2008

Merger to Monopoly to Serve a Single Buyer: Comment

Jonathan Baker

MERGER TO MONOPOLY TO SERVE A SINGLE BUYER: COMMENT

JONATHAN B. BAKER, JOSEPH FARRELL, AND CARL SHAPIRO*

In a recent article in this *Journal*, Tom Campbell contends that "[t]he antitrust laws should be interpreted to permit producers of a good to merge into a monopoly wherever there is only one purchaser of the good."[1] For reasons we explain here, we strongly disagree.

The essential building block for Campbell's policy recommendation is his assertion that bilateral bargaining between a single seller and a single buyer—as would occur after a merger to monopoly among the sellers that serve that buyer—induces efficient trade. He states: "The overall payment for all the goods will be subject to bargaining between the two parties, but the quantity sold is not in doubt. It is equal to the same quantity that would be arrived at in perfect competition."[2] In Part I, we examine this argument critically and explain why bilateral monopoly is not reliably efficient.

By contrast, Campbell contends that bargaining between a single buyer and multiple sellers—as would take place before such a merger—typically leads to an inefficient outcome. To reach this conclusion, he employs the classic model of a monopsony buyer purchasing from price-taking sellers, in which the buyer restricts its purchases to drive down the price. In Part II, we analyze Campbell's use of this model and explain why output is likely be *greater* when a single buyer negotiates with two suppliers than when those suppliers merge to create a monopolist. In Part III, we explain why Campbell's policy recommendation is unjus-

---

* Jonathan Baker is Professor of Law at American University. Joseph Farrell is Professor of Economics, University of California, Berkeley. Carl Shapiro is Transamerica Professor of Business Strategy at the Haas School of Business at University of California, Berkeley. We are grateful to Tom Campbell and two anonymous referees for comments on an earlier version.

[1] Tom Campbell, *Bilateral Monopoly in Mergers*, 74 ANTITRUST L.J. 521 (2007).

[2] *Id.* at 522 (footnotes omitted).

tified if mergers are evaluated based on their impact on buyers rather than total efficiency.

Campbell does not merely argue that monopoly *can* be more efficient than competition and lead to more output. He recommends per se legality of a class of mergers to monopoly. This proposal is not supported by his economic argument comparing bilateral monopoly with classic monopsony. Moreover, as Part 4 discusses, this recommendation departs both from the general approach to establishing per se rules in antitrust law and from the fundamental presumption in antitrust law that competition is efficient.

I. BILATERAL BARGAINING

We agree with Campbell that two parties engaged in bargaining—such as a single buyer negotiating with a single seller—have an *incentive* to trade the quantity that will maximize their joint profits. Modern economic analysis of bilateral bargaining recognizes this joint incentive to achieve bilateral efficiency, yet it does not find that bilateral bargaining will reliably reach an efficient outcome. Major impediments arise from the pervasive presence of private information and incomplete contracts.

Very often a seller has private information about a product's cost, or a buyer has private information about its value, and each will exploit that information in bargaining. Economists have shown that such private information will often cause negotiating firms to miss some mutually profitable deals or reach bargains that leave some possible gains from trade unattained. In widespread circumstances, a buyer will limit its quantity so as to influence the seller's perception of its willingness to pay for the product. As a result, inefficiently low quantities routinely result from bilateral bargaining under asymmetric information.[3] Indeed, modern economic analysis provides general conditions under which substantial inefficiencies *must* result from negotiations between rational and self-interested parties.[4]

---

[3] Campbell appears to distinguish sharply between the possibility that bargaining may "break down," leading to no trade, and the possibility that it might lead to some, but too little, trade. We see no basis in economics for such a categorical distinction, and certainly do not limit our concerns to the former possibility, contrary to what Campbell asserts in his reply. Tom Campbell, *Bilateral Bargaining: Further Comment*, 75 ANTITRUST L.J. 647, 649 (2008) [hereinafter *Further Comment*]. Even if bilateral monopolists reach a deal, inefficiently low quantities will generally be traded.

