Group Purchasing Organizations, Monopsony, and Antitrust Policy

Roger D. Blair and Christine Piette Durrance*

December 12, 2011

Paper submitted for consideration at the International Industrial Organization Conference.
Please do not cite or circulate.

Abstract

Group purchasing organizations (GPOs) consolidate the purchasing power of their members, and negotiate contracts with input suppliers on their behalf. In the pursuit of lower input prices and reduced transaction costs, most hospitals have joined GPOs. GPOs have received attention from the Department of Justice and Federal Trade Commission because of concerns over monopsony power and standardization of hospital production costs. Additionally, GPOs have been criticized in the literature for some of their contracting practices, which may appear to be exclusionary, and their funding mechanism, which may lead to incentive compatibility. In this paper, we analyze these three competitive concerns in turn. Generally, we find GPOs to be procompetitive. As a result, we suggest an antitrust policy that preserves the benefits of GPO operations while protecting consumers from any competitive shortcomings.

<center>**Group Purchasing Organizations, Monopsony, and Antitrust Policy**</center>

I.   <u>Introduction</u>

   Group purchasing organizations (GPOs) consolidate the purchasing power of their members, and negotiate contracts with input suppliers on their behalf. In the pursuit of lower input prices and reduced transaction costs, most hospitals have joined GPOs (DOJ & FTC, 2004).[1] By 2011, there were over 600 GPOs that accounted for some 90 percent of all hospital purchases (HIGPA, 2011). Although the vast majority of these GPOs are relatively small, the two largest GPOs, Novation and Premier (Burns, 2002), negotiated contracts covering about $70 billion in 2011 (HIGPA, 2011). This consolidation of purchasing power has raised several policy concerns. In 2004, the Department of Justice and the Federal Trade Commission identified three major policy concerns related to GPOs (DOJ & FTC, 2004, pg. 34-46). First, in order to be successful in reducing input prices, a GPO must represent a sufficient volume of purchases to have some measure of monopsony power. Since the exercise of monopsony power reduces social welfare, this may be a very real competitive concern. Second, GPOs employ a variety of contractual provisions that may limit the sources of supply to their members, which raises antitrust concerns about the exclusion of equally efficient competitors. The third concern involves the GPO's funding mechanism. In its role as an intermediary between manufacturers and hospitals, the GPO creates value by reducing transaction costs and (possibly) input prices. The GPO can extract some (or even all) of this value through membership fees from the hospitals or by charging the suppliers for contracting services. Concerns have surfaced that the GPO may not decrease hospital costs due to the most prevalent funding mechanisms. Moreover, there is

---

[1] GPOs are not confined to the health care sector. State and local government agencies, fast-food franchisees, and retail grocers have found GPOs beneficial.

some risk that the GPO's pursuit of its own self-interest may lead to incentive compatibility problems.

This paper provides an economic analysis of the competitive consequences of GPOs. It also addresses the economic effects of the funding mechanism. Our analysis is organized as follows. In section II, we review the rather limited literature on GPOs. In section III, we analyze the enforcement policy of the antitrust agencies and suggest some improvements. In section IV, we examine the competitive impact of GPOs. As we will see, the standard monopsony model is not particularly useful and, therefore, we propose the all-or-nothing monopsony model. The economic results depend upon the market structure on the supply side. In section V, we address the consequences of the GPO's contracting practices that appear to result in the exclusion of some suppliers. In section VI, the GPO funding mechanism and impact on hospital costs are examined. Finally, we close with some concluding remarks in section VII.

II.   Prior Literature on GPOs

There has been surprisingly little academic attention paid to GPOs and their possibly adverse economic consequences. Although there has been no extensive analysis of the possible monopsony power enjoyed by GPOs, Lindsay (2009) identifies potential antitrust concerns surrounding a GPO's exercise of monopsony power, possible collusion on standardized inputs, and commitments to purchase.[2] Lindsay reports that GPOs are able to provide lower input prices and reduced transactions costs through buyer aggregation, but cautions that GPOs must be cognizant of antitrust risks associated with any type of collaboration among their members. We address the issue of monopsony power in greater detail in sections III and IV of this paper.

---

[2] Lindsay also considers some other areas that are beyond the scope of this paper, including GPO membership criteria, member resale prices, and price discrimination.

