

COMMISSION SALES OR FIRM-PRICE SALES — A CONFLICT OF INTEREST

Peter Bowbrick¹

ABSTRACT

In some wholesale markets wholesalers sell goods on commission as well as goods they have purchased outright. It is shown that wholesalers can increase the price they receive for the goods they own at the expense of the goods they are selling on commission. Commission prices may be below those obtained under perfect competition even when wholesalers use monopolistic techniques to maximise their own revenue.

INTRODUCTION

It is common for goods to be sold on commission throughout the world of commerce. Commission agents and salesmen paid on commission are particularly important in insurance, housing and importing. In the agricultural sector, commission sales are particularly important in fish marketing, fruit and vegetable marketing and in livestock auctions.

In some wholesale markets a wholesaler may sell goods on commission as well as goods he has purchased outright. As a result, there may be a conflict of interest; if he sells someone else's goods, he may not be able to sell his own. Hence, it is in his interest to promote sales of his own goods at the expense of those he is selling on commission. In the industries where most marketing is done on commission, producers have a very real fear that they are losing money as a result of this conflict. In this paper the implications of this conflict of interest will be examined. A theoretical model of the situation will be presented, first for a homogeneous product, then for a differentiated product. It will be assumed that a monopolist wholesaler is favouring his own interests in the way described. The situation in a more competitive market will be described and the short-run and market-period situations will be compared.

The theoretical model is believed to be a close approximation to the situation in some markets. While the assumption of monopoly is taken as a limiting case rather

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than as a typical example of the market structure, many wholesalers are in a monopoly situation for at least one of their products. In the small fruit and vegetable markets there may be only one firm with the agency for a certain brand of oranges or tomatoes. More generally, an agent is likely to have the sole agency for a region in respect of many of the products he sells on commission.

HOMOGENEOUS PRODUCT

It is assumed that there is a monopolist wholesaler who sells goods on commission, Product C, and goods that he has bought himself, Product O. Initially it is assumed that there is no significant difference between the two products and that the cross-elasticity is infinite.

The monopolist receives a commission of perhaps 10% for handling product C. His average revenue is only one-tenth of the total average revenue and his client gets the other nine-tenths. If he sells his own product, product O, his average revenue is ten times higher. It would, therefore, pay the monopolist to sell his own produce at the expense of his clients' if he could do so.

In fact, he cannot refuse to handle the product he is asked to sell on commission as, if he does, his clients will develop new market outlets and he will lose his monopoly. In real markets it sometimes happens that some of the product that is being sold on commission is sold when it is old and its quality has deteriorated, or that it is thrown away. To simplify the analysis, it is assumed that all of product C is sold in the market period when it is offered.

Market period

In the market period the supply of goods on the market is fixed. The wholesaler has already bought those goods that he is not selling on commission, so the cost of obtaining them does not come into his calculations. All he is now concerned with is obtaining the best possible price for them.

There are several ways in which the wholesaler can obtain a higher price for his own produce even if product O and product C are identical in the eyes of the customer:

(i) It is normal to give retailers discounts if they purchase large quantities, as administration and handling of large orders is simpler. However, any one wholesaler is likely to have a range of customers from those who buy hundreds of units at a time to those who buy one or two units at a time and he must have the administrative and handling facilities to supply them. Hence, in the market period, and, to some extent in the short-run, the administrative and handling costs can be regarded as fixed. If he

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sells his own product to the small customers at a high price, and product C to large customers at a discount price, he is increasing his own income at the expense of his clients.

(ii) The market period is not homogeneous. Even within the space of a few hours the state of the market may change radically. In a typical wholesale market for highly-perishable foods the demand may be strong when the market opens, as the large buyers try to get the bulk of their requirements early. Later in the day, demand may slacken and, just before the market closes, the supply function changes as wholesalers attempt to sell off all their remaining produce knowing that it will be unsaleable the following day. The picture is somewhat different if the supply is too great early in the day or if the supply position changes during the day. The wholesaler might sell only his own product when demand is strong and then offer product C as demand slackens and the supply function changes. With less perishable produce, that with a storage life of some weeks, there may be a weekly cycle, with demand strong at the weekend and slack at the beginning of the week. Here again, Product O can be sold at the high-price period.