[4] This insight is the basis for much of the work of recent Nobel Laureates Leo Hurwicz, Eric Maskin, and Roger Myerson. *See* Roger Myerson & Mark Satterthwaite, *Efficient Mechanisms for Bilateral Trading*, 29 J. ECON. THEORY 265 (1983) (showing that, in a wide range of cases where gains from trade are possible but, because of private information, not certain, no conceivable mechanism for voluntary bilateral bargaining can reliably achieve

Another severe challenge facing bargaining is the fact that many elements of business relationships—unlike the quantity traded of a simple good—are difficult or impossible to specify contractually. To illustrate, suppose that suppliers engage in R&D to develop new and improved products. Efficient bargaining would require the buyer and seller to negotiate the direction and scope of R&D, and the terms on which as-yet-unknown future products will be sold. An entire field of economics, transaction costs economics, has shown that efficient arrangements are often hard even to specify in contractual form, let alone to agree upon.

In short, while Campbell presents a very simple verbal economic model in which bilateral negotiations over quantity will always reach efficiency, modern economic theory routinely and consistently finds otherwise, even when trade concerns just the quantity of a well-specified product, let alone when more subtle issues arise.

At least as important, empirical evidence shows that bilateral bargaining does not predictably lead to fully efficient outcomes. While it is very rare for a supplier literally to have only one possible customer (and it is not clear to us that Campbell entirely limits his recommendations to that rare case), one can look for empirical evidence on the efficiency of bilateral bargaining by studying the closely related and much more common case where a supplier with a unique product or service negotiates individually with multiple customers who do not interact downstream.[5] Plus, we suspect that if Campbell's arguments were accepted, they also would effectively insulate from challenge mergers to monopoly among sellers in industries like these.

In many business relationships, a price schedule is determined, after which the buyer chooses the quantity traded. Such arrangements can only lead to bilateral efficiency if the price charged for the marginal unit traded equals the seller's marginal cost.[6] If the marginal price ex-

---

efficiency. For textbook treatments, see ANDREU MAS-COLELL, MICHAEL D. WHINSTON & JERRY GREEN, MICROECONOMIC THEORY 858 (1995) ("the important Myerson-Satterthwaite theorem . . . shows that, under very general conditions, it is impossible to achieve ex post efficiency in bilateral trade settings when agents have private information and trade is voluntary"); *cf.* DREW FUDENBERG & JEAN TIROLE, GAME THEORY 245, 279 (1991) (relying in part on the Myerson-Satterthwaite result to conclude that the Coase theorem does not extend to asymmetric-information bargaining except in narrow cases).

[5] For this purpose, one should look at situations in which the customers are not otherwise linked, so the terms negotiated between the supplier and any one customer do not affect the joint profits earned by the supplier and other customers. This absence of interdependence of negotiations appears to be the key role played in Campbell's reasoning by his assumption of a single buyer.

[6] Marginal-cost pricing does not mandate any particular split of the gains from trade between buyer and seller. Other contractual provisions can divide those gains; most sim-

ceeds marginal cost, the buyer will choose an inefficiently low quantity. This provides a simple empirical test of the hypothesis that an efficient quantity is traded under bilateral bargaining: the price paid for the marginal unit must equal the seller's marginal cost.

While marginal cost pricing no doubt arises in some cases, in our experience suppliers with market power that negotiate customer-specific prices very often charge each customer a price for marginal units that is well above marginal cost. For example, consider patent licensing. Typically, the patentee bears no extra costs when its licensee makes additional sales: the patent holder's marginal cost is zero. Yet many patent licenses involve running royalties.[7] These royalties act like a tax on the licensee and reduce the quantity sold below the bilaterally efficient level.[8] In a similar vein, CNN does not charge each local cable monopolist CNN's marginal cost for each extra cable subscriber.[9] Likewise, vendors of business software that negotiate individual prices with corporate customers do not routinely charge them zero (marginal cost) for each additional "seat" or user of that software.

