STUDY NOTES

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Management Accounting – Performance Evaluation

Not all customers will pay the same for the same product, so how can a seller set prices to maximise revenue? By using "price discrimination", writes **Bob Scarlett**.

The question "what price should be charged for the product?" is one of the most critical that businesses must consider. Most aspects of the process of bringing a product to market take time to change or develop. Modifying the cost structure of a business or altering its strategic direction can take years, but a change in product price can usually be made instantly.

The logic behind price discrimination is illustrated by the graph. Imagine we're running a firm that sells units at one price. Each potential customer will buy only one unit. At £10 per unit there are no buyers, but sales rise by 2,000 units for every £1 the unit price is reduced below £10. So, when the price is zero, 20,000 units can be "sold". The line on the graph represents possible combinations of price and unit sales. It shows that, if one price is charged, revenue will be maximised at a unit price of £5, giving sales of 10,000 units and a revenue of £50,000. But adopting a uniform unit price of £5 means two things:

- Almost all the customers actually buying units would have been prepared to pay more.
- There are 10,000 potential customers who do not buy units because they are not prepared to pay more than £5.

How can we refine our pricing structure to improve upon our existing £50,000 revenue? If we abandon the idea of a single uniform unit price, various possibilities emerge. Let's say that we can identify our 2,000 keenest customers and devise some way of charging them the £9 per unit that they're prepared to pay while holding the other 8,000 units at £5. This would boost our revenues to £58,000 – ie, (2,000 x £9) + (8,000 x £5).

Let's say that we can also identify the 5,000 potential customers who are prepared to pay £2.50 per unit, but not £5. If

DEMAND STRUCTURE FOR OUR PRODUCT

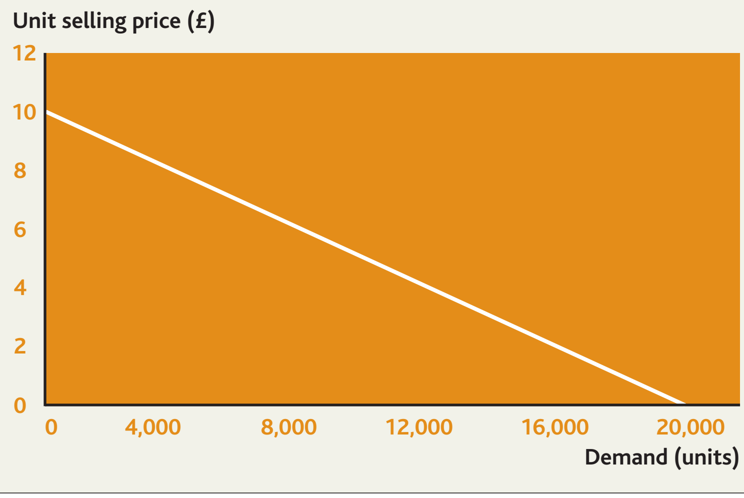

Illustration: Patrick Morgan

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we could devise some way of selling our product to them without disturbing our existing unit sales, it would be possible to boost our revenue to £70,500 – ie, £58,000 + (5,000 x £2.50).

If you are willing and able to play this game, known as price discrimination, it's possible to obtain a lot more revenue from a given market. In this case it's mathematically possible to extract £100,000 if you can a find a way of charging each customer the exact price they are prepared to pay.

There is a clear theoretical case for price discrimination, but charging different customers different prices can cause practical difficulties. So how can it be done effectively? There are generally considered to be three degrees of price discrimination.

First-degree price discrimination

The public auction is the classic price discrimination method in which potential buyers reveal their keenness to buy items via their bids. Products commonly sold through auctions include artworks, used cars, houses and livestock. Where similar items are being auctioned over a day, prices commonly decline as time goes on. The keenest buyers make their purchases early to ensure that they get what they want. By the end of the day, only the least-keen buyers are left and prices tend to sag. If you are a seller, it is usually wise to get your products into the auction as early as possible, while the keenest buyers are still there.

Advances in IT have allowed the auction principle to be extended into new areas. For example, goods can be auctioned on the web (eg, eBay) or on television (eg, bid tv). The normal TV auction method is to display an item – a watch, say – on screen and state that 100 are available and that the "guide shop price" is £80. Viewers are then invited to phone in with their bids (and credit card details). At the end of the auction period, the top 100 bids are accepted and the watches are sent to the successful bidders. A range of prices will have been paid – typically, between £30 and £45 – and price discrimination will have been achieved. The cost of the premium-rate phone call to the TV station discourages frivolous bids.

Second-degree price discrimination

Where an auction is not possible, a seller might establish a price structure that mimics one. An example of this approach is how a supermarket sells beer. The keenest buyers are those who are thirsty and want one beer immediately. So bottles are sold at a price of "£1.80 each or £4.50 for three". Keen buyers who want only one bottle will pay £1.80, but less-keen buyers can buy bottles at an effective unit price of £1.50.

Another example is the pricing of entry to health clubs and amusement parks. Typically, there's a fixed fee and an extra charge for each use of specific services at the facility. The effective price a customer pays for each use of a service depends on the frequency with which they visit the facility. A regular visitor will pay less than an occasional visitor because the fixed entry fee will be spread across fewer uses in the latter's case. An infrequent visitor effectively pays more than a frequent visitor. Again, price discrimination has been achieved.

Third-degree price discrimination

A third approach is where prices are set according to the buyers' characteristics. This is often used where consumers can be split into identifiable groups that are likely to differ in their willingness to pay. For example, a rail operator may offer discounted prices to students and senior citizens. Such passengers are typically willing to travel only when charged low prices and will readily switch to a cheaper means of transport. At the same time, premium prices may be charged to business travellers who can be identified by their use of early-morning services. Their willingness to pay more may be influenced by the fact that such prices may represent only a small part of the total cost of doing business.

Pricing schemes may often involve mixes of second- and third-degree discrimination. For example, the sale of discounted rail tickets to students may require them to buy a photocard. This prevents the holder from buying a discounted ticket and selling it on to a passenger who is not entitled to it. At the same time, the photocard amounts to a fixed-access charge along similar lines to the pricing of access to health clubs.

The practice of price discrimination is far more widespread than may be commonly realised. For example, new cars are usually sold at a list price to which dealers will adhere. But most new car sales to private customers occur as part of a package that involves the trading-in of an old car, finance, accessories and extras. When you approach a car salesman, he will size you up and the package he offers will be influenced by how keen he thinks you are to buy. If you give the impression of being an impoverished and unenthusiastic customer, you may be offered a much better package than would otherwise be the case. Never try to impress a salesman. Even if you succeed, the effect may be the opposite of what you were intending. **FM**

Bob Scarlett is an accountant and consultant.

AN EXERCISE IN DISCRIMINATION

Imagine that you are the marketing manager of a professional consulting firm. Clients are charged, by industry convention, on the basis of an hourly charge-out rate for consultant time. How might you go about maximising the revenues of the firm through the practice of price discrimination?.

You will find an outline answer to this exercise on the CIMA website at www.cimaglobal.com/fmsolution.