Another issue that has received some attention is the potential competitive consequences of common GPO contracting practices. Elhauge (2002, 2003) and Hovenkamp (2002, 2004) have each analyzed the competitive effects of GPO contracting practices and the likelihood of exclusion. Elhauge criticized GPOs for adopting exclusionary agreements that essentially foreclose some rival manufacturers. Specifically, he observes that foreclosure can result from sole-source contracting, minimum purchase requirements, volume-based discounting, and loyalty rebates. In contrast, Hovenkamp is largely supportive of GPOs and their ability to reduce prices and increase output, noting that sole-source contracting and other contracting practices are only anticompetitive under narrow conditions. He observes that medical device markets are largely unconcentrated and market shares are not high enough to justify real anticompetitive concerns. In section V, we weigh in on this subject and provide an economic analysis of contractual provisions that appear to be exclusionary.

The third issue that has received some attention involves the GPO funding mechanism and its implications for hospital costs. As health care costs have continued to soar, efforts at cost containment have become increasingly important. In principle, GPOs could play a vital role in these cost containment efforts. Some studies support the claim that GPOs produce cost savings for member hospitals. For example, Schneller (2009) found that GPOs save the U.S. health care industry approximately $36 billion per year. Burns and Lee (2008) surveyed a sample of U.S. hospitals that participate in GPOs. They found that the majority of the participating hospitals experienced cost savings and were satisfied with their participation in GPOs. In contrast, Litan and Singer (2010) analyzed competitive bids to GPO-member hospitals from manufacturers not on the GPO-negotiated contract and found that GPOs did not secure the best price for their members. In a similar vein, there have been several Government Accountability Office (GAO)

studies that found that GPO-negotiated contracts did not always result in lower prices (GAO, 2002; GAO, 2003; GAO, 2010). In section VI, we address the GPO funding mechanism from an analytical perspective and offer some explanations for these mixed results.

III.   Antitrust Enforcement Policy

In 1996, the DOJ and FTC jointly issued their *Statements of Antitrust Enforcement Policy in Health Care.* GPOs appear to be covered by Statement 7, "Enforcement Policy on Joint Purchasing Arrangements among Health Care Providers." GPOs and joint purchasing agreements among health care providers are not precisely the same thing (Carstensen, 2010). By definition, the latter involves a horizontal agreement among competitors. In contrast, a GPO simply bargains on behalf of its members. Nonetheless, the structural approach of Statement 7 seems to be relevant for GPOs and, therefore, we consider it here. Statement 7 outlines market share thresholds related to two competitive concerns: (1) the exercise of monopsony power by the GPO in the input markets and (2) the possibility of tacit or overt collusion among GPO members in their output markets (ABA, 2007). These concerns would appear to be more serious for joint purchasing agreements that involve organization and operation by the hospitals themselves than for GPOs that are representing the consolidated demands of its member hospitals. Joint purchasing agreements necessarily involve more direct interaction among competing hospitals and, therefore, more opportunity for competitive mischief than would a GPO.

Monopsony Power

There is a presumption that a GPO that accounts for less than 35 percent of the total sales of a product in the relevant market is unlikely to have monopsony power, but that shares above 35 percent are problematic. Consequently, GPOs with market shares below 35 percent are not apt

to be challenged. The structural approach of Statement 7 can be evaluated by considering the relationship between monopsony power and market share.

Monopsony power is the power to depress price below the competitive level by restricting purchases.[3] One measure of monopsony power is the Lerner Index, which measures the deviation from the competitive outcome. It is easily shown that the dominant buyer variant of the Lerner Index (λ) is

$$\lambda = S / (\varepsilon + \eta_f (1-S))$$

where S is the share of total purchases accounted for by the dominant buyer, ε is the elasticity of supply, and η_f is the elasticity of the competitive fringe demand (Blair and Harrison, 1991). While it is true that $\partial\lambda/\partial S$ is positive, i.e., higher shares increase monopsony power, the index shows that relying on market share alone is misguided.[4] For any given value of S, $\partial\lambda/\partial\varepsilon$ is negative, i.e., the more elastic the supply, the lower is the Lerner Index. Thus, supply conditions cannot be ignored in assessing the competitive significance of a GPO. Similarly, $\partial\lambda/\partial\eta_f$ is also negative and, therefore, the more elastic the competitive fringe demand, the lower is the dominant buyer's ability to depress price. Thus, the purchasing reactions of the other buyers also must be considered in inferring the competitive effects of GPOs. To see this, consider the following numerical example. In one case, suppose S = 0.25, ε = 0.50, and η_f = 1.0. In this case, the GPO would enjoy the safe harbor afforded by Statement 7's 35 percent threshold. The value of λ is 0.20, which means that there is a 20 percent deviation from the competitive price. Now,

---

[3] This conception of monopsony power may be inappropriate as applied to GPOs. Far from encouraging its members to curtail purchases, a GPO may encourage them to maintain their purchases as that will enhance the GPO's importance to the suppliers. We address this more carefully in section IV below.