Another body of empirical evidence involves bargaining breakdown or impasse. As lawyers know, commercial disputes between two firms sometimes lead to litigation.[10] Litigation is inefficient because the parties could have achieved the same outcome through bargaining and avoided litigation costs, such as legal expenses or lost executive time. And once litigation begins, proceeding to trial rather than settling represents a further breakdown of efficient bargaining. Most litigated cases settle, but the frequency with which cases instead go to trial illustrates that bilateral bargaining need not reach any resolution, let alone an efficient one.

Other evidence that firms do not reliably achieve efficient outcomes through negotiations is familiar to antitrust lawyers. Vertical mergers are

---

ply, the parties can negotiate a two-part tariff under which the buyer pays the seller a fixed fee and a per-unit charge.

[7] In a widely cited survey, approximately 85 percent of licenses included a running royalty. Michael Rostoker, *A Survey of Corporate Licensing*, 24 IDEA 59 (1984).

[8] We are not suggesting there is anything improper about a patent holder charging running royalties. But a merger between two firms owning patents on substitute technologies used by a single downstream manufacturer could well lead to higher running royalties and higher downstream prices, thus harming ultimate consumers.

[9] Nor did it when cable was more of a monopoly than it now is. This marginal cost is negative if CNN receives advertising revenues based on the number of subscribers.

[10] A mid-1980s study found that between 70 and 88 percent of private antitrust damages cases that reached a final disposition (judgment or settlement) were settled. Steven C. Salop & Lawrence J. White, *Economic Analysis of Private Antitrust Litigation*, 74 GEO. L.J. 1001, 1010 (1986) (table 9). Strikes provide another example of bargaining breakdowns.

commonly expected to eliminate double marginalization.[11] If bilateral negotiations were always efficient, double marginalization would never occur in the first place.

Summarizing, neither modern economic theory nor empirical evidence suggests that bilateral monopoly is reliably efficient, contrary to what Campbell claims. The fundamental assertion underlying his policy proposal is thus unsupported.

II. MULTIPLE SUPPLIERS

We now consider whether bilateral monopoly is better or worse than the alternative of a single buyer facing more than one seller. We begin with a discussion of Campbell's analysis of situations in which a single buyer is purchasing from more than one supplier.

Campbell relies on the classic model of monopsony to analyze markets in which the single buyer purchases from multiple suppliers.[12] In that model, the single buyer establishes the price it will pay, prompting each price-taking seller to supply a quantity at which its marginal cost is equal to that price. As with classic monopoly, an inefficiently low quantity results.

This model is only coherent if each supplier experiences higher marginal costs as its output expands. In our experience, in markets with a small number of suppliers where mergers to monopoly are most likely to arise, marginal cost is often roughly constant, or even decreasing, in the relevant ranges of output. In the defense industry, for example, military contractors often achieve lower marginal costs as they expand output due to learning-curve effects and volume discounts from their subcontractors. If marginal costs are constant or decreasing with output, the classic monopsony model is inapplicable and misleading: a buyer who restricts the quantity it purchases may well drive price up rather than down.

More fundamentally, the classic monopsony model, with many price-taking suppliers, is simply not suitable for analyzing premerger markets

---

[11] Campbell, *supra* note 1, at 525 & 525 n.18 notes the danger of double marginalization. "If auto manufacturers were monopolized, that is, there was only one producer of cars, what would be the effect of allowing the steel refineries that sold to them to become monopolized as well? Such an outcome is unquestionably worse for automobile consumers than if the steel refineries remained competitive." Like Campbell, we would expect a merger to monopoly of steel producers to harm automobile consumers. Unlike Campbell, we would expect this result regardless of whether there is an industrial purchaser of steel in addition to the automobile monopolist.

[12] *Id.* at 521.

for mergers to monopoly. Overwhelmingly, mergers involve two firms, so a merger to monopoly starts with duopoly. Evaluating the effects of a merger from duopoly to monopoly requires comparing the situation in which the single buyer can negotiate with two suppliers vs. only one supplier.

