

Price discrimination in input markets

Analyzing competitive effects
following *Nationwide Poles*

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Date: 16 May 2008 – revised 23 January 2011

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1. INTRODUCTION

Most discussions of price discrimination in economics textbooks concern price discrimination at the retail level on sales to consumers. Yet most antitrust cases about price discrimination concern price discrimination in input markets. The Nationwide Poles case was an example.¹ The input in question was creosote, a type of wood preservative. Sasol was the leading supplier of creosote in South Africa. Because Sasol offered volume discounts, larger producers of treated poles paid lower prices for creosote than smaller producers such as Nationwide Poles. These discounts were not cost justified. Nationwide Poles complained that this practice put it at a competitive disadvantage and therefore was illegal price discrimination under Section 9 of the Competition Act.

The Competition Appeal Court (CAC) ultimately dismissed the Nationwide Poles complaint on the grounds that Nationwide Poles had not presented sufficient evidence that Sasol's conduct was likely to substantially lessen competition in the market for treated poles as a whole. The CAC ruled that it was not sufficient to demonstrate that Sasol's conduct had disadvantaged Nationwide Poles. The CAC ruled that it was necessary under Section 9 (as it is necessary under other sections of the Competition Act) to demonstrate the likelihood of a market-wide impact. The CAC emphasized that the Competition Act was concerned ultimately about consumer welfare rather than the welfare of individual competitors:²

“Consumer welfare is of paramount concern in the context of competition law.”

“However, competition law does not protect the competitor, it protects competition. Evidence which goes no further than suggesting that one competitor may be prejudiced is insufficient to bring the impugned conduct within the scope of section 9(1)(a).”

¹ See Decision of the Competition Appeal Court, In the matter between: Sasol Oil (Pty) Limited and Nationwide Poles CC, 49CACAPRIL05 (13 Dec 2005). See also Decision of the Competition Tribunal, In the matter between: Nationwide Poles and Sasol Oil (Pty) Ltd, Case NO: 72/CR/Dec03 (31 Mar 2005).

² CAC Decision, page 40.

The CAC's decision in Nationwide Poles was useful in clarifying that the meaning of substantial lessening of competition in Section 9 (price discrimination) is the same as the meaning of substantial lessening of competition in other sections of the Competition Act. But, while the decision explains clearly why the CAC believed that the price discrimination in the Nationwide Poles case was *not* likely to substantially lessen competition, the decision does not provide clear guidance as to what kind of evidence *would* meet this test. Worse yet, the way in which the decision is written could suggest to complainants in future price discrimination cases that they can get over the market-wide impact hurdle merely by establishing that their position in their market is more substantial than the essentially trivial position held by Nationwide Poles in the market for treated poles.

The aim of this paper is to nip this approach in the bud. We will show through a simple model how the effects on consumer welfare of price discrimination in an input market are ambiguous even when the victim of the discrimination accounts for a sizeable share of the downstream market and even when the victim is more efficient. Given these results, the competition authorities in South Africa should not accept any suggestion that price discrimination in an input market must have anti-competitive effects if the discrimination is directed against firms that account for a sizeable share of the relevant downstream market. We show in this paper that such an approach to the question of competitive effects is incomplete and not safe.

2. RELATED LITERATURE

The model used in this paper is closely related to the existing economics literature on price discrimination in input markets. This existing literature can be broadly grouped in two sets. One strand considers the case where the upstream supplier is an unconstrained monopolist while the other considers the case where the upstream supplier faces some competitive constraint emanating from alternative sources of supply (e.g. customers can purchase an imperfect substitute from another supplier or can potentially integrate backwards).

The existing literature finds that input price discrimination by an unconstrained upstream monopolist leads more efficient downstream firms to pay higher input prices. This raises two types of efficiency concerns. First, a static efficiency concern arises because a bias in input prices against the *a priori* more efficient downstream players implies a higher share of downstream output (than under uniform pricing) is allocated to less efficient downstream firms.