[4] In assessing the monopsony power possessed by a particular GPO, it is obviously also important to define the market properly. Shares do not mean much if the product market or the geographic market is not defined correctly.

suppose that $S = 0.50$, $\varepsilon = 2.0$, and $\eta_f = 1.0$. In this case, the GPO falls outside the safe harbor and would be suspect. But the value of λ is 0.20 again even though the market share is twice the market share in the first case.

Potential Collusion

The second threshold involves the similarity of hospital costs that may emerge from the similarity of input prices. A GPO is unlikely to be challenged if the expenditures on inputs purchased pursuant to the GPO contract amount to no more than 20 percent of the total revenues from the hospital's sales of hospital services.[5] The competitive concern is that if the member hospitals are all paying the same input prices, costs will become standardized across all hospitals. With similar cost structures, collusion on price in the output market becomes easier. While it is certainly true that reaching an agreement on output prices is easier when costs are identical, this concern is peculiar. After all, standard economic theory presumes that all firms have access to the same production functions and that they pay the same input prices, which would make their cost functions identical. The logic of this threshold would seem to imply that cost dissimilarity is procompetitive. It is not clear that this follows, however, since those hospitals with higher costs will be at a competitive disadvantage.

Countervailing Power

Implicit in Statement 7 is the assumption that input markets are competitive on the supply side, but this need not be the case. There may be some medical devices for which there are no reasonably close substitutes and, therefore, some monopoly power. This market structure is not contemplated in Statement 7, but deserves analysis. To avoid unnecessary complications, we

---

[5] Given the hub-and-spoke nature of GPOs, it would not seem that GPO operations would impair competition in the nurse labor market or in the acute care hospital output market. Nonetheless, such possibilities should not be ignored.

assume that the manufacturer has a lawful monopoly due perhaps to a valid patent.[6] If the

hospitals are not part of a buying group, then the manufacturer can exercise its monopoly power

in the usual way, which is illustrated in Figure 1. The monopoly price and quantity are w_1 and

x_1, respectively. The formation of a GPO that includes all hospitals would far exceed the 35

percent threshold. Such a GPO, however, creates a bilateral monopoly market structure. Under

conditions of bilateral monopoly, the GPO and the manufacturer should reach agreement on the

quantity that maximizes the total surplus, which is, of course, the competitive output equal to x_2

in Figure 1.[7] The expanded purchase of the input leads to an increase in output with a

corresponding decrease in the output price, which obviously improves consumer welfare. The

price, which no longer acts as a rationing device, is indeterminate.[8]

Insert Figure 1 here

The monopoly solution generates consumer surplus of abw_1, and producer surplus of

w_1bde. The bilateral monopoly increases the total surplus by bcd to a total of ace. Precisely how

the surplus will be split is indeterminate, but that is of no competitive significance. The price will

act as a means of sharing the maximized surplus and will be determined through bilateral

bargaining. Since the input quantity is not determined by the price, the output will not be

influenced by the price. Consequently, the output price will be unaffected by the input price.

---

[6] If the monopoly were not lawful, the appropriate antitrust policy prescription would be to attack the unlawful monopoly.

[7] For a basic treatment, see Blair, Kaserman, and Romano (1989) and Blair and DePasquale (2011). For applications in the market for physicians services, see Blair and Herndon (2009) and Blair and Coffin (2003).

[8] The price cannot exceed the height of the all-or-nothing demand at x_2 nor can it fall below the height of the all-or-nothing supply at x_2. Its precise value is subject to bargaining, and, therefore, cannot be determined on an *a priori* basis.

In the static model presented in Figure 1, it is clear that the formation of a GPO will improve social welfare. Consequently, it poses no competitive concerns and should be applauded rather than condemned by the antitrust agencies. But the world is not static and the monopolist may soon face competition in the medical device market. In that event, the GPO could reduce social welfare if it exercises its monopsony power in the usual way.[9] Accordingly, some forecast of future competition is necessary to advance a sound antitrust policy proposal.[10]

IV.   GPOs and the Exercise of Monopsony Power

Although It is undeniable that a GPO consolidates the demands of its members,[11] the economic consequences of that consolidation depend on the market structure before and after the GPO's formation. Here, we consider two alternative scenarios to illustrate the range of outcomes.[12] First, we analyze a competitive market in which the formation of a GPO does not alter the market structure, i.e., the market remains competitive. Second, we explore the case of a GPO that converts a competitive market into one with monopsony power. In this connection, we reject the standard monopsony model in favor of its all-or-nothing alternative.[13]

GPOs With No Monopsony Power

We begin with a competitively structured market, i.e., one in which there is neither monopoly power nor monopsony power. This is depicted in Figure 2 where *D* is demand, *S* is

---

[9] It is unlikely that a GPO could exercise monopsony power in the usual way because it would have to impose purchase quotas on its members. This is examined in Section V below.