Campbell does not analyze negotiations between a single buyer and two suppliers. However, his argument that bilateral bargaining must lead to efficiency, because any inefficient outcome leaves an incentive for renegotiation, also applies to trade between a single buyer and any one seller when there are multiple suppliers. Rather than trade an inefficient quantity, the buyer and any seller would have an incentive to renegotiate to capture otherwise unexploited gains from trade. If one consistently assumed that inefficient bilateral agreements will not stick because they would be renegotiated, one would conclude that market structure does not affect the quantity traded. Moreover, if negotiation with a single supplier would yield more joint surplus than would negotiations with multiple suppliers, then that supplier and the buyer have a joint incentive to strike an exclusive deal before starting to negotiate price and quantity.[13] If, as Campbell argues, privately efficient trade is promoted by bilateral, rather than multilateral, negotiation, a merger to monopoly is not necessary to achieve those gains.[14]

Campbell's conclusion that a merger to monopoly will enhance efficiency thus results from a critical shift in assumptions. In relying on the classic monopsony model to represent the outcome with one buyer and more than one seller, he assumes a rigid and inefficient bargaining process. But when considering the outcome of negotiations in a post-merger bilateral monopoly, he assumes a flexible, efficient bargaining process. The increase in efficiency and in quantity traded that he credits to a merger to monopoly is instead due to this change in assumptions about the bargaining process.

Contrary to Campbell's assertions, economic theory robustly predicts that efficiency is more likely to result if the buyer can negotiate with

---

[13] On this and related questions when contracting among sellers and direct buyers is assumed to be privately efficient, see B. Douglas Bernheim & Michael Whinston, *Exclusive Dealing*, 106 J. POL. ECON. 64 (1998).

[14] Moreover, if a single buyer's agreement to deal exclusively with one supplier violates Sherman Act Section 2, as Campbell supposes in his reply, that legal result would presumably arise because an exclusive agreement between the two—a bilateral bargain—would *reduce* output relative to the result when the sole buyer negotiates with multiple suppliers. Under such circumstances, there is no reason to suppose that a merger among suppliers would make possible a bilateral bargain that *increases* output, contrary what Campbell also assumes. *See* Campbell, *Further Comment*, *supra* note 3, at 654.

multiple suppliers rather than just one. In particular, with private information, economic theory indicates that negotiated outcomes often are *more* efficient and lead to *more* trade if the buyer can negotiate with two or more suppliers rather than just one. To illustrate, suppose that marginal cost is known to be $1, while the buyer's value (as perceived by the sellers) is equally likely to be $2 or $4. With two sellers, if competition is sharp enough to yield gross margins below 50 percent,[15] the competitive price is below $2 and trade efficiently takes place. This efficiency is jeopardized if the two sellers merge. If the merged firm can commit to a price, its profit-maximizing price will be $4. Half of the time, the buyer's value will be $2, and no transaction will occur; trade is inefficiently lost.[16]

Much more generally, a buyer able to deal with two or more suppliers can frequently employ an auction or bidding system, as indeed the Department of Defense often does. With private information, an auction typically yields greater buyer welfare and overall efficiency than does negotiation with a single supplier. Indeed, Bulow and Klemperer have shown, quite generally, that no amount of bargaining power will be as valuable to the buyer as adding one extra bona fide supplier to which it can turn.[17] Competition is a highly effective way to achieve efficiency in the presence of private information about buyer value and seller costs.

III. THE WELFARE STANDARD

So far, we have followed Campbell in analyzing mergers to monopoly to serve a single buyer solely in terms of their efficiency consequences. We have explained why a merger from duopoly to monopoly to serve a single buyer is likely to reduce, rather than enhance, overall efficiency. But our objection to Campbell's argument does not turn on the choice of welfare standard.

If one adopts a total welfare standard, and even if one believes that bilateral bargaining over price and quantity is efficient, it still does not

---

[15] Nothing of importance turns on the requirement that duopoly margins not exceed 50 percent; we could readily construct a similar example in which duopoly margins are higher.

