Customized Pricing: Win-Win or End Run?

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ABSTRACT

Modern technology, particularly as associated with internet shopping, permits excellent estimations of individual consumer willingness to pay. Customized pricing is defined as a pricing strategy based upon such individualized estimates--each customer is presented with an individual price. The paper addresses the ethical, legal, and managerial challenges of customized pricing practice. A simple empirical study is included to illustrate not only the economic effects of customized pricing but, also, the surprising finding of initial consumer satisfaction with customized prices. Participants showed considerably less satisfaction, however, upon learning the nature of the pricing technique.

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INTRODUCTION

The core of the marketing concept is profitability through the satisfaction of consumers' wants and needs. Because each consumer is unique, maximum satisfaction would be achieved if firms could address those wants and needs individually rather than treating everyone the same. There was a time when virtually all transactions were conducted between individuals and all products were customized. The industrial revolution, however, brought standardized production, mass communication, and widespread distribution. With lower costs, competitive pressure forced most marketers to compromise between customization and standardization. Firms found competitive advantage by segmenting the mass market, enhancing satisfaction with a small array of different offerings but still taking advantage of scale economies. Segmentation, nonetheless, trades off some consumer satisfaction for efficiency. Even the most complex segmentation schemes may present a single offering to thousands, even millions of consumers, all with slightly different desires.

Over the past decade or so, however, technology has allowed firms to return to individualized marketing. For example, computer-assisted design permits production of automobiles and bicycles to the specifications of the individual. In retailing, 360-degree body scanning assists the fitting of clothing to the wearer's exact body shape. GPS-enabled telephones and automobiles provide information on nearby retailers, restaurants, and services of interest. Dell distinguished itself by letting consumers build their own computers. Amazon.com, among

others, makes individualized product recommendations. On the basis of information provided by the consumer or collected by the marketer, many firms can now make the individualized offerings of pre-Industrial Revolution days—a development Cross and Dixit (2005) refer to as "back to the future".

Especially in the internet market, firms can collect data on consumers' past purchases and shopping behavior in remarkable detail, down to the seconds spent on specific internet pages. That information can then be analyzed to present consumers with individualized offerings—ads or products that are optimized for the individual. To the extent that such efforts are successful, both firms and consumers would appear to benefit. Firms reduce their selling costs, increase sales, and bolster relationships. Consumers gain from personalized interaction; they get the products they want, when and where they want to buy them, and the communications they want to receive.

Whereas the mutual benefits of individualization appear to be clear for product, promotion and place, they are not so clear when it comes to the last of the 4 Ps, —pricing, which is the focus of this paper. The distinction, of course, is that, whereas the other P's contain value, price implies sacrifice. Consumers may not *want* any level of price; they are merely willing to pay prices of a certain level. The same data bases that are used to customize ads or products make it possible for firms to estimate what each individual consumer is willing to pay and to set a price based on that estimate, a process we refer to as customized pricing. Arora, *et al.* (2008) provide a framework and discussion of issues related to individualized marketing. They distinguish between customization (individualization based on customers' proactive specifications) and personalization (individualization based on all available consumer information). Despite our use of the word *customized,* our focus, in their terms, is on personalization of price.

It is not surprising that the customization of price should present different problems from customization of other aspects of the marketing offering. Product, promotion, and place all capture aspects of the value the firm exchanges; whereas, price, for the most part, captures the consumer's sacrifice. Further, price is easily measured and accessible to both psychological and economic analysis. For these reasons, price is usually the most salient aspect of a transaction. This saliency contributes to making it ethically and managerially problematic. In this paper, we define customized pricing, present examples of its practice, provide an empirical illustration of its effects, and discuss its managerial, legal and ethical challenges.

For the firm, the benefits of customized pricing are obvious. It is a straightforward matter of economics that customized pricing should enhance firm profitability—the firm sets price at the highest acceptable point for each person. Ignoring (for the moment) consumers with demand so low as to be below a profitable price, no sale is lost because the price is too high; yet, no profit is lost by selling at a price lower than the price a consumer is willing to pay. In economists' terms, the firm captures as profit all potential consumer surplus.

In principle, although somewhat surprising, one can argue that consumer welfare may also be increased. A customized price is, simultaneously, the price the firm wants to charge and the price the consumer is willing to pay. By definition, every consumer should be content to pay what he is willing to pay; no consumer would be presented with a price too high.