This reduction in production efficiency tends to reduce welfare. However, the resulting increase in symmetry between downstream firms may lead to stronger competition among them and thus reduce the impact of the production inefficiency on total welfare. Yoshida (2000) and Valletti (2003) show that the combinations of these effects depend on the downstream competition setting. Interestingly, consumer surplus and total welfare may move in opposite directions in some settings.³

Second, where input prices punish more efficient firms, a dynamic efficiency concern arises. That is, where downstream firms can make investments to increase their efficiency, the discriminatory input pricing reduces a firm's private benefits of investment because the firm will have to pay a higher input price if it achieves a cost advantage. DeGraba (1990) shows that this can lead firms to underinvest in efficiency enhancing activities.⁴

The other strand of literature follows Katz (1987) and considers the case where the downstream firms have some bargaining power vis-à-vis the upstream supplier.⁵ In its basic form, this bargaining power is due to the ability to gain access to an alternative source of input at a constant cost per unit by incurring an initial fixed cost. The downstream firms that are more efficient can spread the fixed cost of access over more units and thus have a better outside option than those that are less efficient. This results in more efficient firms receiving more favourable input prices from the upstream supplier. In Katz's model, some firms are more efficient than others and have better outside options because they are active in a larger number of downstream markets (resulting in higher sales). Katz shows that the upstream supplier charges these larger firms lower input prices because they have better outside options. In his model, input price discrimination leads to lower welfare than uniform pricing (when both pricing regimes involve purchases from the upstream supplier in equilibrium).

³ Yoshida, Y., "Third-Degree Price Discrimination in Input Markets: Output and Welfare," *American Economic Review* 90 (2000), 240-246; Valletti, T., "Input Price Discrimination with Downstream Cournot Competitors," *International Journal of Industrial Organization* 21 (2003), 969-988.

⁴ DeGraba, P., "Input Market Price Discrimination and the Choice of Technology," *American Economic Review* 80 (1990), 1246-1253.

⁵ Katz, M., "The Welfare Effects of Third-Degree Price Discrimination in Intermediate Good Markets," *American Economic Review* 77 (1987), 154-167.

Inderst and Valletti (2009) consider a model similar to Katz (1987) in that the downstream firms have the option to switch to an alternative input by incurring an initial fixed cost.⁶ The main difference is that Inderst and Valletti assume that some firms have lower costs of converting the input to final sales (whereas Katz assumes that some firms are active in more markets). Like Katz, they find that the upstream supplier offers a lower input price to these more efficient firms because they have a better or more credible “threat”. However, in their model, input price discrimination does not necessarily reduce welfare. Furthermore, if downstream firms can reduce conversion costs through investment, input price discrimination does not reduce incentives to invest in low cost technologies.

Our setting involves a constrained upstream supplier, like in Katz (1987) and Inderst and Valletti (2009). However, instead of assuming that the downstream firms have the option of switching to a substitute product, we analyze a situation where the downstream firms sell two products, i.e., the product of the upstream supplier as well as a substitute product supplied by other firms. We allow the downstream firms to have different distribution costs, like in Yoshida (2000) and Valletti (2003), as well as different (exogenous) costs of procuring the substitute product. Interestingly, this setting is able to combine the two types of effects previously observed in the literature. Specifically, we show that the upstream supplier has an incentive to charge a downstream firm a higher price *either* when the firm is more efficient in converting inputs to final sales *or* when the firm is less efficient in procuring the substitute input.

Our setting therefore provides a unified framework that accounts for both strands of the literature. On the one hand, the upstream supplier can benefit from a downstream firm’s superior efficiency in converting inputs to final sales by discriminating against that firm *ceteris paribus*, as in the unconstrained monopolist models of Yoshida (2000) and Valletti (2003). On the other hand, the upstream supplier can benefit from a downstream firm’s inferior efficiency in procuring the substitute input by discriminating against that firm *ceteris paribus*, as in the constrained monopolist models of Katz (1987) and Inderst and Valletti (2009).⁷

⁶ Inderst, R. & T. Valletti, “Price Discrimination in Input Markets,” *RAND Journal of Economics* 40 (2009), 1-19.

