Assessing the Implications of Upstream Buyer Power on Downstream Consumers

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Introduction
The growth of big-box retailers over the past few decades has been a worldwide phenomenon. Sales at these retailers have been rising, due, in part, to their ability to use their greater purchasing volume to negotiate lower prices from their suppliers and to pass along those cost savings to consumers. Although suppliers that have encountered tougher negotiations may express concerns about the potential for monopsony power, the competitive concerns often fade when the question turns to whether consumers benefit.

This is natural. After all, if a buyer can negotiate lower prices from its upstream suppliers, doesn’t that automatically imply lower prices to consumers? It turns out that the answer is not so clear, and in this paper, we explore the factors that determine whether consumers are likely to be harmed or helped by upstream buyer power. An example that highlights the key factors that can matter in evaluating the impact of buyer power on consumers is the 2007 merger between book retailers A&R Whitcoulls (ARW) and Borders in Australia and New Zealand, which was reviewed by the Australian Competition and Consumer Commission (ACCC) and the New Zealand Commerce Commission (NZCC).
What is Upstream Buyer Power?

Buyer power has been described in a number of different ways. For example, economist Roger Noll offers a definition that focuses on competitive pricing: a purchaser with buyer power “can force sellers to reduce price below the level that would emerge in a competitive market.” Other economists define buyer power as simply pricing below a supplier’s “normal selling price,” which may or may not be the competitive price.

Buyer power typically manifests itself in upstream markets for the wholesale supply of a particular product. For example, a retailer will purchase products from upstream suppliers at the wholesale level and sell those products to final consumers at the retail level. Buyer power can therefore have welfare consequences on suppliers and retailers that participate in the upstream market and on retailers and consumers that participate in the downstream market. An assessment of the welfare effects on both buyers and sellers in a particular market would be an analysis of the total surplus to both parties, while an assessment of the welfare effects on only the buyers would be an analysis of consumer surplus. Assessing the welfare consequences on a total surplus standard in either or both of the upstream and downstream markets may be appropriate in some circumstances, but in this paper we will restrict our analysis to the welfare of consumers who purchase the final end product (i.e., in the downstream market).

Pricing in the Upstream Market

To assess how downstream consumers might be affected by buyer power, we begin by considering how buyer power affects the prices of the input or product that is sold by upstream sellers. Consider, for example, an upstream market that is perfectly competitive on the supply side. In such a market, the upstream suppliers sell an input to a buyer or group of buyers. The transactions of these suppliers and buyers may establish a single market-clearing price. An example would be the market for many agricultural commodities, where in many cases there are a large number of farmers supplying a small number of buyers at (possibly) a single market price.

In an upstream market characterized by a single buyer, perfectly competitive suppliers, and an upward sloping supply curve—a situation that is often referred to as the “textbook” model of monopsony power—the single monopsonist buyer can affect the input price it pays by varying the amount it demands. This is because the monopsonist buyer will have to pay a higher price if it wants to purchase additional (marginal) units of the input. However, in the textbook model, the monopsonist cannot pay a higher price for just the incremental units that are purchased; the monopsonist will end up paying a higher price for all units of the input purchased. Since the monopsonist buyer’s purchasing volume will influence the market price for the input, its profit maximizing strategy is to buy less of the input than would be purchased if there were many competing buyers for the input. By buying less of the input, the monopsonist also reduces the overall market price that is paid for the input.

Suppose, however, that the upstream market is comprised of a relatively small number of suppliers that hold some market power of their own or, in the extreme case, a monopoly supplier of the input. In these cases, the process in which prices are set is likely to be determined through bargaining or negotiation. In a market with a limited number of downstream buyers and few upstream suppliers that may possess some degree of market power, the negotiations would result in individual prices for each buyer, rather than a single market price for all buyers.

