

Supermarkets and Shopper Dockets: The Australian Experience

by

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This paper provides an analysis of the competitive implications of 'shopper docket' schemes that have been recently seen in petrol and grocery retailing in Australia. We argue that such schemes can cause social welfare reductions through distortions in consumer behaviour as well as through reductions in long-term competition as entry barriers are raised.

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1. Introduction

Bundling and tying have long interested lawyers and economists. In Australia, the main competition law, the *Trade Practices Act* (1974), restricts certain practices such as tying, bundling and exclusive dealing, particularly where these practices have the purpose or effect of substantially lessening competition.¹

Recently, Australia has witnessed the rapid growth in bundling of petrol and groceries. This bundling usually involves supermarket customers receiving a fixed 'per litre' discount on their petrol purchases if they spend more than a certain amount on groceries. There are specific linkages between particular supermarket outlets and particular petrol retailers. Coles supermarkets offer discount vouchers for Shell petrol while Woolworths/Safeway supermarkets offer discount vouchers for Caltex petrol.

Australia is not the first country to have seen these types of schemes. For example, groceries and petrol have often been bundled together in the United Kingdom. Similarly the bundling of petrol and groceries has recently been introduced into New Zealand.² The Australian experience however differs from that of many overseas countries in the sense that it involves established supermarkets joining with established petrol companies where each of participant continues to maintain their existing outlets. For example, in the United Kingdom, Asda, Safeway, Sainbury's and Tesco have long offered discount petrol schemes. However these chain stores usually also sell petrol in their supermarket forecourts. In other words the bundling scheme involves a so-called

¹ Section 47 of the Act.

² See "Pak'N Save challenges rival with cheap petrol offer", Irene Chapple, *The New Zealand Herald*, September 19, 2003.

hypermarket, which sells both groceries and petrol at a single location. Pak'N Pay has adopted a similar approach in New Zealand.

In contrast, the bundling of groceries and petrol in Australia generally involves established supermarkets and petrol chains being linked by discounts even though there is no necessary geographic link between outlets. If a customer buys more than \$30 worth of groceries at a Coles supermarket, then that customer receives a (currently) four cent per litre discount on petrol purchased at a Shell petrol station. The voucher or docket received by the customer can be used at hundreds of Shell outlets and there is no reason to expect that a Shell petrol station will be located in the immediate proximity of the supermarket. Indeed, other petrol outlets may be conveniently located near the Coles supermarket, but the discount voucher will not be redeemable at these outlets. The same holds for the arrangement between Woolworths and Caltex.

The bundling of essentially unrelated products in oligopolistic markets creates cause for concern. Supermarkets in Australia are dominated by Coles and Woolworths with some smaller chains such as Foodlands and IGA having a fringe presence. Petrol wholesaling and retailing in Australia is dominated by Shell, Caltex, BP and Mobil. Again there are a number of smaller independent petrol wholesalers as well as a variety of independent petrol retailers. Thus, both the retail grocery sector and petrol industry in Australia are relatively highly concentrated by international standards. As we discuss below, brand specific bundling between groceries and petrol can be a legitimate competitive tool. At the same time, as this practice spreads such bundling may result in a considerable loss of consumer welfare and a long-term erosion of competitive pressures in the relevant industries.

2. Background

‘Shopper docket,’ where grocery customers at supermarkets receive a discount voucher for petrol purchases from particular petrol retailers, commenced in Australia in mid 1990s. Woolworths, one of Australia’s two leading supermarket chains, entered into petrol retailing by establishing its own Petrol Plus brand. While any customers could buy petrol from a Petrol Plus outlet, customers who purchased more than \$30 of groceries at Woolworths would also be eligible to receive a four cent per litre discount at Petrol Plus.

In October 1996, the Woolworths arrangement was cleared by the Australian Competition and Consumer Commission. “The ACCC has welcomed Woolworths’ entry into petrol retailing as it is consistent with the ACCC’s recent petroleum report which called for increased competition and new entry.”³

In May 2003, the Coles supermarket chain and Shell, a major petroleum company, announced that it would form an alliance covering 584 Australian petrol stations. A key feature of the alliance was the bundling of petrol and groceries. Customers who purchased \$30 or more at Coles supermarkets would receive a four cent per litre discount on petrol purchases from Shell.