⁷ The intuitive explanation of the result is slightly different than in Katz (1987) and Inderst and Valletti (2009). In our model, if a downstream firm faces a higher cost of procuring the substitute input (than other downstream firms), then its demand for the upstream supplier’s input is less elastic and, therefore, the upstream supplier has an incentive to charge that firm a higher input price.

Although our setting yields results that generally are ambiguous, it also can provide very useful insights in various cases.⁸ In particular, under the commonly-used assumption of linear demand and constant marginal costs, we show that price discrimination by the upstream supplier has no effect on consumer welfare even when the downstream firm that is discriminated against is both large and efficient.

3. DESCRIPTION OF THE MODEL

To set up the argument on competitive effects, we begin by describing a simple model in which a monopolist in manufacturing sells to downstream distributors at different prices.

Assume there is a product X that is manufactured in South Africa by just one firm, M. Assume that the services of distributors are required for the product to reach consumers. To keep the issue of foreclosure out of the analysis and to keep the analysis focused on price discrimination in input markets, assume that the manufacturer is not vertically integrated and instead relies entirely on independent distributors. To simplify further, suppose there are only two distributors, A and B.

Suppose there is another product Y that is a close but imperfect substitute for product X from the perspective of consumers. Suppose that distributors A and B also handle product Y. The availability of the substitute product Y puts a constraint on the prices that firm M can charge distributors for product X.

Assume that distributor A has better access to substitute product Y than distributor B, i.e. assume that the marginal cost to distributor A of product Y is less than the marginal cost to distributor B. We show in the analysis below that this difference in the marginal costs of procuring product Y provides firm M with an incentive to price discriminate and to charge distributor A less for product X than distributor B.

We assume that the distributors' marginal cost of supplying product X or Y to consumers equals the cost of the underlying product plus a distribution cost per unit (which we assume is the same for the two products). We assume that distributor B is more efficient in distribution, i.e. has a

⁸ In this paper, we focus on static efficiency concerns and leave dynamic efficiency considerations for future research.

lower distribution cost per unit. (Recall that distributor B is the distributor with higher marginal costs of procuring product Y.)

4. THE POSSIBLE ARGUMENT ON COMPETITIVE EFFECTS

Firm M charges distributor B higher prices for product X for reasons unrelated to differences in its cost of supplying the two distributors, and distributor B therefore might complain that it is the victim of illegal price discrimination.

To persuade the competition authorities that the price discrimination to which it is subjected has the kind of market-wide impact which must be shown according to the Nationwide Poles decision, distributor B might emphasize that it is one of only two firms in the downstream distribution market and is actually more efficient in distribution than its downstream rival. Distributor B might argue that these factors distinguish it from Nationwide Poles and that under these (different) circumstances, the competition authorities can be confident that prices to consumers would be materially lower (and consumer welfare higher) if firm M were required to supply it with product X on the same terms that firm M currently supplies distributor A.

5. ANALYSIS OF THE ARGUMENT

The first and most obvious problem with this argument is its assumption that, if price discrimination were prohibited, firm M would react by keeping the price of product X to distributor A at the current level and would simply lower the price to distributor B.

We will show below that there is no basis for this assumption. If the manufacturer of product X were required to charge uniform prices, the profit-maximizing uniform price would be between the prices now being charged to distributors A and B. Thus, while a move to uniform pricing would imply a reduction in the price paid by distributor B, it would imply an *increase* in the price paid by distributor A.

This simple observation should be sufficient to take the shine off any attempt to establish competitive effects through an argument along the lines outlined above. The remainder of the paper presents a more formal analysis of the impact of price discrimination on market prices and consumer welfare under the conditions of the hypothetical described above.

5.1. DEFINITIONS AND ASSUMPTIONS

The total supplies of products X and Y equal the quantities distributed by distributor A plus the quantities distributed by distributor B:

$$\text{Supply of product X: } Q_{total} = Q_A + Q_B$$

$$\text{Supply of product Y: } q_{total} = q_A + q_B$$

The inverse demand functions for products X and Y are as follows:

$$\text{Inverse demand for product X: } P = a_1 - b_{11}Q - b_{12}q$$

$$\text{Inverse demand for product Y: } p = a_2 - b_{22}q - b_{21}Q$$

All of the parameters in the above equations are assumed to be positive.