(iii) When he is selling to a large customer, the wholesaler can sell product O at a higher price than the market price and product C at a lower price. Even if the retailer can see no difference between product O and product C he will not mind paying the different prices, providing the average price is acceptable. Most retailers average prices in these circumstances, taking a higher margin on the cheaper product so the retail price is the same for both.

(iv) The monopolist may also reap some of the benefits of discriminating monopoly by selling some goods at a cut rate to those customers who have a more elastic demand, like processors and caterers. This will increase his average return.

Market discrimination is only possible when the market can be separated effectively, when it is possible to charge a different price to certain customers.

It also relies on separation of the markets at a later stage: resale by the customers in the low-price market must be impossible. If resale is possible, the maximum difference between the prices in the two markets is the cost of resale, say commission, plus handling, plus transport. When the product is homogeneous and there is a fair bit of knowledge of market prices and market conditions, it may not, in any case, be possible to maintain a large differential in market prices.

Discriminating monopoly can only work where the elasticity of demand in the two markets is different and where the elasticity is less elastic in the high-price market. It may not be possible to charge a higher price in one of the markets. For example, if the monopolist is exporting, the export market must be the cheap market for it is there that

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he faces competition. He may be able to sell cheaply to a processor, knowing that resale is difficult, while, if he sells cheaply to the other sector of the market, he cannot prevent the processor from buying the cheap goods. There is no point in selling cheaply to the processors if their demand is less elastic than the demand of the rest of the market as this would reduce total revenue. The difference in the elasticities of demand in the two markets must be large enough to produce a significant increase in prices. This must depend on the size of each market, the degree of separation that can be maintained, and the elasticity of demand.

In the particular context under consideration, it must be asked if it is practicable to divert the quantity required to the low price market. This depends, in part, on the size of the low-price market in relation to the high-price market. When the wholesaler is selling his own goods as well as goods sold on commission, he has a much greater incentive to split the markets. He can sell on commission to the low-price markets while selling his own product to the high price market. Indeed, it can pay him to split the market even when the elasticity of demand is the same in both markets in spite of the general rule that discriminating monopoly does not pay when the elasticity of demand is the same in both markets. For example, if he distributes the goods in such a way that the price rises by 20% in market A and falls by 20% in market B, the average price remains unchanged. The revenue of the wholesaler increases substantially as he sells his own product in market A and keeps the whole of the increased price while he puts commission goods into market B and loses only his commission, 10% of the change. From this argument, it can be seen that there are times when it pays the retailer to restrict supply in the market with the more elastic demand.

Short-run

In the short run, the position is slightly different. Firstly, some of the administrative costs and handling costs which are fixed in the market period become variable in the short run. Secondly, supply is assumed to be fixed in the market period but it is variable in the short-run.

In the short run, certain administrative and handling costs are variable. The wholesaler has the choice of refusing to sell to the smaller customers if it does not pay him, or of increasing his charge to small customers. The whole of the increased handling charge and administrative charge is then a cost to the wholesaler's own product, so he does not gain as much from this practice as might appear to be the case from the market-period position. This should not be over-emphasised. In a real market this added charge might be negligible because of the high ratio of fixed costs—premises, salesmen's' salaries etc—to variable costs, because if the wholesaler turned away small customers they would find an alternative source of supply, or because

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there would be government intervention if discrimination against the small retailer was too obvious.

In the short-run, also, wholesalers may be able to adjust the supply available in times of the greatest demand, whether it fluctuates weekly, monthly or seasonally. In the market period the quantity of goods available is fixed, while in the short-run it is possible for the quantities of product C, that sold on commission, and product O, that owned by the wholesaler, to be altered.

If the monopolist has a fair idea of the quantities of product C that will be available, he may be able to adjust supplies of O in order to maximise his own profit. If, for example, all the supplies of O are imported and all the supplies of C are home-produced, he will have no difficulty in adjusting supplies. If he produces the O himself, he has rather more difficulty, as he must adjust his output. If all supplies are produced by independent producers, and he buys some outright and sells the rest on commission, he cannot directly influence supplies.

In so far as he is able to adjust supply, the wholesaler will do so in order to maximise his own revenue. He will increase the supplies of O as long as the increase in his own profit from doing so exceeds the loss in his commission income from the sale of C at the lower price.

