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## PRICE DISCRIMINATION AS A MEANS OF MARKET SEGMENTATION: A FASHION MERCHANDISING EXAMPLE

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### **Introduction**

The retailer of higher priced, fashion clothing faces many difficult problems in the marketplace today. Among these can be included personnel, promotion on limited budgets, location, pricing strategies and consumer segment selection. The present paper proposes to focus only on the last two, pricing and consumer segment selection and their interrelationship.

Every retailer knows, either implicitly or explicitly, that consumers, as a group, can be subdivided into smaller groups called segments. The basis for this division is differences in behavior with respect to particular marketing variables. The variations for the segmentation process can be quite elaborate as in life-style variables (psychographics), or quite simply as in geographic segmentation (2).

Unfortunately, most of the segmentation strategies presented in the marketing literature are not particularly useful to the retailer of limited size and financial capability. The purpose of this paper is to develop a segmentation strategy based on pricing tactics that can be readily adapted to the smaller retailer, one who may not have multiple outlets, for example. Though the focus here will be on the retailer of fashion goods in the higher price lines, with minor modifications it may be useful to other types of retailers as well.

The use of price as a means of market segmentation is by no means a new or unique concept. It has been well established in marketing and microeconomics that different consumers respond differently to prices. In the marketing and economic literature this is referred to as elasticity of demand and is considered to be one of the most influential factors in determining the best price for a product (3, p. 11). Capitalizing on the knowledge that different groups of consumers have different elasticities of demand and employing it as a means of market segmentation has been referred to as price discrimination.

The term “price discrimination” should not be confused with the illegal version often referred to in the media. Price discrimination in the sense that it is used here is perfectly legal and one of the most frequently used pricing tactics in many retail and service outlets. Theaters, for example, charge different prices at different times of the day. This is price discrimination based on time. At football games, different prices are charged for seats in different parts of the stadium. This is price discrimination by place. What is proposed in the present paper is that retailers of fashion clothing can use a similar form of price discrimination based on differences in elasticities of demand in different market segments.

The objective of this form of segmentation is to draw in the group of consumers that form the segment immediately below that which the retailer is now appealing to. That is, the group of consumers whose price elasticity for the retailer’s product line is higher than those consumers now purchasing the product should be converted to customers. To show why this would be beneficial to the retailer we turn first to the theory which justifies the method and then to the pricing tactic to carry out the objective.

### **Profit Maximization and Price Discrimination**

Unlike firms in the economist’s perfectly competitive model, retailers of fashion clothing have some control over price — they are price seekers. If fashion retailer XYZ seeks a single price which will maximize the profit from seasonal sales of a particular line of dresses, it must first estimate demand, i.e., the quantities it is likely to sell at different prices. This demand schedule is given in the price and quantity columns of Table 1, and provides a forecast of total revenue (Price X Quantity). These price-quantity demand schedule numbers constitute the basis for computing the marginal revenue schedule in the fourth column of Table 1. Marginal revenue is computed by determining the change in total revenue ( $P \times Q$ ) when there is a one unit change in sales. Next, the wholesale price of the dresses (\$4) is inserted and labeled marginal cost. Finally, economic theory and simple arithmetic lead a profit maximizing firm to set a single price which induces a sales volume that equates marginal revenue and marginal cost.

The profit maximizing price in the example is \$7, and the quantity is 8 units. At a higher price marginal revenue is above marginal cost; therefore, extra sales at a lower price would add more to revenue than to cost. While at a lower price where marginal revenue is less than marginal cost, reduced sales at a higher price would reduce cost more than revenue is reduced. Hence, XYZ achieves maximum profit (or minimum loss) at the price and quantity which equate marginal revenue and marginal cost.

XYZ’s price seeking becomes more complicated when it recognizes that the total demand in Table 1 is a combination or sum of the demands of at least two types of customers. High income customers will buy in accordance with

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**Table 1****Total Demand**

Price	Quantity	Total Revenue	Marginal Revenue	Marginal Cost	Gross Margin
12	1	12	12	4	8
11	2	22	10	4	14
10	3	30	8	4	18
9	4	36	6	4	20
8	6	48	6	4	24
7	8	56	4	4	24*
6	10	60	2	4	20
5	12	60	0	4	12
4	14	56	-2	4	00
3	16	48	-4	4	-16
2	18	36	-6	4	-36
1	20	20	-8	4	-60