The Shell/Coles alliance differed from the Woolworths/Petrol Plus scheme in that it combined a major supermarket chain with one of the four largest petrol players in Australia. The deal did not facilitate new entry into either petrol retailing or wholesaling, unlike Petrol Plus. Further, the bundling-aspect of the Shell/Coles alliance could not be justified on the basis of complementarities between the products. While a consumer’s demand for groceries might be related to their purchase of petrol, there is no particular

³ “Woolworths’ petrol notification not opposed,” Australian Competition and Consumer Commission, News release, October 18, 1996.

reason to expect that a Coles supermarket customer will gain any intrinsic value by also buying petrol from Shell. In addition, unlike the United Kingdom, there was little development of co-located supermarkets and petrol outlets. While the alliance involves Coles taking over the management of Shell's retail petrol station network and establishing 'Coles Express' outlets at these stations, the discount vouchers would be provided by regular supermarkets, regardless of their proximity to a Shell retail outlet. Indeed, grocery purchases made at Coles Express located in a Shell petrol station were explicitly excluded from the discount scheme.

In August 2003, Woolworths responded to the Coles/Shell alliance by announcing plans for a joint-venture with Caltex to deliver similar bundled discounts for fuel and groceries. The Woolworths/Caltex agreement covered more than 450 retail petrol outlets across Australia. When commenting on the Woolworths/Caltex agreement in April 2004 the chief executive officer of Woolworths noted that the Coles/Shell alliance "got an advantage, a one-off, first-up advantage."⁴

The agreements between two of Australia's largest supermarket chains and two of the four major petrol companies created considerable consternation in their respective industries. The Service Stations Association has predicted that the bundling schemes could result in the closure of 3000 independent petrol stations.⁵ In November 2003, IGA, one of Australia's smaller supermarket chains, announced that it would be "offering customers discounts on their grocery bills for fuel bought at any service station."⁶ Although these schemes are relatively new, anecdotal evidence suggests that smaller

⁴ "Woolies, Caltex top up discount fuel outlets," AAP, *Sydney Morning Herald*, April 29, 2004.

⁵ "Supermarkets back to basics," Simon Evans, *Australian Financial Review*, January 19, 2004.

⁶ "IGA joins food, fuel discount war in NSW," Stephen Gibbs, *Sydney Morning Herald*, November 22, 2003.

supermarkets and petrol companies other than Shell and Caltex are suffering a loss of sales due to these shopper docket schemes. At the same time, it appears that the two schemes have largely ‘canceled each other out’ in terms of profit, simply leaving the unassociated supermarkets and petrol companies the losers.⁷

3. The Economics of Bundled Discounts

Bundling is pervasive in the economy. There are many products that can only be bought as a unit (like a car body and a car engine) or that tend to be bought together (such as a mobile phone and a mobile phone service). In these cases it is usually possible to identify good commercial reasons why the bundling occurs. For example, bundling might be driven by the costs of supply. It might be cheaper to supply two products together than to supply each product separately and a bundled discount allows the producer to share that cost saving with consumers. Alternatively, demand-side factors come into play so that the consumers value the bundle more than they would value the individual products separately. It is far from clear however that the bundled discounts being offered for petrol and groceries involve either demand-side or supply-side benefits.

Bundling may also be used to raise firm profits. Broadly speaking there are two ways that bundling can benefit firms. First bundling may involve price discrimination. Offering a bundled product allows the firm to exploit the diversity of consumer preferences. By carefully designing both the individual product prices and the bundled package, a firm can raise its profits relative to simply selling two products separately.⁸

⁷ “Supermarkets back to basics,” Simon Evans, *Australian Financial Review*, January 19, 2004.

⁸ See Stigler (1968), Adams and Yellen (1976), McAfee, McMillan and Whinston (1989) and Gans and King (2004a).

Alternatively, a firm may find bundling profitable because of its anti-competitive effects. Bundling may involve practices that are similar to predatory pricing. For example, a firm with a monopoly in one product may tie sales of that product to a second good or service that is potentially competitively supplied. The firm may use the bundled products to undermine competition in the potentially competitive sector, for example by effectively selling the tied product below cost. Even though the bundle as a whole may be priced above cost, rivals are effectively prevented from competing in the potentially competitive sector.⁹

Claims of predatory pricing have been raised overseas in connection with bundled discounts for groceries and petrol. In June 2002, Safeway in the UK significantly raised the per litre price discounts offered to grocery customers and associated petrol outlets. The maximum discount for supermarket customers who spent over £150 on groceries was 20 pence per litre or approximately 25% of the pump price. “Petrol retailers, rather than supermarkets, had the most to lose from Safeway’s offer. Profit margins on petrol tend to be less than 4p a litre and, unlike supermarkets, petrol retailers are not able to fund losses through other activities.”¹⁰

Bundling can also be used to raise barriers to entry in an industry. By bundling two products, an incumbent can make entry more difficult. If an entrant just comes in with one of the bundled products then it may only be able to access a small part of the potential market. The remainder of the market involves customers who prefer the bundle. For entry to be successful, a firm might have to simultaneously enter both products so

⁹ See, for example, Tirole (2004).