Given controversies with respect to consumer notions of *fair* pricing (see, *e.g*., Bolton, Warlop, and Alba 2003) and the use of private individual information (Turow, Feldman, and Meltzer

2005), however, marketers face significant challenges in applying customized pricing, both practical and ethical, if not legal.

CUSTOMIZED PRICING DEFINED

With customized pricing, identical products are delivered, regardless of time or situation, to different consumers at different prices. As noted above, prior to the Industrial Revolution, such pricing was the norm. Then, most manufactured products were made, priced, and sold to order. Most exchanges occurred in markets where prices were negotiated—a practice that remains common in many parts of the world. In time, technological advances in manufacturing, distribution, and communication resulted in standardized products, shipped in bulk, and sold through intermediaries, increasingly through chain stores. Although marketers still recognized that customers had different perceptions of value and, therefore, differences in willingness to pay, there was little ability to adjust price. By and large, price was determined by costs. Even when different prices were set for segments with different perceptions of value, it was still a single price for a large number of consumers. By the end of the twentieth century in the United States, customized pricing remained the norm in only a few markets—automobiles, real estate, some services, and sales made through auctions.

Customized pricing can also be "dynamic" pricing, if each consumer is presented with a price that is determined by an estimate of that individual's demand for a given product, in a specific situation and time. Many markets feature dynamic pricing that is not individualized. Restaurants and theaters, for example, routinely charge different prices according to time of day. Hotels and entertainment services, likewise, increase prices during "high seasons". In similar fashion, a variety of retailers charge higher prices to reflect dynamics of location—"Last gas for 100 miles," for example. Coca Cola even attempted to price according to the dynamics of the weather. They announced the development of vending machines that were sensitive to temperature and would raise prices when it was warmer, lower prices when cooler (Hays 1999). (In response to very negative public response, Coke backed off the tactic.) These dynamic pricing schemes are only approximations to truly customized pricing, however. In order fully to customize pricing, firms must be able to estimate demand not only for the situation (time, location, weather, *etc*.) but according to the wants and needs of the individual. Such considerations have typically been possible only in auctions or one-to-one negotiations.

What makes customized pricing worthy of renewed attention is the potential for widespread application, primarily as a consequence of developments in technology. For example, when a customer enters a retail website via a sign-in, software can pull up past purchase information, coupled with demographic and pyschographic data, and up-to-the-moment assessments of on-line shopping behavior. Using this information, the software can not only suggest products of interest but can estimate the highest price the customer is likely to pay.

CUSTOMIZED PRICING PRACTICE

As noted above, customized pricing is neither new nor specific to internet marketing. It is a common practice for firms to set different prices for different segments. Segment pricing is not customized to the individual level. Rather than an individualized price, each consumer receives a price based on the segment to which he is assigned, based typically on demographic measures. Business travelers, for example, pay more for airline tickets; wealthy nations pay more for drugs. Victoria's Secret and other firms have set different catalog prices based on average income differences across zip codes. Youths and seniors pay less for many services.

As with any aspect of segmentation, however, segmented prices are only a compromise. The defining demographics are only loosely related to differences in consumer demand. Some members of the every price segment would be willing to pay more; and, some members of every segment are unwilling to pay the asked price but may be willing to pay some lower price that would remain profitable for the firm. Thus, segmented pricing will always result in sub-optimal consumer value and sub-optimal sales revenues.

In e-commerce, firms can, in theory, eliminate the errors of averaging (and the lost value) by estimating demand at the individual level. Measures of on-line behavior indicate how much a person was willing to pay for items in the past, how many times he searched for the item, where he searched, how long he spent on each page, whether he read the "fine print" in an offer, and if he took advantage of special offers. These data, augmented by data collected by third parties, can include interactions with many retailers, even non-shopping internet behaviors. The data on each individual can be supplemented with relevant data from others who are similar to the individual. Thus, a firm can use a rich array of an individual's past behaviors, combined with similarly rich data from thousands of others with similar profiles, to estimate how much that individual is willing to pay for a given product in a given situation. In essence, firms can charge lower prices to those who are estimated to be more price sensitive, perhaps in the form of special deals, and higher prices to those who are estimated to be less price sensitive.

These data can be accessed and analyzed, and the price estimate derived, almost instantaneously and completely unobtrusively. On-line, the consumer is presented with a price that appears in no way unusual.