When there is a single buyer and a single seller, this is often called a bilateral monopoly situation. Absent any buyer power, the standard monopoly result would apply: the upstream monopoly supplier would withhold supply and set an input price above competitive levels. However, when a buyer has monopsony power, it has the ability to
obtain a share of the upstream monopolist’s profits. In theory, it can be shown that the monopolist supplier and monopsonist buyer will have an incentive to negotiate the quantity that maximizes their joint profits, with the result being a level of market output that is closer to the competitive outcome and greater than that which would be achieved absent buyer power. The monopoly supplier and the monopsonist buyer would not want to set a quantity different from this, as to do otherwise would not maximize the total amount of the profits that can be split between them. In practice, however, the ability to maximize joint profits may be constrained by, for example, private information, incomplete contracts, and a breakdown in bargaining. Nonetheless, where the buyer has some bargaining power, it can extract some of the monopolist’s surplus, and to do so generally results in a higher quantity of input purchased than in the pure monopoly case, even if this is not necessarily the joint profit maximizing quantity.

The exercise of buyer power lowers the price paid to the input supplier. But do consumers benefit?

Indeed, in the bilateral bargaining model, price is a means of dividing the profits between the parties. The input price will therefore be based on the relative bargaining strength of the monopoly supplier and monopsony buyer. Where even a small amount of bargaining power exists, the monopsony buyer has some ability to extract a lower input price. Essentially, buyer power in the bilateral bargaining framework allows a buyer to offset the market power of its supplier. In general, the result is lower input prices and a higher quantity of input purchased.

In both cases (i.e., the textbook monopsony and bilateral monopoly situations), the exercise of buyer power lowers the price paid to the input supplier. But do consumers benefit? We address this question next.

Consumer Impact and Pricing in the Downstream Market

A rigorous analysis of whether consumers are ultimately harmed or helped by the exercise of buyer power would involve an analysis of prices, sales volume, production, and various non-price considerations (e.g., quality, investment, and innovation). For example, it may be possible to conduct an empirical analysis that compares the market outcomes with buyer power against those that would have been achieved absent buyer power.

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A theoretical grounding for such an analysis can be found in the textbook model of monopsony power, which shows that final consumers are likely to be harmed from the exercise of buyer power if the reduction in the price paid for an input directly translates into a reduction in the supply of that input and, consequently, a reduction in the supply of products that incorporate that input.

Moreover, if the large buyer also has market power in its output market, the situation is likely to be worse for consumers. This is because if the monopsonist buyer purchases less of the inputs that it needs, then its sales volume may fall below competitive levels. This drop in output could lead to an increase in the final price charged to consumers, making consumers worse off. In other words, rather than passing on the lower input price, the monopsonist may end up producing less, charging higher prices, and keeping the additional profits that result.
However, this result is not a foregone conclusion. Several market conditions could affect whether buyer power is likely to harm consumers or not. First, for buyer power to lead to consumer harm, the supply curve must be upward sloping. For example, Jon Jacobson and Gary Dorman have observed that buyer power cannot be exerted if the supply curve is horizontal, as any withholding of supply by the monopsonist would have no effect on the input price.\textsuperscript{14} As a result, consumer welfare is unchanged relative to competitive levels.

Second, as noted above, it is more likely that consumers may be harmed by an exercise of buyer power if the monopsonist also has market power in the downstream market. If, instead, the powerful buyer sells its output in a perfectly competitive output market, then any reduction in the amount of input purchased by the large buyer may not adversely affect consumers, particularly if the large buyer competes against firms that are likely to increase their output in response. With a supply response by rivals, there may well be no change in the total output or the prices paid by consumers. This is more likely to be true if the large buyer competes with other firms that do not need the input that is subject to monopsony power.