[10] There may be a tradeoff between the immediate gains in social welfare and possible welfare losses in the future. Evaluating the tradeoff necessarily requires present value calculations that are fraught with uncertainty.

[11] There are some hospitals that have joined more than one GPO. In those cases, the consolidation by any one GPO is necessarily incomplete.

[12] We already analyzed the bilateral monopoly case in Section III above.

[13] The all-or-nothing model was applied to the health insurance market by Herndon (2002).

supply, and the competitive price and output are w_1 and x_1, respectively. If a GPO is formed, but it has no buying power, the economic results will be either competitively neutral or actually procompetitive. Unless the formation of the GPO is simply a failed attempt to achieve monopsony, the only sensible explanation for the existence of a GPO is the realization of some efficiency. Transaction costs, for example, may be reduced by the GPO. These cost savings will lead to an increase in total purchases, which improves both consumer welfare and producer welfare.[14] This case poses no antitrust concerns and would be ignored by the antitrust agencies.

Insert Figure 2 here

GPO Monopsony with Competitive Supply

Suppose that the GPO consolidates the demands of its members and thereby acquires monopsony power while the supply remains competitive. In the usual exercise of monopsony power, the monopsonist maximizes its profits by restricting purchases to the point where the marginal factor cost (*MFC*) equals the marginal revenue product, which is essentially the demand. In Figure 2, this would require a reduction in quantity from x_1 to x_2. The price paid will fall below the competitive level (w_1) to w_2. The resulting loss in social welfare is captured by the triangular area *abc*. In this case, the average cost of the members falls, which leads to increased profits. With reduced purchases, output of the members falls as well. If they have any appreciable market share, this will result in higher output prices. These are clearly legitimate competitive concerns that should attract the attention of the antitrust agencies.

In practice, especially in the hospital sector, the traditional monopsony model is of limited usefulness in analyzing GPO behavior. Ordinarily, the GPO cannot exercise its

---

[14] This case is analyzed in Blair and Harrison (1991) in some detail. It poses no competitive concerns and should be applauded.

monopsony power in this way because its members do not want fewer purchases. Instead, they want to buy the same amounts at lower prices. A GPO can hardly expect its hospital members to reduce their use of everyday items such as latex gloves, needles, and plastic cups. Nor can the GPO expect a hospital to forgo the purchase of much needed medical devices such as pacemakers so other members can enjoy lower prices. The hospital's service quality would be compromised if it curtailed the use of the inputs necessary to produce acute care hospital services. This could lead to unfortunate patient outcomes and consequently invite medical malpractice claims. Far from encouraging its members to curtail purchases, a GPO will want to enhance its importance as a customer. GPO members therefore may be encouraged to keep their purchases up. Thus, the GPO must find another way to exploit its monopsony power. One avenue is the use of all-or-nothing offers to input suppliers.

Instead of reducing its total purchases below x_1, and sliding along the supply curve to a lower price, the GPO could offer to buy x_1, at a price below w_1, or buy nothing at all. This all-or-nothing offer converts producer surplus into buyer surplus by pushing the supplier off the usual supply curve and onto the all-or-nothing supply curve, which is represented by S_A in Figure 3. Points on S_A are price and quantity combinations that yield no producer surplus. In the profit maximizing all-or-nothing offer, the offer would be to purchase the competitive quality x_1 at a price of w_2 or not buy anything at all. At this point, all of the producer surplus will have been extracted by the GPO. If the seller refuses, it sells nothing and the GPO turns to someone else for its purchases of x_1. This strategy, therefore, can only work if there is a "someone else" to whom the GPO may turn, i.e., the threat to go elsewhere must be credible.

With the all-or-nothing strategy, the quantity is equal to the competitive output. As a result, this outcome does not involve any allocative inefficiency, which is the usual economic

objection to departures from competition. It does, however, involve a significant distributional impact. Before the formation of the GPO, there was producer surplus of w_1bc, but after the emergence of the GPO, all that was converted to buyer surplus. It is not completely clear that this redistribution of the surplus is an antitrust problem. Policy arguments can be made on both sides.[15] One can certainly argue that the purpose of antitrust policy should be to promote social welfare. In that case, the distributional consequences are irrelevant. But one could also argue that the antitrust laws should preserve competition. In that event, monopsony is objectionable even when it results in no allocative inefficiency.[16]

A Caveat

The use of all-or-nothing offers does not cause allocative inefficiency in the short-run static model that we analyzed, but may have serious, adverse effects in the long run. Consider a firm's investment decision. When a firm must incur R&D costs prior to realizing any operating profit, the decision to go forward depends on the expected net present value (NPV) of the project. Now, the NPV can be written as

$$\mathbf{NPV} = -\sum_{t=1}^{\tau} (\mathbf{R\&D})_t / (1+i)^t + \sum_{t=\tau+1}^{T} \Pi_t / (1+i)^t$$

where the research and development expenditures in year t are denoted as $(R\&D)_t$, Π_t are the expected operating profits in year t, i is the discount rate, τ is where the R&D costs have all been incurred, and T is the final year of the project. Obviously, the NPV must be positive or the project will not be undertaken.