Although customized pricing fits well in e-commerce, it is not limited to the internet. Many hotels will give customers various levels of discounts, depending on room availability. Increasingly, retailers are happy to enroll consumers in their patronage programs with associated deals. Many retailers may also be willing to negotiate a price, although relatively few promote the practice. Off-line and e-commerce practices tend to differ in several respects: the extent of *private* information used by firms, the individualization of the practice, and the lack of consumer control. By and large, off-line approaches to individualizing price are limited to discounting based on general knowledge of the firm—costs, sales estimates, capacity, *etc*.—with little knowledge of the consumer beyond the immediate interaction.

Many firms specialize in building data sets from both online and offline sources that can be tailored for the needs of specific clients. Among them are Epiphany, Oracle-PeopleSoft, and Acxiom. Epiphany, for example, provides American Airlines with individualized consumer profiles and matches them with individually relevant content and offers (Epiphany.com Case Studies: American Airlines, cited in Turow, Feldman, Meltzer 2005). Many other examples of customized pricing have been reported:

Harrah's Casino gives its customers a gold card to use for all games of chance and purchases in the resort. Accumulated points lead to discounts. One of the justifications, of course, is that the card tends to disguise the expenses that consumers accrue, thereby facilitating greater spending. The real value, however, is the data. When combined with additional data on the individuals, including past behaviors, the casino is able to tailor its offers—mostly price discounts—in ways that are both attractive to the guests and most profitable for the firm.

Grocery stores throughout the United States keep track of individual purchases through the use of patronage cards. One application is to provide instant promotional coupons along with

purchase receipts. These coupons, again, may be customized to appeal to the individual based upon estimates from rich data sets. Although most clearly used to identify which products will be appealing, the coupons also may offer different levels of price discounts, according to estimates of price sensitivity. Evidence of the success of such customization is the redemption rate of such coupons, which greatly exceeds that of untargeted direct mail coupons.

Amazon.com was reported as having used data to set prices for electronics—lower prices for new customers (Haggblom 2004). The company claimed they were providing price discounts randomly.

Ramastry (2005) cited a *photography site* that offered lower prices to customers who had previously visited price-comparison sites. No information was provided to indicate how the firm collected such information or whether it involved a "spy" cookie.

In an offline application, *Bloomingdales* department store uses a rich data set, triggered by the use of a credit card to give up-to-the-minute information to salespeople, in order to "enable salespeople to custom-build merchandise suggestions" (Levey 2004).

Many *financial institutions* offer different prices to people for various services. They estimate appropriate levels based on credit reports, loan applications, and payment activities gathered from the market (Turow, Feldman, Meltzer 2005).

Vascellaro (2006) describes several applications. Overstock.com assesses up to 40 consumer attributes during a site visit and uses that information to select from thousands of possible promotions, including different price discounts. eBay and Ice.com show different home pages depending on estimates made when a consumer logs on, which include various levels of price based on discounted shipping. Ice.com also offers lower prices to first-time shoppers or shoppers coming from specific sites. Many sites offer discounts that are framed differently, for the same products, depending on the search terms that drive them from the various search engines. Other sites actually lower price in response to on-line behaviors that suggest a reluctance to buy, such as moving back and forth between sites or visiting price comparison sites.

AN ILLUSTRATION

To illustrate the effects of customized pricing, we conducted a simple study. The intent of the study was not to extend our knowledge; after all, the economic effects of customized pricing are fairly straightforward. The purpose of the study is to provide a context for the subsequent discussion. One novel contribution of the study is the inclusion of measures of perceptions of price fairness and price satisfaction. Thus, the study provides an illustration of the effects of customized pricing on sales, profits, and consumer responses, relative to typically high and low prices. A convenience sample of 79 undergraduate students were presented with the following scenario:

> Assume a pizza service were being offered that delivered pizza by the slice to classrooms. Imagine a delicious pizza pie, with your favorite toppings, delivered right to this room, piping hot, as soon as class is ended.

They then answered two questions designed to measure reservation prices:

1. I would be willing to pay as much as _____, but not more, for one slice of this pizza, delivered hot to this room at the end of class.