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H Demand in Table 2, while the demand of low income customers L Demand is given in the price-quantity schedule of Table 3. Since high income customers are less sensitive to price than low income customers, economists say that H Demand is less elastic than L Demand. Therefore, if Firm XYZ could segregate these two market segments and confront separately the H Demand curve in Table 2 and the L Demand curve in Table 3, then profit would be maximized by equating marginal cost and marginal revenue in each market at a price of \$8 in Market H and a price of \$6 in Market L. This would result in a total revenue (TR) of \$58 ( $TR = P_H \times Q_H + P_L \times Q_L = \$8 \times 5 + \$6 \times 3 = \$58$ ) when the two separate demand schedules are used. This compares favorably to the \$56 ( $TR = P \times Q = \$7 \times 8 = \$56$ ) that would have occurred under the single demand schedule. Similarly, gross margin would increase by \$2 when the H and L demand schedules are used in place of the total demand schedule. This can be seen by comparing the difference between Total Revenue (TR) and variable costs (VC) under the two methods ( $TR - VC = \$56 - (4 \times 8) = \$24$  under the old method versus  $TR_H - VC_H + TR_L + VC_L = \$40 - \$20 + \$18 - \$12 = \$26$  under the suggested method).

The market segregating technique employed by most retailers of fashion clothing is first displayed, then, at the end of the season, the merchandise is put on "sale" at a lower price. Utilization of time to achieve market segmentation and profit maximizing price discrimination is almost universal, and has become well-known and understood by the consuming public.

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**Table 2**

**H Demand Schedule  
(High Income Customers)**

<b>Price</b>	<b>Quantity</b>	<b>Total Revenue</b>	<b>Marginal Revenue</b>	<b>Marginal Cost</b>	<b>Gross Margin</b>
12	1	12	12	4	8
11	2	22	10	4	14
10	3	30	8	4	18
9	4	36	6	4	20
8	5	40	4	4	20*
7	6	42	2	4	18
6	7	42	0	4	14
5	8	40	-2	4	8
4	9	36	-4	4	0
3	10	30	-6	4	-10
2	11	22	-8	4	-22
1	12	12	-10	4	-36

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**Table 3**

**L Demand Schedule  
(Low Income Customers)**

<b>Price</b>	<b>Quantity</b>	<b>Total Revenue</b>	<b>Marginal Revenue</b>	<b>Marginal Cost</b>	<b>Gross Margin</b>
12	0	0	0	0	0
11	0	0	0	0	0
10	0	0	0	0	0
9	0	0	0	0	0
8	1	8	8	4	4
7	2	14	6	4	6
6	3	18	4	4	6*
5	4	20	2	4	4
4	5	20	0	4	0
3	6	18	-2	4	-6
2	7	14	-4	4	-14
1	8	8	-6	4	-24

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## **Is the Current System of Price Discrimination Defective?**

The system currently in use is tantamount to using time to segregate the buyers of fashion clothing. However, rational, price sensitive consumers become increasingly reluctant to buy at a high price items which will be priced lower in a few weeks or a few months. It is also likely that these rational, well-educated, middle income consumers are frequently frustrated and disappointed when they shop end-of-season sales since more search time is used, and selection (e.g., color and size) is reduced, sometimes drastically.

It should follow then that a significant proportion of middle and upper middle income consumers are "turned off" to fashion clothing by the current use of time to achieve market segmentation and price discrimination. These increasingly well educated consumers are therefore spending less on fashion clothing and more on competing goods such as world travel, resort vacations, entertainment, housing, cars, investments, etc. This could result from dissatisfaction with the traditional two-segment pricing technique which uses time to drive a wedge between buyers who are charged a high pre-season price and buyers who must struggle to purchase at a lower "sale" price.

The most significant implication of this potentiality is the loss of the customer when he or she opts to purchase another commodity now rather than wait for the price of clothing to fall. Though the cost of a lost customer cannot be accurately determined, every retailer knows that losing customers is expensive and should be avoided if at all possible. If this hypothesis has some realistic validity, then retailers of fashion clothing need a new technique to permit well-educated, budget conscious, rational consumers to buy at the start of each season, and before the unsold residual merchandise goes on sale.

### **An Alternate Segmentation Strategy**

Translation of this theoretically sound strategy of segmentation into a workable mechanism for the retailer might take several forms. The one proposed here to shift from time discrimination to price discrimination is the pre-purchase merchandise voucher. This method is designed specifically to achieve penetration in the more price sensitive, middle income consumer group which is currently purchasing fashion goods at substantially reduced "sale" prices (sometimes at 40-50% off the retail price) or is purchasing alternative goods. As indicated by Frank, Massey, and Wind,

Discrimination is potentially valuable for the firm whenever one group of customers has greater perceived need for the product than another group of customers. Some of the factors that can lead to need differentials among potential customers are: use

opportunities, availability of substitutes (availability may differ by geographic area or by type of end use), and tastes. Use opportunity and taste differences can often be related to surrogates like income, education, social class, and life cycle. To this extent the range of applicability of a price discrimination strategy is no different than that of any other kind of market segmentation (for example, one based on targeting promotion) (1, p. 183).