---

[15] The Supreme Court has extended protection from collusive monopsony to sellers; see *Mandeville Island Farms v. American Crystal Sugar*, 334 U.S. 219 (1948).
[16] As we saw in section III, the antitrust agencies have adopted a structural approach that is based on presumptions that may not apply to all-or-nothing offers.

Once the R&D costs have been incurred, they are sunk. If a GPO extracts all of the producer surplus, the operating profits Π_t will be zero and the firm's investment would become a total loss. The possibility of this happening will reduce the expected net present value and will lead to reduced investments in some forms of R&D. Consequently, social welfare may be reduced in the future even though there is no allocative inefficiency in the present.

Insert Figure 3 here

V. Foreclosure of Suppliers

GPOs negotiate contracts with input suppliers on behalf of their members. Some of these contracts contain provisions that raise the specter of anticompetitive foreclosure.[17] Perhaps the most obvious candidate for criticism is the sole source contract. In such contracts, one manufacturer has the exclusive right to sell its product pursuant to the GPO contract.[18,19] Some GPO contracts offer minimum volume purchase requirements to a specific supplier. A close cousin is the requirements contract that obligates members to buy at least a specified percentage of their requirements from that supplier. Bundled discounts provide another example of a

---

[17] Some of these provisions amount to exclusive dealing, which may be anticompetitive (Frech, 2008). In the present case, however, the GPO is offering to deal exclusively in exchange for lower prices. This would seem to be procompetitive.

[18] Legal challenges to sole source contracts have not fared well. In *Allied Orthopedic v. Tyco Health Care*, 592 F. 3d 991 (2010), for example, a group of hospitals challenged Tyco's sole source status with several GPOs that excluded generic substitutes. The trial court found that Tyco received sole source status because it offered a superior product at reduced prices.

[19] *Retractable Technologies, Inc. v. Becton Dickinson and Co.*, 01-CV-036 (E.D. Tex.) is an example of an illegal monopolization case that resulted in foreclosure of a supplier from the GPO contract. Retractable Technologies created a retractable syringe aimed at reducing needlesticks, but allegedly suffered difficulty marketing their new product as a result of GPO agreements that favored other manufacturers. After suing the two largest syringe manufacturers and the two largest GPOs for monopolization of the syringe market, Retractable Technologies settled their suit.

contractual provision that tends to exclude rivals.[20] When discounts are bundled, purchase volumes on product X influence the discount on product X and on products Y and Z as well. Tiered or loyalty discounts provide increased discounts as the hospital buys increased percentages of its requirements for a specific product.[21, 22]

The competitive impact of these contractual provisions has been the subject of some debate (Elhauge 2002, 2003; Hovenkamp 2002, 2004).[23] Critics argue that these contracts have the potential for anticompetitive foreclosure. In each instance, there is a tendency for one supplier to thrive while its rivals are excluded entirely or marginalized. But these competitive concerns are largely an optical illusion when the suspect provisions are viewed in the correct light. The issue is not whether a supplier is at a post-contractual disadvantage in competing for

---

[20] Bundled discounting was found to be a monopolizing business practice in *LePage's Inc. v. 3M*, 324 F.3d 141 (3d Cir. 2003), cert. denied, 124 S. Ct. 2932 (2004).

[21] C.R. Bard Inc., which produces branded catheters, sold its catheters to hospitals pursuant to a GPO contract negotiated with Novation. The contract in question contained provisions for making Bard the sole source of these catheters. The contract also provided tiered (or loyalty) discounts and bundled discounts that deterred substitution. St. Francis Medical Center sued Bard alleging that it had abused its dominance in the catheter market. The trial court granted summary judgment in favor of Bard because the hospitals were not bound to purchase under the contract. Since they could purchase off-contract, they must have purchased from Bard because Bard offered the best terms. Thus, there could be no injury to the hospitals. For additional details, see *Southeast Missouri Hospital v. C.R. Bard*, 616 F. 3d 888 (8th cir. 2010), and *Southeast Missouri Hospital v. C.R. Bard*, 642 F. 3d 608 (8th cir. 2011).