$1.00 $1.50 $2.00 $2.50 $3.00 $3.50 $4.00 $4.50 $5.00 $5.50 $6.00

2. If this delivered pizza slice were being sold by auction, I would be willing to bid as high as _____, but no higher.

$1.00 $1.50 $2.00 $2.50 $3.00 $3.50 $4.00 $4.50 $5.00 $5.50 $6.00

After indicating their reservation prices, subjects turned to a new page and read the following:

Compute the average of the prices from the two questions on the previous page (i.e., add them together and divide by 2), and write it down next to this paragraph. Now, assume that a pizza service were being offered that delivered pizza by the slice to classrooms. Imagine a delicious pizza pie, with your favorite toppings, delivered right to this room, piping hot, as soon as class is ended.

1. If the price for one slice of this pizza, delivered hot to this room at the end of class were exactly the average value you just computed, would you buy a slice?
yes no

2. How satisfied would you be with the price you wrote down?

extremely dissatisfied 1 2 3 4 5 6 7 extremely satisfied

3. Do you think the price you wrote down is a fair price for one slice of this pizza, delivered hot to this room at the end of class?

Yes, very fair 1 2 3 4 5 6 7 No, very unfair

Over the next two weeks, the same respondents were presented with two additional scenarios (the pizza offer), and the purchase, satisfaction, and fairness questions, identical to the original except that, for each, the price was specified. Each subject responded to either a high price ($4.50) or a low price ($2.50); half the subjects saw the low price first, then the high price; the other half had the reverse. Thus, over three weeks, subjects responded to a customized price, then a low (or high) price, then a high (or low) price.

Cost, of course, presents a potential problem for the customized price method. Some customers may have reservation prices at or below cost. In the analysis below, we considered an unconstrained customized price method, which offered the product at the reservation price, no matter how low, and a constrained customized price method, which set all prices at least as high as a variable cost that we presumed to be $1.50.

Pricing Method	Participation	Total Contribution	Satisfaction with Price	**Perceived Fairness of Price	Average Consumer Surplus (all)	Average Consumer Surplus (buyers only)
*Customized$_u$ (average RP=$2.51)	85% (67/79)	$67.67	5.15	5.10	0.0	0.0
*Customized$_c$ (average RP=$2.81)	67% (53/79)	$148.93	5.15	5.10	0.0	0.0
Low ($2.50)	75% (59/79)	$59.00	4.71	4.78	$.01	$.30
High ($4.50)	8% (6/79)	$18.00	1.75	2.08	-$1.99	-$.83

*Customized$_u$ refers to the unconstrained model—selling at each consumer's reservation price. Customized$_c$ refers to the constrained model—selling only to consumers with reservation prices at or above cost ($1.50).
**The fairness scale was recoded such that higher numbers indicate more satisfaction and higher perceived fairness.

Table 1. Responses to Alternative Pricing Methods

The results of the example are presented in Table 1 and summarized below, focusing on the implications of customized pricing for managerial application and on consumer perceptions of fairness. We note again that the purpose of this study is not to make a contribution to theory but, merely, to illustrate the principles at play; no statistical hypothesis tests are included. (Statistics are available from the authors.)

1. Customized pricing was the most profitable and resulted in the most market participation.

Eighty-five per cent (67/79) of the participants reported they would buy at their reservation prices (RP). The average RP was $2.51, which resulted in a total contribution to profit of $67.67 (67 x $1.01) for the unconstrained method. Fourteen subjects who were willing to buy at their reservation prices had RPs equal to or less than $1.50. The remaining 53 subjects had an average RP_{const} = $2.81. Under a constrained method 67% (53/79) would buy, with a total contribution profit of $148.93.

In contrast, seventy-five per cent (59/79) were willing to buy at the low price, which resulted in a total contribution profit of $59.00. Note that even though the low price ($2.50) is nearly identical to the average RP, the participation rate is different. The reason, of course, is that some subjects had RPs below the low price.

Only eight per cent (6/79) of the subjects were willing to buy at the high price ($4.50), for a total contribution profit of $18.00.

Thus, unconstrained customized pricing resulted in the greatest market participation and constrained customized profit led to the highest profit for the firm. An unconstrained application led to an 85% participation rate. The constrained method reduced participation to 67%, slightly lower than the low price, but with more than doubled profits.

2. Customized pricing resulted in highest number of customers who regarded the offer as satisfactory and fair but a lower average price utility for purchasers.

Satisfaction and perceived fairness were highest for the customized price method, slightly lower for the low price level, and decidedly lowest for the high price level. It is not surprising that perceptions of the customized prices were positive, given the salience to respondents of their stated reservation prices. The customized price is, after all, the price one is willing to pay, which should be perceived as fair and satisfactory. Low prices, although perceived in a slightly less positive light in this example, may be regarded as equally or more satisfactory and fair if they are low enough.