The level of competition in the final output market is particularly important in the bilateral monopoly situation. If a powerful buyer has market power in the final output market, it faces conflicting incentives. On the one hand, the exercise of buyer power may lead to lower input prices and a higher quantity of input purchased, which may be passed through to consumers in the form of lower prices and higher output. On the other hand, if the increase in buyer power occurs simultaneously with an increase in market power in the final output market (e.g., through the consolidation of retailers), the buyer may have an incentive to raise the price that it charges consumers. Economists Paul Dobson and Michael Waterson have shown that the former effect—lower prices and higher output—will dominate if competition in the final output market is intense.\textsuperscript{15}

Third, the contractual terms of the supply agreements between upstream input suppliers and their buyers can be an important consideration. In the textbook model, if contracts between input suppliers and their buyers allow for non-linear pricing arrangements (e.g., contracts where the pricing involves both a price per unit and a lump sum payment that does not depend on the volume of the input purchased), the parties may design a contract that uses the fixed component to reduce or even eliminate the efficiency loss associated with the exercise of buyer power, in which case an exercise of buyer power may not lead to consumer harm.\textsuperscript{16}

In a bilateral monopoly situation, non-linear pricing also may allow buyer power to be exercised by reductions in some fixed component of the price paid, rather than through variable price reductions and increases in input quantities. However, to the extent that prices are determined solely by variable costs and unaffected by changes in fixed costs, any reduction in the price of some fixed component of the price paid for an input may not be reflected in the buyer’s output prices. Thus, market

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output and price in the downstream market (and hence consumer welfare) may remain unchanged, even if there is a reduction in some fixed component of the price paid for an input.\textsuperscript{17}

Fourth, whether consumers are likely to be harmed may also depend on a more complex set of interactions that involve the effect of buyer power on the nature of competition among suppliers in both the output market and the resulting ability of these buyers to obtain discounts from their upstream suppliers. In a bilateral monopoly situation, for example, if a powerful buyer obtains and passes along lower input prices to final consumers in the form of lower output prices, the large firm may take market share away from its smaller rivals (i.e., those with less buyer power) in the downstream market. As a result, smaller firms may purchase less of the input, which may reduce their ability to negotiate comparable input price discounts. This “waterbed effect” could occur if powerful buyers are able to purchase inputs at lower prices compared to their smaller rivals. The formal theoretical foundations of this effect have only recently been developed,\textsuperscript{18} and the economics literature is not yet clear on the extent to which waterbed effects may or may not occur.\textsuperscript{19} In any case, if a waterbed effect does occur, the consumer welfare impacts are \textit{a priori} ambiguous due to the opposing price changes.\textsuperscript{20}

Fifth, buyer power could potentially have an effect on the incentives of suppliers to invest and innovate. It is often argued that because buyer power reduces upstream suppliers’ profits, it can harm upstream sellers’ incentives for investment and innovation. For example, in New Zealand, the NZCC has stated that the exercise of buyer power by supermarkets may result in suppliers being “discouraged from making investments in process and product innovation, as well as in maintenance, if expected returns are reduced.”\textsuperscript{21} The UK Competition Commission, in its market investigation of the supply of groceries in the UK, has expressed a similar concern:

\begin{quote}
Related to the issue of supplier profitability and their ongoing financial viability is the effect of grocery retailers’ buyer power on suppliers’ willingness to invest and innovate. The concern is that suppliers, as a result of the exercise of buyer power by grocery retailers, receive such low prices and margins that their willingness to invest and innovate declines. Ultimately, this may lead to reduced quality and new product availability for consumers.\textsuperscript{22}
\end{quote}

However, here again, the effect on consumers is ambiguous. Buyer power may in fact increase suppliers’ incentives to innovate. For example, economists Roman Inderst and Christian Wey have noted that investment and innovation can improve the bargaining position of a supplier against a strong buyer, thereby increasing the supplier’s ability to obtain a higher share of the

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joint surplus. By investing to make its product more attractive or by lowering its costs, a supplier can improve its bargaining position and make it more difficult for a strong buyer to switch suppliers. In addition, buyers generally have an interest in encouraging investment and innovation by their suppliers.

**Case Study: ARW’s Acquisition of Borders**

The acquisition of Borders by ARW (which was trading as Angus & Robertson in Australia and Whitcoulls in New Zealand) in 2007 is a good example of a transaction that raised issues regarding the potential exercise of buyer power. In both Australia and New Zealand, ARW and Borders operated national chains of retail book stores, and based on competitive concerns that were raised by publishers, the ACCC and NZCC analyzed the potential for increased buyer power. For example, as stated in the ACCC’s Statement of Issues,

"Publishers also indicated that, because the acquisition will significantly increase Angus & Robertson’s share of retail sales, post-acquisition it will be more costly for them to ‘walk away’ from a deal with Angus & Robertson. [Publishers] therefore considered the acquisition would allow Angus & Robertson to decrease the price it pays for books or demand other improvements to terms of trade such as increased promotional support."