[22] *Kinetic Concepts, Inc. v. Hillenbrand Industries, Inc*. 95-CV-0755 (W.D. Tex., Aug. 31, 2000), a bundling case which also involved a requirement to buy a certain percentage, is an example. In this case, Kinetic and Hillenbrand each manufactured and sold standard as well as specialty hospital beds. Kinetic argued that Hillenbrand offered additional discounts on standard hospital beds if a customer was willing to purchase at least 90 percent of its specialty beds from Hillenbrand. Kinetic was allegedly unable to match the discounted price and sued for illegal tying. Ultimately, Kinetic prevailed with a $521 million verdict.

[23] In response to some these concerns the Health Industry Group Purchasing Association (HIGPA), a trade association representing 16 GPOs, has created a code of conduct regulating GPO behavior (Code of Conduct Principles, Health Industry Group Purchasing Association, 2009).

sales to the GPO member. Instead, the issue is whether rival suppliers can compete for the GPO contract. The locus of competition shifts from the members to the GPO.

Consider the sole-source contract provision. A GPO negotiates contract terms with several input suppliers on behalf of its members. Once the deals are made, the GPO then offers its members a list of the products that they can purchase pursuant to the contract. For some inputs, a specific manufacturer is the sole source of that input. For a hospital to buy from another source, it must buy "off contract," which may be discouraged by the GPO.[24] Those rival suppliers that are not included in the GPO's list may object that they have been foreclosed from access to the GPO's members. This allegation may, of course, be true ex post, but it does not mean that those suppliers could not have competed for the contract. The locus of competition is simply different. The GPO selects the supplier that offers the best deal, so rival suppliers can compete to be the sole source. If all suppliers are equally efficient producers, then the "winner" will be the firm willing to accept the lowest return on this book of business. There is no public policy reason to object to this outcome. If the suppliers are not equally efficient, it is the most efficient supplier who can offer the lowest price to the GPO. In this case, the "right" firm is the sole source and fewer resources are expended in providing that input. Sole source contracts, therefore, are procompetitive rather than anticompetitive.

The other contractual provisions are more obviously procompetitive. All of them involve offering lower input prices for increased volume. Suppliers are induced to lower prices by the increased volume that is promised by the GPO. At least in principle, all input suppliers can

---

[24] A GPO can negotiate lower prices when it can promise increased volumes. In an effort to assume suppliers of the promised increase, some GPOs may insist that their members not join other GPOs. Other GPOs may include provisions that deter switching. These have procompetitive consequences.

compete on this basis. When a GPO wants to contract only with suppliers that can fill all orders by its members, small suppliers may not be able to compete for the contract. But there are at least two reasons why this is not the death knell for those small suppliers. First, there are numerous GPOs and many of them are small. Second, most GPOs do not require their members to buy 100 percent of their requirements on the GPO contract. Small manufacturers can approach hospitals directly to compete for some of their business.

Volume-based discounts are usually procompetitive. For one thing, they permit a manufacturer to exploit economies of scale and thereby reduce its average cost. In addition, in a world of uncertainty, the discount structure can provide some predictability. To the extent that some firms may be excluded by the volume discounts, there is probably excess capacity. Some firms may fall by the wayside as a result, but it is socially desirable to eliminate excess capacity. Presumably, the least efficient firms will be the ones that fail.

In short, any *ex post* foreclosure is the product of the competitive process. The result is lower prices and more efficient production. Thus, the fear of anticompetitive foreclosure seems to be misplaced.

VI.   GPO Funding Mechanisms

In the preceding section, we ignored the fact that the GPO and its members are separate business entities each with their own profit functions. In actuality, GPOs do not purchase medical products directly, but rather negotiate contracts for purchase on behalf of their member hospitals. GPO members then choose which products to buy and in what volumes at the GPO-negotiated contract terms. To the extent that the GPO is successful in exploiting the combined purchasing power of its members, it converts some producer surplus into buyer surplus. In doing so, it incurs costs that must be covered through its funding mechanism. In this section, we

examine two funding mechanisms: (1) membership fees paid by the hospitals and (2) administrative fees paid by the suppliers.

Membership Fees

The GPO can be compensated through membership fees that the hospitals pay for the privilege of buying inputs pursuant to the GPO-negotiated contract.[25] Consider the all-or-nothing contract described in Figure 3. By exercising monopsony power in this fashion, the GPO increases buyer surplus by the rectangular area w_1bdw_2. For the hospitals to maintain their interest in being a GPO member, they must share in that surplus. Precisely how that surplus is shared is indeterminate since it depends on the GPO market structure. At one extreme, suppose that GPOs compete among themselves for members by offering larger shares of the surplus. Assuming that the GPOs are equally efficient, the net surplus available for sharing will be area w_1bdw_2 minus the costs of operating the GPO. In the limit, competition will lead to the hospitals getting all of this net surplus with the GPO earning only a competitive return on its investment. In this case, the membership fees will equal the average cost of the GPO operation.