As the table indicates, customized pricing fared well even on the consumer surplus criterion (offered price minus RP). Consumer surplus for customized pricing is, by definition, 0.0, because each consumer buys at his reservation price. The high price option, in this study, no surprise, led to the lowest average surplus. Surprisingly, even the low price option led to a slightly negative average surplus because the average reservation price was $2.51 versus a low price of $2.50. One cannot generalize from these outcomes. A lower low price level would obviously have led to a positive average surplus. We should expect, however, that high price levels would normally lead to negative surpluses.

The average price utility for only those who would purchase is positive for the low price; whereas, it remains at 0.0 for customized pricing. (The average price utility for the high price improved but remained negative because two of the six purchasers bought despite a price above their stated reservation prices. These purchases are not necessarily examples of non-rational consumer behavior. Willingness to pay may change from time to time, due to situational factors.) In general, one would expect positive average price utilities for purchasers at any price other than customized price, which defines price utility as zero. Consumers normally will buy only when they perceive the value of the product to exceed the price.

In conclusion, our simple study confirms that customized pricing should be preferred by the firm, with the profit highest by far from a constrained application. Even an unconstrained application, which would sell at a loss to some consumers, resulted in a higher profit than either the low or high price approaches. The unconstrained application had the highest market share. A constrained application had a slightly lower market share than the low price. If we assume that in this case, the low price is close to the competitive price floor, it is clear that a customized pricing approach will likely produce at least as good economies of scale benefits and much higher profits than any standardized price approach. The absolute differences in sales and profits, of course, depend on the prices that are compared.

Perhaps counter-intuitively in this example, direct measures of satisfaction and a derived measure of consumer welfare indicated that consumers are also better off with customized pricing. Only for the criterion of average price utility for purchasers was (as we should expect) customized pricing inferior. If the general satisfaction of a large number of participants outweighs the limited price utility of a small number of purchasers, these data suggest that consumer welfare is enhanced by customized pricing—everyone has the opportunity to purchase at what is believed to be a fair price.

CONSUMER REACTION TO CUSTOMIZED PRICING

The direct measures of fairness and satisfaction, however, did not tell the whole story. At the conclusion of the illustrative study, we explained to the subjects how the customized prices had been set. Despite the ratings of satisfaction, once they learned that they had been given different prices for the same product, a large majority were clamorous and in agreement in their condemnation of customized pricing. Even some who had paid less than their reservation prices raised objections. To their thinking, one would get a low price offer only if one didn't really want the product. For products that one desired, the price would be high. The responses of this small sample were not unusual.

Generally, consumers do not know that customized pricing can and is occurring; and, they do not think it is fair. Turow, Feldman, and Meltzer (2005) surveyed a representative sample of U. S. adult internet users, addressing several key, relevant issues:

- 64% did not know that it is legal for "an online store to charge different people different prices at the same time of day"
- 76% agreed that "it would bother me to learn that other people pay less than I do for the same products".
- 64% agreed that "it would bother me to learn that other people get better discount coupons than I do for the same products".
- 66% disagree that "it's OK with me if the supermarket I shop at keeps detailed records of my buying behavior".
- 87% disagreed that "it's OK if an online store I use charges people different prices for the same products during the same hour".
- 72% disagreed that "if a store I shop at frequently charges me lower prices than it charges other people because it wants to keep me as a customer more than it wants to keep them, that's OK".
- 84% agreed that "websites should be required to let customers know if they vary charges for the same items during the same period".

CUSTOMIZED PRICING AND THE LAW

Although many people assume that customized pricing is illegal, it is not. There are several key laws designed to regulate competitive pricing, but, without showing that a difference in pricing is based on discrimination against a protected class, customized pricing is not controlled.

The Robinson-Patman Act of 1936, often cited as the law against price discrimination, is designed to limit anti-competitive pricing. It covers only commodities, not services or intellectual property. The act's relevance to customized pricing would depend upon whether it reduces a consumer's ability to buy from competing retailers. It can be argued that customized pricing would have exactly the opposite effect. By targeting consumers at their willingness to buy price, especially on-line, retailers are providing new lower reference prices for other on-line retailers, encouraging the very price competition that the law is designed to protect. Absent a showing of discrimination on the basis of race, religion, national origin, or gender, different prices set for individual consumers do not violate the Robinson-Patman Act. In fact, that law allows specifically for customized pricing to meet competition or to reflect a difference in costs.