The parameter b_{12} measures the impact on the price of X of changes in the quantity of Y. The parameter b_{21} measures the impact of changes in the quantity of X on the price of Y. We assume that $b_{21} = b_{12}$, i.e. these cross-effect parameters are equal. This assumption simplifies the presentation; the principal results of our analysis still hold if we assume that these cross-effects are not equal. The assumption of equal cross-effects can be justified by assuming the absence of income effects on the demands for products X and Y.

We also assume:

$$b_{11} > b_{12} \text{ and } b_{22} > b_{21}$$

These inequalities imply that the price of a product is more sensitive to the supply of that product than to the supply of the other product. A sufficient condition for these inequalities to hold is that the total demand for the two products (X and Y) decreases as the price of one of the products (X or Y) increases.

The profit function of firm M, the sole manufacturer of product X, is given by:

$$\pi_M = w_A Q_A + w_B Q_B$$

where w_A and w_B denote the prices that firm M charges distributor A and distributor B, respectively. We assume without loss of generality that the marginal cost to firm M of manufacturing product X is zero.

The profit functions of distributors A and B are:

$$\pi_A = (P - w_A - t)Q_A + (p - t)q_A$$

$$\pi_B = (P - w_B)Q_B + (p - s)q_B$$

The parameters s and t are assumed to be positive and in the range where both distributors purchase positive quantities of both products in equilibrium with uniform pricing of X. s denotes the marginal cost to distributor B of procuring product Y, the imperfect substitute for product X. Without loss of generality, we assume that the marginal cost to distributor A of procuring product Y is zero, and thus s represents the cost advantage of distributor A in procuring product Y. Similarly, t denotes distributor A's marginal cost of distribution, and we assume that the marginal cost of distribution faced by distributor B is zero. Thus, t represents the cost advantage of distributor B in distributing the two products to consumers. Note that, under uniform input prices (i.e., $w_A = w_B$), if $t > s$ then distributor B is more efficient than distributor A for both products (since distributor B's total marginal cost of procuring and distributing each product is lower than distributor A's).

5.2. DOWNSTREAM COMPETITION

We assume that distributors A and B are Cournot competitors in the downstream markets for products X and Y. The first-order conditions for profit-maximization by distributors A and B are therefore:

$$FOC_A^X : \partial \pi_A / \partial Q_A = P - w_A - t - b_{11}Q_A - b_{12}q_A = 0$$

$$FOC_A^Y : \partial \pi_A / \partial q_A = p - t - b_{22}q_A - b_{12}Q_A = 0$$

$$FOC_B^X : \partial \pi_B / \partial Q_B = P - w_B - b_{11}Q_B - b_{12}q_B = 0$$

$$FOC_B^Y : \partial \pi_B / \partial q_B = p - s - b_{22}q_B - b_{12}Q_B = 0$$

These first-order conditions can be solved for the equilibrium quantities supplied by distributors (i.e. Q_A , q_A , Q_B and q_B) as functions of the prices w_A and w_B that firm M charges distributors A and B for product X.⁹ For product X – that is, for Q_A and Q_B – those functions are also the demand functions that firm M faces from distributors A and B. For the moment, we simply denote those demand functions by $Q_A(w_A, w_B)$ and $Q_B(w_A, w_B)$.

5.3. UPSTREAM PRICE SETTING

If price discrimination is allowed, then firm M sets the prices w_A and w_B to maximize its profits:

$$\pi_M = w_A Q_A(w_A, w_B) + w_B Q_B(w_A, w_B)$$

If instead price discrimination is not allowed, then firm M is required to set uniform prices – i.e. it maximizes its profits subject to the constraint that the prices to distributors A and B are equal.