Where the monopolist buys the product which he imports, and sells the rest on commission, he may face a perfectly elastic supply curve on the world market. He can obtain all he wants at the price I, and this is his marginal cost. The supply of C, is fixed, so far as the importer is concerned, and his revenue from C is $10\% PQ_{\sim}$ where P is the market price and Q_{\sim} is the quantity of C, as he charges 10% commission. It is assumed that the handling costs are zero.

The market price $P=f(Q_{\sim}+Q_0)$.

The net revenue to the monopolist $N=(P-I)Q_0+ 1/10 PQ_{\sim}$ and the monopolist may adjust Q_0 to maximise his profit.

It does not pay the wholesaler to import if the supply of C is such that the market price is lower than the import price plus the normal profit.

Figure 1 shows the monopolist's profit. If the sales on commission are OC his commission is 10% of P times the quantity sold or $(0.1 P)(Q_{\sim})$. The net revenue he gets from his own goods is the market price P less the import price I, so, where the sales of his own are CU, his revenue from his own goods will be shown by the shaded quadrilateral RT. His total profits are shown by the two shaded areas.

A firm dealing with imported goods only would be just interested in that part of the curve, to the right of C, which refers to imports only. This is shown in Figure 2. Here the import price I is the marginal cost, and $P(I \text{ --- } \sim)$ is the marginal revenue. Profit is maximised when marginal revenue equals marginal cost—when imports are CV.

This point on the Average Revenue curve is necessarily of unit elasticity with

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reference to the axes QR and RS. Therefore, the area of the rectangle LMPR, total profit, is maximised when the slope of the Average Revenue curves to these axes is unity.

If the position of a firm selling on commission as well as selling its own product is considered, it will be clear that to this Average Revenue must be added the commission 10% PQ~. This makes the Average Revenue curve less elastic, so the profit maximising point moves to the left. Thus, the firm that sells on commission as well as importing will import less than the firm that only imports and this will drive up prices.

The substance of the argument is the same when a rising marginal cost is assumed.

It follows from this that the profit-maximising point is at a higher price when one firm handles both its own product and a product sold on commission, than when different firms handle the commission sales and the own-sales or imports. Prices will be somewhat higher as a result of the same firm handling both commission sales and imports.

Competition

A wholesaler selling an undifferentiated product in competition with other wholesalers can obtain higher prices for his own product in many of the same ways: he can give discounts on commission sales rather than on his own sales; he can sell his own product when prices are high; he can charge a retailer different prices for his own goods sold on commission, knowing that the retailer will charge the same price for both.

Profit-maximisation through market discrimination is not likely to prove profitable unless there is oligopoly with collusion. It has been shown that, even under monopoly, it may not be possible to maintain a high price differential between the two products and both a high price differential and an extremely inelastic demand in one market would be necessary before it paid a single oligopolist to sell some goods at cut price to a market with an elastic demand. The oligopolist would be raising the price in one market and all the other firms would benefit from this, while the other firms would not bear the same costs of selling cheaply in the low price market. Where there is a small number of firms and collusion, tacit or explicit, exists, wholesalers can still make profits through discriminating monopoly.

If several firms sell both their own goods and those sold on commission, they may have a tacit or explicit agreement to restrict supplies in order to raise prices.

Conclusion: homogeneous product

The effect of having a wholesaler selling his own goods at the same time as he sells

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other people's goods on commission, when the goods are homogeneous, is as follows: The producer gets a price lower than the average market price, because the wholesaler gives quantity discounts on commission sales rather than on his own, because he sells his own products in high-price periods and other people's at low-price periods, because he charges different prices for the two sets of goods, knowing the retailer will average the margins, and because, when operating a discriminating monopoly, he sells the commission goods in the low-price market. The effect of the discriminating monopoly is likely to be small, especially in oligopolistic or competitive situations. In the short-run, the wholesaler can restrict supply and in these cases the producer's income may be higher than it would be if the wholesaler did not also handle his own product. The wholesaler can get a higher income than he would if he sold only on commission or if he sold only his own product. In the first place, his turnover is higher. He may get a price for his own product which is higher than the market average price by giving quantity discounts on commission sales only, by selling only his own product in high price periods, by charging a higher price for his own produce, knowing that the retailer will average his margins. He may also increase his total revenue by discriminating monopoly, particularly if he sells his own goods in the high-price market. In the short run he can restrict supplies to increase both his commission and his margin. In the short run, this only affects the consumer in two ways. Firstly, his prices may be increased by a discriminating monopoly. Secondly, his prices may be increased by restriction of supply. In the longer term supplies may be reduced by the fact that most producers receive prices lower than the average market price.