The Federal Trade Commission regulates prices as well as the gathering of information on-line. As noted, many of the objections to customized pricing relate more to the information collection and process rather than the actual prices. In Europe, the collection of individual data on-line is

closely regulated, but in the United States, a right to privacy on-line is not clearly delineated. Without such privacy protection, consumer data collection does not violate the legal standard of unfair or deceptive trade practices. In fact, in many cases, consumers are told that their on-line actions are monitored, but few realize the detail of that tracking. Because the information is presented in the "fine print" of boilerplate statements of consumer privacy and information use, few consumers are likely even to read the disclosures.

If customized pricing were done in concert by competitors to fix prices it would violate the Sherman Act. But such is not the case. Customized pricing is done by each merchant, trying to meet the price points of individual consumers. Clearly, this helps the firm, but it can be argued that customized pricing also increases competition.

In a class-action case, Katzman v. Victoria's Secret Catalogs, it was argued that the company's catalog offered different prices to different consumers and was a violation of RICO, the Racketeering and Corrupt Organizations Act. RICO violations can include mail fraud, which was alleged in the case, and wire fraud, which might apply more generally to customized pricing. This case, however, illustrates how far customized pricing is from a violation of the legal standard. In a rare display of criticism, the federal judge for the Southern district of New York chastised the plaintiff attorneys and required them to pay the defendant's legal fees. The judge concluded that the lawsuit was frivolous and caused unnecessary adverse publicity for Victoria's Secret.

THE ETHICS OF CUSTOMIZED PRICING

Notwithstanding its legality, consumers express concerns about customized pricing. We encountered these objections in the debriefing of the subjects in our pizza study, and they are described more generally in Turow, Feldman, and Meltzer (2005). Do those objections and concerns indicate that customized pricing violates ethical principles? We discuss that question in this section.

From what philosophers call a *deontological perspective*, the differential pricing aspect of customized pricing does not appear to be objectionable. The free market is predicated upon demand-based pricing. No one argues that the stock exchange is unethical because prices reflect willingness to pay. Taking demand pricing to an individual level may be uncomfortable, even problematic when consumers don't expect the practice to be at work (a point discussed below), but that alone does not mean the practice is wrong, *per se*.

Moreover, proponents of customized pricing regard it as a win-win tactic, resulting in *utilitarian* benefit. Firms clearly benefit from increased profits per unit and potential economies of scale. Some of that profit supports the other customizations--product, promotion, service, distribution, information--for customers. Society benefits from expanded access to product exchanges. Customized pricing also benefits general consumer welfare by making goods and services available to a larger audience. Drugs, for example, are sold at high prices to segments that can afford them and at low prices to other segments who need them but could otherwise not buy them. Universities charge full tuition rates to students who can afford to pay, which allows them to offer scholarships to other students who cannot and would, otherwise, be unable to attend.

In practice, however, customized pricing may violate a utilitarian ethic in two ways. First, in hard dollars and cents, consumer surplus is eliminated by customized pricing. In principle,

customized pricing would leave all customers satisfied, but *just* so, and no customers delighted. Average or total consumer surplus would be lower with customized pricing than with standard pricing plans, considering only participating consumers (those who are willing to buy). It is, however, unclear how to evaluate the utilitarian tradeoff: customized pricing makes products available to more consumers, increasing total consumer satisfaction, but, at the same time, the practice eliminates consumer surplus, reducing consumer delight.

A more important criticism in terms of utility concerns transparency and consumers' expectations of standard pricing. As observed in the pizza study and as implicit in the concept of reservation price, consumer satisfaction is generally high with customized pricing, but, perhaps, only because consumers are assuming standard pricing--they encounter the price and think, "Well, that is about what I was willing to pay." If a transaction satisfies a consumer only because of a lack of transparency, one cannot claim that it increases utility. On the other hand, if there is transparency, one might argue that all consumers who opt into customized pricing would then be satisfied with their prices. The opinions reflected in the Turow, Feldman, and Meltzer (2005) survey, however, suggest that markets have not yet evolved to that point. Firms are not typically transparent about customized pricing or their information collection. Whether increased transparency might increase the acceptability and, hence, consumer satisfaction, in the future, therefore, is an open question.