Similarly, the NZCC noted that:

"Publishers have suggested that increased buyer power on the combined entity’s part would most likely manifest as:

- demanding discounts at supra-competitive levels, which could impact on the viability of the publishing business; and
- choosing not to stock a title, which could impact on the viability of the print run."

Both the ACCC and NZCC concluded that the merger would not give the bookstore chains buyer power over publishers in the upstream market. In addition, both agencies reported qualitative evidence to show that the merger would not adversely affect the viability of book publishers (or any individual book title), as it would not be in the merged entity’s interests to reject a particular book title.

Moreover, even if it were assumed that the retailers could have exercised buyer power, it is unlikely that consumers would have been harmed. First, the evidence suggests that publishers are likely to have some market power of their own, in which case the appropriate model of price determination is not the textbook monopsony model, but the bilateral bargaining model. This is particularly the case in Australia, where books are generally not subject to parallel imports. As stated by the ACCC, this gives publishers “a monopoly in respect of these titles.” In New Zealand, the NZCC found that, while parallel importing is possible, publishers still hold some bargaining power as the copyright holder for particular titles.

Second, the contractual terms of the supply agreements between retailers and publishers typically involve simple variable cost pricing, in which the price of a book purchased by ARW and Borders is a “per unit” price for each book purchased, rather than, for example, a fixed

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payment in combination with a per unit price. In general, publishers set recommended retail prices for books, with the wholesale price for a book based on a negotiated discount off the recommended retail price. One possible fixed component to wholesale prices is promotional support by publishers. For example, the ACCC noted that buyer power may allow the merged entity to either decrease the prices paid to publishers or to demand increased promotional support. However, promotional discounts are negotiated for individual titles on a variable or per-book basis. Thus, promotional support appears to have been provided by way of lower, variable per unit prices.\textsuperscript{32}

Buyer power is not unambiguously bad for consumers, and, in fact, may benefit consumers. But to determine which outcome is likely requires careful economic analysis and study.

Third, both the ACCC and NZCC found that the downstream retail market is competitive, with the merged entity facing a number of competitors. In Australia, the ACCC found that the merged entity would be constrained in the downstream market by a number of rivals, particularly its closest competitor Dymocks, but also other national book chains and department stores. Similarly, in New Zealand the NZCC found the merged entity would be predominately constrained by Dymocks, but also by other national book chains and department stores such as The Warehouse. The book retailing market thus appears to be one characterized by competition and market factors that make it likely that the merged entity would pass along lower wholesale prices to final consumers.

The presence of publishers with market power, per unit input prices, and a competitive downstream retail market for books are factors that would tend to suggest that any concerns about buyer power are not likely to harm consumers. The presence of these market factors may have been among the reasons why both the ACCC and the NZCC ultimately decided to clear the transaction.

Conclusions
Many analyses of buyer power focus on the potential for a monopsonist buyer to extract lower prices for the inputs that it purchases from upstream suppliers. While this is a relevant inquiry, it is also important to examine how and whether an exercise of buyer power is likely to harm or to benefit consumers. The answer will depend on the facts of the market at issue. Some of the key economic considerations that will be relevant include market conditions that affect the supply of the input in question, the level of competition in the downstream market in which the monopsonist competes, the contractual terms of the supply agreements between upstream suppliers and downstream buyers, the potential for waterbed effects, and the market factors that affect firms’ incentives to invest and innovate. Buyer power is not unambiguously bad for consumers, and, in fact, may benefit consumers. But to determine which outcome is likely requires careful economic analysis and study.