[16] One might respond that if the seller asks $4 and the buyer walks away, the seller will cut its price to $2. But if the buyer can get a price of $2 so easily, it will never pay $4. To get its maximum profit, the monopoly seller must at least sometimes just let the buyer walk away, destroying joint value even while getting more for itself. For a more general exposition by a distinguished competition economist, see John Vickers, *Market Power and Inefficiency: A Contracts Perspective*, 12 OXFORD REV. ECON. POL'Y 11 (1996).

[17] Jeremy Bulow & Paul Klemperer, *Auctions Versus Negotiations*, 86 AM. ECON. REV. 180 (1996). Bulow and Klemperer address the inverse case of competition among buyers to purchase from a single seller, but their result applies equally when sellers compete to serve a single buyer.

follow that mergers to monopoly to serve a single buyer enhance efficiency. Absent extraordinary synergies, such mergers unquestionably weaken the bargaining power of the buyer, to the advantage of the merged entity, because they eliminate the buyer's primary negotiating tactic: playing one supplier off against another.[18] Under such circumstances, suppliers will find it profitable to merge to monopoly, even if their merger involves inefficiencies.[19] Plus, if the two suppliers are competing to innovate, they have less incentive to do so rapidly if they merge or collude.

In practice, most merger enforcement asks how a proposed merger will affect the welfare of those who buy directly from the merging firms.[20] If one judges mergers based on their impact on direct buyers, mergers to monopoly to serve a single buyer are even more clearly undesirable. As just noted, such mergers will generally disadvantage the direct buyer.

In cases where the direct buyer is an intermediary who sells to final consumers, one can instead judge a merger based on its impact on final consumers. In this case, a merger will harm final consumers if it causes the direct buyer to pay a higher price for marginal units or to purchase a smaller quantity. We explained above why a merger to monopoly is likely to result in such effects in realistic settings with private information about seller costs and buyer value.

IV. THE VIRTUES OF COMPETITION

Merging parties in any individual case could choose to offer Campbell's argument. They could contend before an enforcement agency or court that their particular merger to monopoly will lead to efficient bilateral bargaining and thus will not cause a reduction in output or otherwise harm final consumers. That argument might have merit in some cases. But Campbell does not just argue that mergers to monopoly to serve a single buyer *can* be efficient or *can* increase output. He asks us to be so confident in these predictions as to justify making such mergers

---

[18] *See id.*

[19] Put differently, the transfer from the buyer to the suppliers that results from the merger is relevant, even under a total welfare standard, because it creates an incentive for suppliers to engage in inefficient mergers. Such mergers are a form of rent seeking.

[20] *E.g.*, FTC v. H.J. Heinz Co., 246 F.3d 708, 719 (D.C. Cir. 2001) ("no court has ever held that a reduction in competition for wholesale purchasers is not relevant unless the plaintiff can prove impact at the consumer level."). Courts may care about the welfare of direct buyers for their own sake or because their welfare is thought to be a good signal as to the welfare of final consumers.

legal per se.[21] Yet, as we have demonstrated, modern economic analysis does not support the conclusion that mergers leading to bilateral monopoly routinely enhance welfare, however welfare is defined and, consequently, does not support making such transactions legal per se. Moreover, it would be more than passing strange if a statute that explicitly prohibits mergers that substantially reduce competition or tend to create a monopoly could be interpreted to accept in all cases the total elimination of competition merely because there is a single buyer.

Nor is it necessary for the government to disprove Campbell's theory in order to prevail in an individual case when challenging a merger to monopoly to serve a single buyer. The theoretical reasons why the presence of multiple suppliers benefits buyers and promotes efficiency, and the empirical evidence that firms engaged in bilateral negotiations do not routinely transfer products at marginal cost, combine to make a strong case for presuming precisely the reverse: that absent extraordinary efficiencies, mergers to monopoly to serve a single buyer will reduce efficiency and harm consumers. Moreover, the harm to competition from such mergers is greatest in markets where private information about cost and value is important, including markets where innovation is an important element of competition.