Because customized pricing requires substantial individual information and because its ethical acceptability appears to depend on consumer awareness, we turn now to a consideration of transparency. Customized pricing appears to be ethical only if the process is transparent to consumers and proper security is assured for consumer information.

TRANSPARENCY

A fundamental tenet of marketing is honesty. The American Marketing Association Code of Ethical Norms and Values for Marketers highlights honesty and openness as ethical values. We have argued that customized pricing is not inherently unethical, but consumers raise objections when they do not know about the practice before the fact. When consumers expect standardized pricing, and, further, if the firm knows that consumers expect that, is it dishonest for the firm not to clarify its pricing?

The general question here is the obligation of a firm to describe its business practices, especially as they relate to consumer beliefs about how the firm operates. Marketing communications are typically limited to the value-added aspects of the product. Firms rarely describe any aspects of "back room" operations. No firm widely communicates its human resources practices or its component suppliers. Consumers rarely care about such things. Moreover, although all firms communicate their final prices, few make available their pricing tactics. Rarely do we see or expect to see a firm promote that its pricing is set at 45% over costs or 10% above the average. Although it would clearly be wrong to lie if asked about using customized pricing, should a firm be specifically required to disclose and explain customized pricing, when we do not expect it to explain standard pricing tactics?

The answer is yes. Even though people may have no clear sense of how much a retailer marks up merchandise or otherwise manages prices, consumers do believe that prices are based on costs. They expect standardized pricing (except in a few situations). Using customized pricing without disclosing the practice violates this widely-held expectation, and, so, amounts to a

dishonest practice that violates the AMA code of ethics. We do not propose that firms must disclose the specifics of their pricing strategies, but at a minimum, the practice of customized pricing should be made explicit.

Note further that consumers might regard customized pricing as unfair even if the tactic were disclosed and clearly described. Of course, that description would give them the opportunity to shop elsewhere, to avoid what they considered an unfair seller. But a loss or the threat of a loss of customers should provide competitive incentive toward more transparency. And, despite objections to customized pricing generally, we observed above that consumers tolerate customized pricing in a number of markets, most notably the airline industry, but also in the automobile market, and in purchases from some websites, such as priceline.com, which allows customers to set the price at which they are willing to purchase travel and hotel services or eBay, the auction site, or second-hand markets where prices are generally negotiable. Consumers accept customized pricing in these cases because they know that customized pricing is at work. Over time, consumers presumably become socialized to acceptance of customized pricing and do not require constantly to be informed. In such markets, consumers presumably evaluate prices relative to their perceptions of product value, not to prices paid by others or to some supposedly objective, non-customized reference price. The widespread acceptance of customized pricing in a variety of these markets suggests that fairness comparisons across consumers are material and relevant only when consumers do not know that customized pricing is at work.

The acceptability of customized pricing, when expected, is supported by experimental evidence. Bolton, *et al*. (2003) report on a set of experiments about consumer judgments regarding the fairness of prices, fairness relative to a benchmark or on the basis of consumer understanding of costs (extending work done in Kahenman, *et al*. (1986)). Their findings illustrate the effects of consumer socialization and consumer expectations: given consumer expectations of standardized pricing, differences in price across consumers are considered unfair, but when consumers expect customized pricing, those same price differences are not perceived as unfair.

So, customized pricing is ethical when there is transparency that it is occurring. Moreover, it is *perceived* as fair. That is, it is perceived as fair, or at least tolerated as not unfair, if consumers know that customized pricing is at work. In effect, transparency requires that customers opt-in to transactions with customized pricing, either explicitly because of some potential benefit of lower prices, or implicitly when the practice is widely known (such as in the airline industry) and not buried in difficult-to-find-and-read disclosures.

This requirement that the practice of customized pricing be disclosed and that customers opt-in raises two further questions. First, what sort of disclosure is required? Ethical marketers will not hide behind the legalese of a typical disclosure statement that they know to be neither clear nor likely to be read (this would violate the commitments to “honesty, responsibility, fairness, respect, openness and citizenship” included in the AMA Code, in point 3 under *General Norms*). The airline industry does not explicitly disclose the practice but it has become widely known to travellers. The question is how other markets should proceed. Would a clear statement of the practice be sufficient, or would consumers need to be told the basis for customization, the personal data collected, and the range of prices offered?