5.4. RESULTS

5.4.1. Determinants of the input price differences under price discrimination

The model described in the previous section exhibits the following interesting property: If either distributor B is more efficient in distribution (i.e. $t > 0$) or distributor A can procure product Y at lower cost (i.e. $s > 0$), then firm M has an incentive to sell product X to distributor B at a higher price than to distributor A. Specifically, when price discrimination is permitted, the difference between the profit-maximizing prices charged by firm M to distributors is given by:¹⁰

$$w_B - w_A = \frac{(b_{22} - b_{12})t + b_{12}s}{2b_{22}}$$

⁹ These prices are contained explicitly in the two conditions relating to product X and they are contained implicitly through the quantities of product X (Q_A and Q_B) in the two conditions relating to product Y.

¹⁰ These results and the results discussed below were derived using *Mathematica*.

Since $b_{22} > b_{12}$, this expression is necessarily positive. This shows that firm M has an incentive to sell product X to distributor A at a lower price. Note that this is true even when distributor B is more efficient than distributor A for both products (i.e., as long as $t > s > 0$).¹¹

It might seem surprising at first that distributor B's greater efficiency in distribution ($t > 0$) should result in it paying higher prices for product X. The intuition can be clarified by considering a situation where the only difference between the two distributors is their difference in distribution efficiency (i.e. $s = 0$). Because distributor B is more efficient, at uniform input prices distributor B sells more of X than distributor A. If firm M then increases the price to distributor B by a little and reduces the price to distributor A by the same amount, its additional profits on the units sold to distributor B more than compensate for its lower profits from the units sold to distributor A. Thus, by introducing a wedge between its prices to the two distributors and favouring distributor A, firm M is able to increase its profits. In effect, firm M is able capture for itself some of the benefits of distributor B's superior efficiency.

The fact that distributor A's superior access to product Y ($s > 0$) should result in distributor A paying less for product X than distributor B perhaps is less surprising. In fact, however, the underlying reason why distributor A's superior access to product Y results in price discrimination in favour of distributor A is similar to above. Consider a situation where the only difference between the two distributors is their costs of access to product Y (i.e. $t = 0$) and where initially distributors A and B pay the same price for X. Because distributor A incurs a lower cost for unit of product Y than distributor B does, distributor A sells more Y than distributor B. If firm M sells X to distributors A and B at a uniform price, this difference in sales of product Y will result in distributor A selling less of product X than distributor B at equilibrium. This result derives from the fact that, even though distributors A and B pay the same input price for X, distributor A's opportunity cost of selling additional X is greater than distributor B's. An increase in sales of X reduces the price of Y, which has a larger effect on distributor A than on distributor B (because distributor A sells more Y than distributor B). The fact that distributor A has a higher opportunity cost of selling X means that distributor A will sell less X than distributor B.

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In our model, distributor B would pay a lower price for product X (than distributor A) *only if* distributor B had a relatively large cost advantage in procuring product Y (i.e., only if $s < -(b_{22} / b_{12} - 1)t$). This result is consistent with the two strands of the economics literature discussed in Section 2.

Having established that distributor A's superior access to product Y ($s > 0$) implies that distributor B sells more X than distributor A, the incentive of firm M to price discriminate on sales of X in favour of distributor A is exactly as above. Relative to uniform pricing, firm M will have an incentive to increase the price of X to distributor B (which sells more X under uniform pricing) and to reduce the price of X to distributor A (which sells less X under uniform pricing). In this case, where the price discrimination derives from distributor A's superior access to Y, the price discrimination effectively allows firm M to take advantage of the higher relative value product X has for distributor B.¹²

Note that if the demands for products X and Y were independent (so that changes in the quantity of X would have no effect on the price of product Y and vice versa), then b_{12} would equal zero and distributor A's superior access to product Y ($s > 0$) would *not* be a factor leading to a price difference on product X.¹³