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1 The term upstream supplier refers to a seller of a product or service higher in the supply chain. For example, a manufacturer of a consumer product would be an upstream supplier for a retailer. A manufacturer of a key input (e.g., automobile tires) would be an upstream supplier for a manufacturer that purchases that input to make another product (e.g., an automobile manufacturer that purchases tires).


4 In the long run, however, producer surplus can affect consumer surplus. For example, producer surplus (loosely speaking, profits) may create an incentive for a supplier to develop new products that benefit consumers.


6 This analysis assumes an upward sloping supply curve, although it may be that, in practice, the supply curve is horizontal (reflecting, for example, constant returns to scale or the ease of entry and expansion) or even downward sloping (reflecting, for example, economies of scale). This has implications for the impact of buyer power, which we consider later. For a discussion of why the upward sloping supply curve is the most likely scenario, see Paul W. Dobson, Roger Clarke, Stephen Davies, and Michael Waterson, "Buyer Power and its Impact on Competition in the Food Retail Distribution Sector of the European Union," *Journal of Industry, Competition and Trade*, 1, 3 (September 2001), at 252-253. On the other hand, Jonathan M. Jacobson and Gary J. Dorman argue that an upward sloping supply curve is not ubiquitous, particularly in manufacturing industries that are characterised by constant returns to scale. (See Jonathan M. Jacobson and Gary J. Dorman, "Joint Purchasing, Monopsony and Antitrust," *Antitrust Bulletin*, 36, 1 (Spring 1991): 1-79.)

7 However, if buyer-side price discrimination is possible, then an increase in the demand for the input by a monopsonist may not lead to higher input prices marketwide.

8 For a graphical depiction of this result see, for example, Dobson, Clarke, Davies, and Waterson "Buyer Power and its Impact on Competition in the Food Retail Distribution Sector of the European Union" (as cited in note 6).


12 See Blair, Kaserman, and Romano, "A Pedagogical Treatment of Bilateral Monopoly" (as cited in note 9).


14 See Jacobson and Dorman, "Joint Purchasing, Monopsony and Antitrust" (as cited in note 6).


19 For example, Zhiqi Chen builds a model which shows the opposite of the waterbed effect, where suppliers reduce the input price to both the powerful buyer and other buyers. (See Zhiqi Chen, "Dominant Retailers and the Countervailing-Power Hypothesis," *RAND Journal of Economics*, 34, 4 (Winter 2003): 612-625.)

20 See Inderst and Valletti, "Buyer Power and the ‘Waterbed Effect’" (as cited in note 18) for a discussion of the conditions under which consumers are likely to be harmed by a waterbed effect. Inderst and Valletti find that consumer detriment is more likely if the smaller (less powerful) buyers are already sufficiently "squeezed" by relatively higher wholesale prices and lower market shares relative to the powerful buyer or buyers.

21 New Zealand Commerce Commission, Decision Nos. 606 and 607, 8 June 2007, para. 346.


24 Jonathan M. Jacobson and Gary J. Dorman make a similar point, stating that buyers have an interest in keeping their suppliers “healthy and competitive”, and do not wish to make life for suppliers difficult to the point that quality, service or innovation are impaired. (See Jacobson and Dorman, “Joint Purchasing, Monopsony and Antitrust” (as cited in note 6) at 44.)

25 The authors advised ARW and filed expert reports in respect of this merger.


29 Parallel importing is “the importation of legitimately produced goods without the consent of the relevant copyright, trademark or patent holder (or her agent) in the recipient country” (See Matthew Burgess and Lewis Evans, “Parallel Importation and Service Quality: An Empirical Investigation of Competition Between DVDs and Cinemas in New Zealand,” *Journal of Competition Law and Economics*, 1, 4 (December 2005) at 747.) Since books cannot be parallel imported in Australia, the publisher is the Australian copyright holder of books published overseas.


31 NZCC Decision No. 630, 20 November 2007, para. 182.

32 The ACCC Public Competition Assessment also refers to negotiations between book retailers and publishers over publishers’ “retailer advertising” budget. No further explanation of this is given in the ACCC decision, and thus it is not clear if this budget is on a title-by-title basis or is a fixed amount.