¹⁰ “Case study -- supermarket petrol pricing,” tutor2u, at www.tutor2u.net/business/marketing.

that they can match the incumbent's bundled offerings. Whinston (1990) and Nalebuff (2004) examine the use of bundling to raise entry barriers in more detail.

In summary, bundling can have both pro-competitive or anti-competitive consequences depending on the exact circumstances. This makes bundling difficult for competition authorities to assess as it must take a case-by-case approach.¹¹

4. Bundling of Groceries and Petrol

What happens when bundling occurs across specific brands in two otherwise unrelated oligopolistic industries, such as petrol and groceries in Australia? First, it should be noted that while the shopper docket discount appear to be 'one way,' they are just a type of bundling. For example, take the arrangement between Coles groceries and Shell petrol. A customer who buys more than \$30 of groceries at Coles then they get a discount on petrol purchases at Shell. Superficially, it appears that the discount only applies to those customers who would shop at Coles anyway. Such customers now receive a discount at Shell and might be tempted to change their petrol retailer to Shell in order to use the discount voucher.

The discount however works both ways. A customer who regularly purchases their petrol at Shell might be tempted to shift their grocery purchasing from, say, IGA to Coles, knowing that this will allow them to receive a discount on their regular petrol purchases. Indeed, a customer who currently purchases from neither Coles nor Shell might be tempted to begin purchasing from both retailers in order to avail themselves of the discount.

¹¹ Gans and King (2004a) discuss these issues in more detail.

This two-way benefit provides the same strategic advantage through price discrimination as holds for a monopoly offering a bundled discount over two otherwise unrelated products.¹² When Coles and Shell offer a bundled discount, this is like a form of price discrimination. They are able to attract consumers who regularly purchase from one retailer but are marginal for the other retailer and customers who are marginal for both retailers. Coles and Shell can effectively raise their headline prices, while retaining marginal customers through the discount voucher that offers an overall lower bundled price.

Unlike a monopoly situation, however, bundled discounts in oligopolistic industries hurt competitors. Grocery and petrol competitors suffer a loss of sales and respond by lowering their own prices. This, of course, all seems good for competition, and as Gans and King (2004b) show, the resulting retail deals can benefit either those customers who purchase both bundled products or those customers who purchase *neither* bundled product. Customers who purchase only one of the bundled products, however, may lose. A customer who finds it highly convenient to purchase groceries at Coles but finds it highly inconvenient to purchase petrol from Shell receives a shopper docket that they cannot use. While effectively paying for this docket through the price of groceries at Coles, the customer is unable to use the docket and pays higher prices overall.

This suggests that the welfare effects of a unilateral discount scheme are ambiguous and depend on the exact distribution of customers. Gans and King (2004b) show that under certain conditions, unilateral bundling can lower total welfare by distorting consumer purchasing decisions, even though the bundling firms and some customers are better off.

¹² See . McAfee, McMillan, and Whinston (1989).

The market dynamics, however, do not stop there. A unilateral bundling scheme between two otherwise independent retailers is likely to lead to a bandwagon effect. The reason for this is easy to see. Suppose that Coles and Shell have a bundled discount but Caltex and Woolworths remain independent. Even though they are independent, the discount scheme offered by their retail rivals creates an artificial price dependency between Woolworths and Caltex. Supermarkets now care about the prices charged by unconnected petrol retailers and vice-versa. If Caltex raises its retail prices, some of its customers will decide to change their purchases of petrol to Shell. Any of these customers who previously purchased at Woolworths supermarket will now have an increased incentive to buy from Coles even if neither Coles nor Woolworths alters their prices. After all, if the customer changes both his petrol and grocery stores, then they receive a discount voucher. Thus, Woolworths loses sales when Caltex puts up its petrol prices simply due to the existence of a discount scheme between Coles and Shell. The same holds true for Woolworths if Shell raises its prices. The Coles/Shell Alliance creates an interdependency between otherwise unrelated supermarkets and petroleum companies.