At the other extreme, suppose there is a single GPO, i.e., a monopoly middleman of sorts. In that event, there will be no competition for members and the GPO will be able to retain the entire net surplus. Between the two extremes, there may be varying amounts of competition for members. If there are too few GPOs competing with one another, then there will be some division of the surplus between the GPO and its hospital members.

Administrative Fees

---

[25] This funding mechanism is far less prevalent than the second one that we will consider. As will become apparent, the main difference between the two is distributional rather than allocative.

The second, and far more prevalent, funding mechanism involves administrative fees that the manufacturers pay the GPO. In this case, the GPO negotiates contracts with the manufacturers on behalf of its members. The hospitals then buy whatever they require from the manufacturers based on the GPO-negotiated contract. The administrative fee is paid by the manufacturer to the GPO for its contracting services.[26] This fee is based on a percentage of the volume of sales of the product sold off that negotiated contract.

The economic results of this funding mechanism are not as dissimilar from membership fees paid by the hospitals as one might suppose. Consider the all-or-nothing case in Figure 3. The input supplier enjoys the producer surplus of w_1bc when it sells x_1 at a price of w_1. If the firm has no access to the GPO's members, the GPO can charge an access fee of w_1bc. The members pay w_1 and buy x_1. The difference between this outcome and the one in which hospitals pay membership fees is cosmetic. The GPO gets all of the surplus in either case. For the hospitals, total expenditures are equal to w_1x_1 when the suppliers pay administrative fees. When they pay membership fees, their total expenditures will be w_2x_1 to the supplier and w_1bdw_2 to the GPO for a total of w_1x_1. Thus, in principle, there is no difference between the two funding mechanisms.

Recognizing that GPOs can provide valuable service and mindful that payments by suppliers may appear to be kickbacks, policymakers have responded. First, the Social Security Act makes it illegal to receive compensation for the referral of products or services which are reimbursed under federal health care programs. In 1987, Congress enacted the Medicare and Medicaid Patient Protection Act,[27] which provided an exemption for GPOs, allowing them to

---

[26] As long as certain provisions have been met, these fees will not be deemed kickbacks, which would violate the federal Anti-Kickback statute. Medicare and Medicaid Patient Protection Act of 1987 (42 U.S.C. 1320a-7b).

[27] Medicare and Medicaid Patient Protection Act of 1987 (42 U.S.C. 1320a-7b).

collect administrative fees from medical product manufacturers while negotiating contracts for hospitals. In 1991, the Department of Health and Human Services adopted "safe harbor" provisions with respect to the anti-kickback policies which require additional transparency in the payment of fees from the manufacturer to the GPO.[28] First, the GPO and hospital must have a written agreement that explicitly states the rate at which the manufacturer will compensate the GPO based on the volume of products sold. The threshold should not exceed 3 percent, but has been reported to be higher in special cases (GAO, 2003). Second, the GPO is required to annually disclose to the hospital the dollar amount received from each manufacturer as a result of hospital purchases off the GPO contract.

VII.   Concluding Remarks

As we have seen, GPOs raise some competitive issues that may arouse antitrust scrutiny. In some cases, GPOs are procompetitive; in others, they may be anticompetitive. Care must be exercised to determine the actual competitive consequences of GPOs in particular circumstances. The structural approach embraced by the antitrust agencies is prone to error for at least two reasons. First, the emphasis on market share can lead to incorrect inferences regarding market power because supply and demand elasticities are ignored. Second, the structural approach focuses only on the GPO while presuming that supply is competitive. This focus ignores the possibility of the GPO's providing countervailing power, which would be procompetitive.

GPO contracts often include terms that appear at first blush to be exclusionary or anticompetitive. Upon closer examination, however, these terms may be the *quid pro quo* for

---

[28] 56 Fed. Reg. 35952.

lower prices. Condemning such terms can lead to perverse results, such as higher prices. Again, care must be exercised if error is to be avoided.

Finally, the GPO funding mechanism may suggest conflicts, but these too may well be more apparent than real. The actual impact depends on market structure and, therefore, cannot be determined on *a priori* reasoning.

Per se rules and structural safe harbors are appealing because enforcement resources are reduced. But errors, potentially serious errors, can creep in and thereby lead to perverse decisions and outcomes. Policy must proceed cautiously if errors are to be at a minimum.

References

ABA Section of Antitrust Law (2007). *Antitrust Law Developments*, 6th ed., Chicago: American Bar Association.