Here, of course, use opportunity and tastes are directly related to both middle income and higher education. These are, in turn, characteristic of price sensitive consumers, the group which is specifically being sought by the proposed technique.

The specific version of pre-purchase merchandise claim might vary from store to store depending on its unique characteristics. However, a simple example should suffice to demonstrate the technique. The magnitude of the discount or its timing could vary greatly due to situational circumstances but the basic idea remains constant, as does the objective.

To implement the concept, a retail outlet would offer for sale a "pre-purchase merchandise voucher" from January to March. The voucher might sell for \$400 and would be exchanged for merchandise valued at \$500 at a later time, beginning, for example, in July of that year and ending when the voucher is depleted. Anyone not purchasing the voucher in the specified time period would not be allowed to purchase again until the following year. Thus, it would represent an investment on the part of the consumer which would, in effect, yield a tax free return of 25% in this example. This is an added incentive to purchase the vouchers.

There are several advantages to both the consumer and the retailer in employing the technique. For the price sensitive, middle income consumer, the frustration of having to buy fashion merchandise during close-out sales when selection of both styles and sizes are severely limited is eliminated. This would simultaneously increase the satisfaction of each purchase. As mentioned previously, the purchase would represent an investment which would earn tax-free interest-in-kind of 25% (in this example). In addition, if varying magnitudes of vouchers were offered, the consumer would be able to purchase one that fit his particular needs. Larger vouchers might conceivably offer slightly larger discounts as well.

For the retailer the system is similarly advantageous in several ways. First, and foremost, he has access to a new market segment which, heretofore, was not purchasing or was purchasing at substantial discounts. This would result in substantially increased volume. In addition, those price sensitive customers who are buying through the voucher system would be buying at a higher price (say, 25% off rather than 40% if the goods were purchased on sale) and simultaneously being more satisfied with their purchases. This is a unique result beneficial to both buyer and seller.

As a bonus to the retailer under this system, he gets to recoup part of the discount that has been granted. Since he would have 6-12 months' use of funds they could help finance the season's purchases or be invested in short term securities returning interest during the year. If, for example, a customer purchased a \$400 voucher to be exchanged for \$500 in merchandise, the retailer might earn 10% on the \$400 for six months which would net him \$20. Adding this back to the original discount of \$100 produces a net discount of \$80 which is a 16% reduction rather than the apparent 20% discount.

As can be seen, this system is beneficial to both buyer and seller. It relies some frustration and financial burden on the customer and can increase volume and profits for the retailer. There are, of course, some potential difficulties inherent in any form of segmentation through price differentials. The one most frequently discussed (1) is the potential for the discount purchaser reselling the goods to a non-discount purchaser. Though this might be a difficulty in some industrial settings or for extremely high priced goods (diamonds, for example) it would seem to present no difficulty for a retailer of high fashion clothing. Another possible problem is the purchase of vouchers by the price-insensitive consumers who would have purchased the product at the full price. Though it is certainly possible, if economic theory is correct, it would be unlikely since, by definition, price-insensitive consumers simply would not seek out the discount. Combining this with the "status" factor associated with buying higher priced goods characteristic of price-insensitive consumers further diminishes the likelihood of voucher purchases by existing "prime time" purchasers.

Since drawing in a different type of consumer might risk a change in store image which could be detrimental to the retailer, this factor should also be considered. It is the intent of the system to bring in "fringe" customers as regular customers. This means that the customers induced to shop at the outlet are already shopping there, albeit at a different time. The likelihood of drawing in an undesirable clientele could be minimized by using the price of vouchers as a deterrent. The price should be maintained at a level that would discourage an image change brought about by a clientele change. The retailer himself would be the best judge of what that level is.

Finally, there is the possibility that the voucher system would not work, i.e., no one would buy the vouchers. This would result in only a minimal cost (that of printing the vouchers) to the retailer and the net effect of the failure would be insubstantial.

In summary, this paper proposes a new form of segmentation using price differentials as a tactic of implementation. Economic theory suggests that different customers are differentially susceptible to varying prices. Using this knowledge, the retailer of more expensive, fashion clothing can develop a mechanism for expanding his market while maintaining or increasing profitability. By using a pre-purchase voucher system which allows price-sensitive customers to purchase in advance at a discount, significant advan-

tages can accrue to both the buyer and the seller. Though there are certain inherent difficulties with the concept, these can be controlled rather easily by the retailer minimizing their potential for negative consequences.

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