This price interdependency creates strong incentives for other supermarkets and petrol retailers to copy the Coles/Shell scheme. We have seen exactly this flow on effect in Australia. These schemes, however, tend to cancel each other out in terms of both profits and prices. As Gans and King (2004b) show for the case of duopoly industries, once each supermarket pairs up with each petrol retailer, and vice-versa, bundling becomes ubiquitous. Any initial profit advantage for the first-moving pair is dissipated and the net result is a loss for consumers. This loss reflects the distorted buying choices created by the bundling schemes. Under ubiquitous shopper docket schemes such as

those emerging in Australia, a driver with a 50 litre petrol tank is willing to spend up to \$2 driving to a less preferred supermarket or petrol retailer in order to gain the 4 cent per litre benefit of a shopper docket. While the dockets provide a monetary discount and a transfer to customers, they also lead to a real loss of resources as consumption patterns change.¹³

The bandwagon effect for grocery/petrol bundling may lead to direct long-term reductions in competition if there are uneven numbers in the relevant industries. The bundling process is much like a game of musical chairs – if there are fewer chairs than players then someone is left out and leaves the game. In Australia, there are four major petrol companies (together with smaller “independents”) and two major grocery chains. Woolworths and Coles have already entered into alliances with Caltex and Shell respectively. This means that the other petrol majors, BP and Mobil, as well as the independents, face an uncertain future. In the absence of a ‘partner,’ these petrol companies risk being left with a declining market share. They may respond by targeting particular market segments, such as corporate customers who do not gain the benefits of shopper dockets. Alternatively, they may try and ‘spread’ the scheme to other products. However, it is not clear what other products are regular ‘weekly’ purchases for most households like petrol and groceries. And even if such a defence was successful, it only spreads the potential competition concerns to another industry. Finally, the petrol companies that are left without supermarket partners may exit the industry in the longer term, leading to lower petrol competition and higher prices for all consumers.

¹³ Gans and King (2004b) also show that integration between supermarkets and petrol companies can also provide a strategic effect that offsets bundling by other non-integrated retailers. Thus, over time, the Australian shopper dockets scheme may lead to ‘protective’ integration that undermines (and possibly eliminates) these discount schemes.

The bundling schemes may also lead to long term problems in the grocery industry. In addition to harming existing small grocery retailers, the schemes make it harder for new entry to occur in the future. A new entrant in supermarkets must not only overcome the standard barriers such as gaining appropriate sites, it must also overcome the shopper dockets. It will not be enough to simply enter and offer lower grocery prices. Rather, the lower prices of a new entrant must also make it worthwhile for customers to forgo the bundled discount offered by established supermarkets. Effectively, a new entrant must compensate customers for paying higher petrol prices! Thus, the shopper dockets scheme may lead to reduced competition in petrol and groceries as existing players exit the market, and higher barriers to entry that limit any future outbreak of competition.

5. Conclusion

Over the past few years, Australia has witnessed the rapid spread of bundled discounts for groceries and petrol. In this paper, we have briefly outlined the economic concerns raised by these so-called ‘shopper docket’ schemes. In particular, we have described the relationship between these schemes and standard price discrimination, noted the propensity of these discounts to lead to a ‘bandwagon effect’ and described the potentially undesirable outcomes that can be caused by these schemes. We have noted have the spread of shopper docket schemes can lead to a reduction of competition in groceries and the petrol industry due to the exit of incumbent players and increased barriers to entry.

References

- Adams, W.J. and J. Yellen (1976), "Commodity Bundling and the Burden of Monopoly," *Quarterly Journal of Economics*, 90 (3), pp.475-98.
- Gans, J.S. and S.P. King (2004a) "Potential Anticompetitive Effects of Bundling," *Working Paper*, No.2004-16, Melbourne Business School, Melbourne.
- Gans, J.S. and S.P. King (2004b) "Paying for Loyalty: Product Bundling in Oligopoly," *Working Paper*, No.2004-08, Melbourne Business School, Melbourne.
- McAfee, P., J. McMillan and M.D. Whinston (1989), "Multiproduct Monopoly, Commodity Bundling, and Correlation of Value," *Quarterly Journal of Economics*, 104 (2), pp.371-84.
- Nalebuff, B. (2004), "Bundling as an Entry Barrier," *Quarterly Journal of Economics*, Vol.111, No.1, pp.159-187.
- Stigler, G.J. (1968), "A Note on Block Booking," in G.J. Stigler (ed.), *The Organization of Industries*, Homewood (IL): Irwin.
- Tirole, J. (2004), "The Analysis of Tying Cases: A Primer," *mimeo.*, IDEI/Toulouse.
- Whinston, M.D. (1990), "Tying, Foreclosure and Exclusion," *American Economic Review*, 80 (4), pp.837-59.