Blair, R.D. and K.L. Coffin (2005). "Physician Collective Bargaining: State Legislation and the State Action Doctrine," *Cardozo Law Review*, Vol. 26, pp. 101-132.

Blair, R.D. and C. DePasquale (2011). "Considerations of Countervailing Power," *Review of Industrial Organization*, Vol. 39, pp. 137-143.

Blair, R.D. and J.L. Harrison (1991). "Cooperative Buying, Monopsony Power and Antitrust Policy," *Northwestern University Law Review*, Vol. 86, pp. 331-367.

Blair, R.D. and J.B. Herndon (2004). "Physician Cooperative Bargaining Ventures: An Economic Analysis" *Antitrust Law Journal*, Vol. 71, pp. 989-1016.

Blair, R.D., D.L. Kaserman, and R.E. Romano (1989). "A Pedagogical Treatment of Bilateral Monopoly," *Southern Economic Journal*, Vol. 55, pp. 831-841.

Burns, L.R. (2002). *The Health Care Value Chain: Producers, Purchasers, and Providers,* 1st ed., San Francisco: Jossey-Bass.

Burns, L.R. & J.A. Lee (2008). "Hospital purchasing alliances: Utilization, services, and performance." *Health Care Management Review*, Vol. 33, pp. 203-215.

Carstensen, P. (2010). "Buyer Cartels versus Buying Groups: Legal Distinctions, Competitive Realities, and Antitrust Policy," *William & Mary Law Review*, Vol. 1, pp. 1-46.

Department of Justice and Federal Trade Commission (2004). *Improving Health Care: A Dose of Competition,* Washington, D.C.: Federal Trade Commission.

Elhauge, E. (2002). "The Exclusion of Competition for Hospital Sales Through Group Purchasing Organizations," Report to US Senate.

Elhauge, E. (2003). "Antitrust Analysis of GPO Exclusionary Agreements," Comments Regarding Hearings on Health Care and Competition Law and Policy—Statement for DOJ-FTC Hearing on GPOs, available at
http://www.ftc.gov/os/comments/healthcarecomments2/elhauge.pdf.

Frech, H.E. (2008), "Some Thoughts on Bundled Rebates Exclusionary Policies," *GCP: The Online Magazine for Global Competition Policy*, pp. 1-10.

Government Accountability Office (2002), "Group Purchasing Organizations: Pilot Study Suggests Large Buying Groups Do Not Always Offer Hospitals Lower Prices."

Government Accountability Office (2003). "Group Purchasing Organizations: Use of Contracting Processes and Strategies to Award Contracts for Medical-Surgical Products."

Government Accountability Office (2010). "Group Purchasing Organizations: Services Provided to Customers and Initiatives Regarding Their Business Practices."

Herndon, J.B. (2002). "Health Insurer Monopsony Power: All-or-None Model," *Journal of Health Economics,* Vol. 21, pp. 197-206.

Health Industry Group Purchasing Association (HIGPA) (2011), "A Primer on Group Purchasing Organizations," available at
http://www.supplychainassociation.org/resource/resmgr/research/gpo_primer.pdf

Health Industry Group Purchasing Association (HIGPA) (2011), "Group Purchasing: An examination of the growing group purchasing business model across multiple industries," available at http://www.higpa.org/?page=GPO101.

Hovenkamp, H. (2002). "Competitive Effects of Group Purchasing Organizations' (GPO) Purchasing and Product Selection Practices in the Health Care Industry," Prepared for the Health Industry Group Purchasing Association, available at
https://www.novationco.com/pressroom/industry_info/HovenkampGPOStudy.pdf.

Hovenkamp, H. (2004). "Group Purchasing Organization (GPO) Purchasing Agreements and Antitrust Law," Prepared for the Health Industry Group Purchasing Association, available at
http://higpa.site-ym.com/resource/resmgr/press_releases_2004/2004hovenkampgposandantitrus.pdf.

Lindsay, M. (2009). "Antitrust and Group Purchasing," *Antitrust*, Vol. 23, pp. 66-73.

Litan, Robert E. & Hal J. Singer (2010). "Do Group Purchasing Organizations Achieve the Best Prices for Member Hospitals? An Empirical Analysis of Aftermarket Transactions," available at
http://www.medicaldevices.org/node/795

Schneller, E.S. (2009). "The Value of Group Purchasing in the Health Care Supply Chain," available at https://www.novationco.com/pressroom/industry_info/GroupPurchasing.pdf

Figure 1

Figure 2

Price

S

S$_A$

w$_1$ — — — — — — — b

a

w$_2$ — — — — — — d

c

D

0

x$_1$

Quantity

Figure 3