Campbell's argument raises concerns for antitrust enforcement beyond the narrow class of mergers to monopoly to serve a single buyer. He is arguing that coordination among all of the suppliers in a given market, to negotiate in a concerted fashion with the buyer, will enhance efficiency.[22] If accepted, this argument would encourage defendants to justify on efficiency grounds a wide range of coordinated behavior among rivals, outside the narrow context of mergers to bilateral monopoly, as the same argument could be used to justify conduct that could be understood as creating countervailing power in bargaining. Campbell raises this possibility when he argues that his "conclusion that merger to monopoly should be permitted in the face of monopsony is bolstered" by the Capper-Volstead Act exemption for agricultural cooperatives and

---

[21] Campbell states: "The rule I propose is that the following mergers be permitted: (1) merger to monopoly of suppliers where there is only one purchaser." Campbell, *supra* note 1, at 534 (second category of permitted mergers omitted).

[22] Campbell's argument is far-reaching because it rules out the anticompetitive side of the familiar welfare tradeoff associated with the work of Oliver Williamson. Campbell does not rely on the usual efficiency defense for agreements among rivals, including mergers: that they generate production efficiencies (better or cheaper products) that swamp the allocative efficiency loss arising from the reduction in competition. His argument admits no tradeoff; with mergers to bilateral monopoly it recognizes only allocative efficiency gains.

the antitrust exemption for labor unions.[23] Campbell also finds the Supreme Court's discredited Depression-era *Appalachian Coals* decision, allowing price fixing by a joint selling agency, to be "in line with [his] thesis."[24] The reverse is equally true: if a court were to accept Campbell's argument in the context of merger review, it would likely provide precedent to justify an antitrust exemption whenever firms cooperate in bargaining with a dominant firm, thereby subverting existing antitrust norms.

Although we find Campbell's economic analysis flawed, its underlying message—that monopoly can be more efficient than competition—occasionally emerges even from impeccable economic analysis.[25] Nevertheless, the economics literature as a whole strongly supports the antitrust presumption in favor of competition. Based on our policy experience and our knowledge of economics, we are confident that market competition by and large encourages economic efficiency and progress, and that antitrust benefits society by fostering competition. Antitrust law as a whole wisely and strongly presumes that competition is a good thing.[26]

Antitrust's presumption in favor of competition can coexist with careful analysis of competitive effects of firm conduct and need not be utterly conclusive.[27] More generally, it is worth studying whether one can identify circumstances in which competition might work poorly, and certainly worth analyzing whether competition and the antitrust laws can be made to work better. But Campbell's article does not advance that agenda. Rather, Campbell asserts sweeping, troubling, and unjustified policy conclusions that cut directly against the spirit of antitrust.

---

[23] Campbell, *supra* note 1, at 523. Similarly, Campbell's theory might be used to justify an agreement among individual physicians to create an association solely in order to bargain with large insurers. *See* Campbell, *Further Comment*, *supra* note 3, at 647.

[24] Campbell, *supra* note 1, at 532. *Appalachian Coals, Inc. v. United States*, 288 U.S. 344 (1933), allowed a crisis cartel among distressed coal producers. It has been widely criticized as inconsistent with fundamental antitrust principles and was effectively overruled in 1940. United States v. Socony-Vacuum Oil Co., 310 U.S. 150 (1940); *see* Virginia Excelsior Mills, Inc. v. FTC, 256 F.2d 538, 541 (4th Cir. 1958).

[25] A classic example in the economics literature is the finding that entry into oligopoly markets may occur even when it is inefficient (because the harm to incumbents exceeds the benefit to consumers). *See, e.g.*, N. Gregory Mankiw & Michael D. Whinston, *Free Entry and Social Inefficiency*, 17 RAND J. ECON. 48 (1986).

[26] Antitrust defendants are not permitted to inquire "into the question of whether competition is good or bad" and the rule of reason "does not support a defense based on assumption that competition itself is unreasonable." Nat'l Soc'y of Prof'l Eng'rs v. United States, 435 U.S. 679, 695–96 (1978). *Accord* NAACP v. Bd. of Regents of the Univ. of Okla., 468 U.S. 85, 117 (1984).

[27] For example, mergers do not violate the antitrust laws if they do not harm competition or if they promote it, and in rare cases efficiencies might justify highly concentrating mergers.