simulate post-merger prices and changes in consumer welfare under a variety of merger scenarios. The price and welfare change predictions varied considerably depending upon the merger scenario, which is not surprising since each firm generally owned multiple brands with varying degree of competition with brands of other firms.

In a related paper, Professor Nevo unpacked the underlying source of market power manifested in the high price-cost margins observed in the ready-to-eat cereal industry.\textsuperscript{6} He postulated that there could be three sources of market power in that industry: (1) that which is due to product differentiation; (2) that which is due to the portfolio effect of owning multiple-brands whereby firms selling several brands would charge a higher price than if those brands were sold by independent firms; (3) that which is due to price collusion in the industry. Professor Nevo tested for the three possibilities by first estimating the demand for each brand using the scanner data as described above. He then used the estimated demand system to compute price cost margins that would be implied by three hypothetical industry structures: single-product firms, i.e., assuming that each brand was sold by an independent firm; the existing industry structure, i.e., a few firms with many brands; and a multi-brand monopolist, i.e., assuming all brands sold in the market were owned by one firm. The markup in the first structure is due only to product differentiation. The second case includes the margin due to the multi-product firm affect. The third case generates markup based on joint ownership or full collusion.

Based on his estimates, Professor Nevo found that the margins imputed under the second structure (portfolio effects due to owning multiple brands, rather than collusion) were more in line with the actual margins. He concluded that the high markups in the cereal industry are not due to


\textsuperscript{5} Nevo 2000, supra note 1.

collusion, but rather are due to consumers’ willingness to pay for their favorite brand and pricing decisions by firms that take into account substitution between their own brands. Thus, any market power in the cereal industry is due to the firms’ ability to sell an array of differentiated products. These results highlight the importance of unilateral effects analyses in merger cases in this industry whereby the acquisition of competing brands may enhance the market power of the merging firms even if there is no increase in coordination among the firms due to the merger.

**Consumer Stockpiling, Demand Estimation, and Price Discrimination**

Professor Nevo has also shown that commonly used “static” models of demand estimation are likely to mismeasure own- and cross-price elasticities if they do not account for the consumer inventory behavior. In particular, a temporary price decrease may generate a large demand increase if consumers stockpile the product for current and future consumption. Thus, relating changes in prices in the current period to changes in quantities in the same period will likely lead to overestimation of own-price elasticity of demand unless stockpiling behavior is accounted for in the model. To address this problem, Professor Nevo (and his co-author, Professor Igal Hendel, also at Northwestern) estimated a dynamic model of consumer choice in which households maximize the present expected value of future utility flows while holding inventory of products not consumed in the current period. The model was estimated using scanner data on laundry detergents that capture purchases made by households over a two year period in nine supermarkets of a large midwest city. The authors found that the static model overestimated own-price elasticities by roughly 30 percent and underestimated cross-price elasticities by as much as five times. These results suggest that policy analysis based on static elasticity estimates would underestimate market power and price-effects of a merger. It is therefore expected that the economists at the DOJ may be wary of economic analysis that does not account for stockpiling behavior, particularly in storable consumer product industries.

They first estimated demand using store level scanner data for soft drinks and found that consumers who stockpile are more price sensitive than consumers who do not. They then argued that temporary price reductions in the form of sales can be used by firms to separate between consumers based on their ability to store the product. To test their hypothesis, they used the estimated parameters from their model to compute profits under two hypothetical scenarios: (1) non-discriminatory pricing whereby sellers do not offer periodic price reductions; (2) third degree price discrimination whereby sellers can charge different prices to groups of price elastic versus inelastic customers. Since in practice sellers cannot perfectly separate the different buyer types, the profits under third degree discrimination are upper bound on profits from price discrimination.

The authors found that third degree price discrimination would increase profits by 9–14 percent relative to non-discriminatory prices. Furthermore, sales (as a form of price discrimination) enable firms to capture 24–30 percent of the profit gap between non-discriminatory and third degree price discrimination profits. In fact, total welfare also increases under price discrimination. Sellers are better off as are consumers who store. Consumers who do not store are worse off, but in most instances...
cases their loss is more than offset by storers’ welfare gains. These results show the utility of structural models in providing empirical estimates of welfare, since there are virtually no theoretical results in oligopoly settings that yield unambiguous welfare implications under price discrimination. These results also suggest that when total consumer welfare is the guiding metric, the weight to be attached to enhanced price discrimination (arising from a merger, for example) may be lower than the alternative in which harm to specific group of customers is of primary interest.

Relative Performance of Real Estate Marketing Platforms

Professor Nevo has studied the relative performance of two competing platforms used in real estate transactions: the Multiple Listing Service (MLS), a well-established database that compiles information on all properties listed by full-service realtors, and the for-sale-by-owner (FSBO), the newly established platform which allows the seller to market his property but does not provide any other service. He used data from the city of Wisconsin on nearly every single-family home for sale between 1998 and 2005, which included a history of the date and platform of initial listing, date of any moves across platforms and outcome (sale date and price if sold, withdrawal date otherwise). Unlike most of his other papers, Professor Nevo did not use a structural model to study this problem. Instead he used a “reduced-form” approach that related the outcome of interest (such as the sales price of the house or the duration between the list and the sale date) to the type of platform on which the house was listed while controlling for other determinants of price such as house and seller characteristics. Professor Nevo may have used this method due to the ready availability of data that allowed a relatively straightforward comparison of performance between the two platforms without having to rely on intricate structural modeling.

Professor Nevo found no support for the hypothesis that listing with a realtor and appearance on the MLS generates a higher sales price (before subtracting commissions) than the FSBO transactions. Given that the realtors generally charge a 6 percent commission compared to the $150 flat fee for the FSBO listing, the net price received by an MLS seller is lower than an FSBO seller for a similar house. To put it another way, the full realtor’s commission is the price that MLS sellers pay for the convenience provided by the realtor. Professor Nevo also found that the MLS transactions occurred more quickly than FSBO listings. He attributed this finding to divergence by platform of customer types in terms of the degree of their patience. Specifically, local buyers were assumed to be more patient compared to out-of-town buyers since the former did not have to travel in order to search and buy. Consistent with the idea that local buyers might be more patient, Professor Nevo found that local sellers sold at a premium while local buyers paid less. Hence, patient sellers were more likely to use FSBO, while patient buyers were more likely to purchase on the MLS where they found less patient sellers. These results suggest that a simple comparison of performance between two platforms may not be sufficient to determine the superiority of one over the other. Instead, the researcher must take into account consumer heterogeneity which may be the reason why different consumers self-select into different platforms.

Conclusion

Facilitated by the ready availability of electronic scanner data, advances in econometrics, and ever improving processing power of computers, the empirical techniques in the focus of Professor  

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Nevo’s research are increasingly being used by antitrust economists to evaluate merger effects and market power. These methods are particularly helpful to analyze competition issues in differentiated products industries where it is often challenging to define product markets and measure the degree of competition among products in the presumed market. They are also particularly helpful in cases where recent history may provide no natural analogs from which to form good natural experiments. With Professor Nevo at the helm, it can be expected that the economists at the DOJ are more likely to supplement their traditional economic analyses of mergers and market power with structural estimations and merger simulations to the extent that data and time permits them to undertake such analyses.