A DIFFERENTIATED PRODUCT

The wholesaler can also increase his return if he can create a distinction between product O and product C.

He may brand the product so that his customers will accept that all products are not identical. The brand may be the name of the producer or the country of origin. His own product and the product sold on commission may have slightly different specifications, and the products can be differentiated effectively by emphasising these differences, by marking the product with the specifications for instance.

Once the products have been branded or marked, the wholesaler can attempt to alter the demand schedules so that he obtains a better price for his own product:

- (i) He may advertise his own product thus putting up the demand for it.
- (ii) When a prospective customer asks for a quotation, the quotation given may refer to his own product: details of the price of the product sold on commission are not

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given unless the customer specifically asks for it. This may be seen as an artificial limitation of supply.

(iii) If the customer asks for guidance, the wholesaler may always say that his own product is superior. This is the most potent form of advertising.

The effect of branding is to reduce the cross-elasticity of demand and so to make it easier to maintain differential prices in discriminating monopoly. One effect of advertising a branded good may be to make the demand for the advertised good even less elastic. This, too, increases the possible returns from discriminating monopoly. As the possible returns from discriminating monopoly are higher, it is more likely that there will be some collusion here than when the product is homogeneous.

If several oligopolists brand their own product and leave the product sold on commission unbranded, then it is possible that the cross elasticity of demand between each oligopolist's own product and the product sold on commission by him, will be higher than that between his own product and branded products sold by other oligopolists. This would be the case if there was a high degree of consumer loyalty, and consumers preferred buying unbranded goods from their regular supplier to buying branded goods from another supplier. In this case, market separation by an oligopolist is likely to be successful even without collusion. The customer would pay a high price for this branded good rather than purchase branded goods from another supplier. If, on the other hand, the cross elasticity between branded goods is higher than that between the commission goods and the individual oligopolist's own goods the position would be different. This might be the case if, for example, all goods were marked with the country of origin so all the goods labelled "French" would, in effect, be identical in the eyes of the purchaser. In this case, if one oligopolist were to sell some of his goods to a low-price market with a high elasticity of demand, the benefit would be reaped equally by all oligopolists and the firm that sold cheaply would get only part of the benefit from its investment. Only if there was collusion in price discrimination would the firms make a large profit.

It has been shown that, in the short run, a monopolist wholesaler who is in a position to restrict supplies of his own product will increase his profits by doing so. If the products are branded, the demand for his own product will be somewhat different, probably being higher and of a different elasticity. If the main effect of advertising is to increase demand, and if the elasticity of demand is unchanged or more elastic, then it will pay the wholesaler to increase the supply of his own goods. Because there is a price differential between own goods and commission goods, it is quite possible that the level of imports that leaves the wholesaler with the maximum profit will leave the producer selling on commission with a lower price than he would get under perfect competition. If the main effect of advertising is to make demand less elastic, then it will pay the producer to restrict supplies, and the producer selling on commission is

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more likely to get a price above the perfect competition level.

Long run

In the long run, the effect of this dual price system will be to discourage firms from producing for sale on commission. Their price will be lower than the market demand will justify and they will be in equilibrium at a lower level of production than would otherwise be the case. When monopolists increase their revenue by discriminating monopoly, commission prices will be below free market prices and this may also happen when revenue is increased by supply restriction of branded goods.

In the long run then, supply of commission goods may be expected to decrease further.

DISCUSSION

It has been shown that a wholesaler who is selling goods on commission and is selling goods of his own at the same time can increase his profit by adopting certain practices that are not illegal. Many of the practices might be considered unethical or immoral by the producer and some might be considered immoral or unethical by the wholesaler, but they could be adopted unconsciously or semi-consciously by wholesalers. A salesman might be more eager or more persuasive when selling his own goods. He might, without thinking about it, load goods sold on commission when prices are low. He might believe that his own product is better. The practices described in this article could be widespread in wholesale markets even if no one firm has a carefully worked out strategy of profit maximisation and there is no conspiracy between wholesalers. There is, therefore, a prima facie case for an investigation into the existence of and the extent of the practices described, and the examination of alternative marketing systems.

REFERENCES