5.4.2. Comparison of input prices under price discrimination and uniform pricing

The following equations compare the profit-maximizing prices to distributors A and B for product X under price discrimination (denoted by w_A and w_B) with the profit-maximizing price when firm M is constrained to charge a uniform price (denoted by w_U):

$$w_A - w_U = \frac{(b_{12} - b_{22})t - b_{12}s}{4b_{22}}$$

$$w_B - w_U = \frac{(b_{22} - b_{12})t + b_{12}s}{4b_{22}}$$

Since $b_{22} > b_{12}$, the profit-maximizing price of product X under price discrimination is lower for distributor A than under uniform price, whereas the opposite is the case for distributor B. This confirms the point stated above. If firm M were required to charge uniform prices, the profit-

¹² More formally, both t and s contribute to making the elasticity of distributor A's demand for product X (i.e. the elasticity of $Q_A(w_A, w_B)$ with respect to w_A), higher (in absolute value) than the elasticity of distributor B's demand for product X at any uniform price $w_A = w_B$. When price discrimination is permitted, firm M can increase its profits by reducing its price to distributor A whose demand is more elastic and increasing its price to distributor B whose demand is less elastic.

¹³ The corollary of this result is that if it is the case that distributor A's superior access to product Y is a factor leading to a price difference on product X, then it must also be the case that products X and Y are substitutes.

maximizing uniform price of product X would be between the prices charged to distributors A and B when firm M is allowed to price discriminate.¹⁴ Thus, while a move to uniform pricing would imply a reduction in the price paid by distributor B, it would imply an *increase* in the price paid by distributor A. Any analysis of competitive effects that attempted to ignore this effect on the prices paid by distributor A would be incomplete and not safe.

5.4.3. Comparison of firm M's profits under price discrimination and uniform pricing

The following equation shows that firm M's profits are greater when it is allowed to price discriminate:

$$\pi_M^D - \pi_M^U = \frac{[(b_{22} - b_{12})t + b_{12}s]^2}{8b_{12}(b_{11}b_{22} - b_{12}^2)}$$

Note that firm M's incremental profit from discrimination increases in t and s .

5.4.4. Impact of price discrimination on distributor sales

As shown above, a shift to uniform pricing from price discrimination in the supply of product X to distributors would reduce the input price paid by distributor B but increase the price paid by distributor A. The following expressions show the difference between the sales by distributors A and B of product X under price discrimination and under uniform pricing:

$$Q_A^D - Q_A^U = \frac{(b_{22} - b_{12})t + b_{12}s}{4(b_{11}b_{22} - b_{12}^2)}$$

$$Q_B^D - Q_B^U = \frac{(b_{12} - b_{22})t - b_{12}s}{4(b_{11}b_{22} - b_{12}^2)}$$

Shifting to uniform pricing would increase the sales of product X by distributor B but would decrease the sales by distributor A. This result follows from $b_{11} > b_{12}$ and $b_{22} > b_{12}$.

Interestingly, shifting from price discrimination to uniform pricing in the sales of product X to distributors A and B also has an effect on these distributors' relative sales of product Y. The

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In the setting of this model, the profit-maximizing uniform price of product X would be halfway between the prices charged to distributors A and B when firm M is allowed to price discriminate.

following expressions show the difference between the sales by distributors A and B of product Y when firm M is allowed to price discriminate in the sale of product X relative to when firm M is required to set uniform prices:

$$q_A^D - q_A^U = \frac{b_{12}[(b_{12} - b_{22})t - b_{12}s]}{4b_{22}(b_{11}b_{22} - b_{12}^2)}$$

$$q_B^D - q_B^U = \frac{b_{12}[(b_{22} - b_{12})t + b_{12}s]}{4b_{22}(b_{11}b_{22} - b_{12}^2)}$$

These equations show that a move to uniform pricing would lead to an increase in the sales of product Y by distributor A and a decrease in the sales of Y by distributor B. Intuitively, since uniform pricing decreases distributor A's sales of product X, it decreases distributor A's opportunity cost of selling product Y. That is, selling additional product Y tends to reduce the price of product X, but this opportunity cost from the perspective of distributor A is smaller with uniform pricing because distributor A sells a smaller volume of product X with uniform pricing.¹⁵ Distributor A therefore sells more of product Y under uniform pricing. The effect is opposite for distributor B as it sells more product X under uniform pricing.

5.4.5. Impact of price discrimination on the prices paid by final consumers

The impact of price discrimination on the prices paid by final consumers will depend on the effects of price discrimination on the total amount of products X and Y supplied to consumers by distributors. The answer to this question for this model can be obtained by summing the expressions immediately above, which show the impact of price discrimination on distributor sales of products X and Y. We find that, under the assumptions of the model analyzed in this paper, price discrimination has no effect on total supplies – either of product X or product Y. The increase in distributor B's sales of product X is exactly offset by a decrease in distributor A's sales. Conversely, the decrease in distributor B's sales of product Y is exactly offset by an increase in distributor A's sales. With no changes in total supplies of either products, there is no change in the final prices paid by consumers, and hence no effect on consumer welfare.

¹⁵ The relevant first order condition in Section 4.2 shows that the marginal profits distributor A makes by from selling more of product Y is higher when its sales of product X is at a lower level. It follows that as the move to uniform pricing reduces distributor A's sales of product X it increases the marginal profits from selling more of product Y. Therefore, distributor A prefers to sell more of product Y under uniform pricing.

5.4.6. Further comments

The finding that price discrimination has no effect on the prices paid by final consumers is a by-product of the particular assumptions of the model, in particular the assumption of linear demand and constant marginal costs. Assuming linear demand functions and constant marginal costs are common in modelling of this type, but demand functions in the real world obviously are not necessarily linear and marginal costs are not necessarily constant. The more general statement with respect to the effect of price discrimination in input markets on the prices paid by final consumers (in a situation where the incentive to price discriminate arises for reasons similar to those in this model) is that the effects are ambiguous. Price discrimination in input markets in this kind of setting could cause prices to final consumers to increase or decrease.

6. CONCLUSIONS

The CAC decision in the Nationwide Poles case concluded that price discrimination by a dominant firm is not prohibited by the Competition Act unless it can be shown that the price discrimination is “likely to substantially lessen or prevent competition” and that the concept of a substantial lessening of competition should be interpreted in Section 9 price discrimination cases in the same way it is interpreted in applying other sections of the Competition Act. The CAC rejected the idea that Section 9 should be regarded as a provision designed to protect small business.

The CAC concluded that the evidence in the Nationwide Poles case did not support a finding that Sasol’s price discrimination in the supply of creosote was likely to substantially lessen competition in the downstream market for treated poles. Having reached this conclusion based on the evidence before it, the CAC did not feel obliged to describe the kind of evidence that might have led it to a different conclusion.

This paper has not attempted to answer the broader question of what evidence would be sufficient to show that price discrimination in an input market has resulted in a substantial lessening of competition in the downstream market. This topic is beyond the scope of this paper.

Our objective has been more limited, but we believe still important. We are concerned that complainants in future price discrimination cases might attempt to meet the market impact test set forth in the Nationwide Poles decision by highlighting the market share and other features of the

firm or firms that are paying prices for an input that are higher than the prices paid by some of their rivals. The CAC emphasized Nationwide Poles' small share of the relevant downstream market, and complainants in future cases might feel they are "home free" if they can establish that their position in their market is more significant.

The purpose of this paper has been to explain why this response to the Nationwide Poles decision is incomplete and not safe. We have shown that, even in a situation in which the complainant is one of only two firms in the downstream market and is more efficient, it is possible that introducing price discrimination in the supply of an input has no effect on consumer welfare. A shift from price discrimination to uniform pricing would reduce the input prices of the firm or firms now paying relatively high prices, but it would increase the input prices of the firm or firms now paying relatively low prices. We have shown using standard economic modelling techniques that the net effect on the prices paid by consumers can be zero. Because price discrimination in the supply of an input can have no effect on the prices paid by consumers, the competition authorities in South Africa should not conclude that price discrimination has substantially lessened competition simply from a showing that the discrimination has been directed against firms that account for a sizeable share of the downstream market. There would be no justification in economics for such a conclusion.