Second, as noted, disclosing the practice brings with it risk. Consumers might refuse to shop at stores and websites that use the practice because they are worried about being exploited. Consumers might also refuse to shop at stores and websites that practice customized pricing in

order to protect their personal data. However, this is a choice consumers should be allowed to make.

In addition to ethical questions about the pricing policy, *per se*, customized pricing requires data collection that may be controversial. Some cases of customized pricing (if not customized, at least, highly segmented) rely on publicly available demographic data to segment customers into groups (such as Victoria's Secret's use of data to customize prices by zip code). Others will rely on personal data. If marketers expect to foster trust and improve consumer confidence in the integrity of the system, to be truthful and forthright, to balance the needs of the buyer with the interests of the seller, and to create transparency in the marketing system, they can collect and use individual/personal information to set prices only with the explicit knowledge of the consumer. The disclosure requirement might press businesses to rely on publicly available data rather than personal data. But the risk here is difficult to assess: customized pricing has not hurt the airlines' business, and in other market segments the practice is widespread and widely acknowledged (e.g., the auto industry). But in those examples customized pricing does not depend on the collection of personal data, or even assumptions about personal information made on the basis of publicly available data. Ultimately, the task for marketers is to socialize customers to customized pricing by providing a balance between necessary transparency to consumers and the firm's need to keep confidential competitive specifics of their pricing policy .

A deeper discussion of the acceptability of using personal data is a topic for another paper. In this context, we can merely note that, although the use of some personal data is generally becoming more acceptable (in the U.S., not so in Europe) to tailor firms' marketing to consumers, much depends on the type of data. Consumers are more willing to tolerate firms' uses of internal data--past responses to offers from that firm--than tracking of shopping at and responses to offers from other sellers.

MANAGEMENT IMPLICATIONS

The simple economics of capturing consumer surplus, as illustrated in the pizza study, dictate that customized pricing increase profits. Research conclusions on practical implications, however, are mixed. Shaffer and Zhan (1995, 2000) argue that among similar firms, customized pricing could favor the individual firm but make worse the market as a whole, due to competitive price pressure. Ghose and Huang (2006), on the other hand, contend that, given quality differences, customized pricing would permit price competition without a Prisoner's Dilemma consequence. Of course, for most marketers, some quality differences exist.

A number of questions and concerns affect the profitability of customized pricing. One is the effect of consumers' long-run reactions and potential efforts to game the system. For example, consumers might forsake current purchases to lower their estimated reservation prices, then stockpile the product at lower price offerings.

Villas-Boas (2006) and Chen and Zhang (2007) differ in their conclusions about the profitability of firms in response to such consumer reactions. Stockpiling would be of greatest concern for marketers of frequently purchased products. Even for other products, such as the latest video game, where stockpiling is of little concern, consumers might manage their shopping behaviors to elicit a low price offer. Such careful and prolonged effort, however, may be atypical consumer behavior. Not only does it imply more elaborate than normal information processing, it also requires that consumers delay gratification.

Another open question for firms is the cost of customizing price--the cost of the data collection, management, and analysis. Most of these information costs, however, should be shared with the promotion and segmentation efforts of the firm, which comprise additional customized aspects of marketing.

Another possible challenge to customized pricing is distribution through gray markets. If consumers with low reservation prices can purchase in bulk, they could turn around and compete with the firm in selling to consumers with higher reservation prices. Such problems occasionally occur with geographic segmentation, but the problem is generally limited to bulk purchases made by channel members. If the price customization is done at the level of the individual consumer, gray market losses should be limited to the small volumes associated with e-bay resellers and such. Price customizers, however, may have to be wary of bulk purchasers.

To mitigate perceptions of unfairness, firms can take several steps. Because such perceptions involve comparisons of transactions, firms can simply deemphasize price information to individual consumers. The internet, of course, facilitates this; but, it may mean limited advertising of specific prices. Firms can also reduce perceived similarity of transactions by modifying other aspects insofar as possible. Product features, financing terms, shipping, warrantees, *etc*. may be adjustable. Consumers are less likely to focus on customized pricing, if *all* aspects of the offering are customized.

Because perceptions of unfairness are less likely when prices are associated with inescapable costs and more likely when associated with seller profits, firms should take care to avoid communicating the effects of customized pricing on profits in favor of its consequences for consumer welfare. Firms can stress the expanded availability of the product that results from customization of price.

Communications might also indicate the costs of providing individualized attention. A strategy of highlighting the individualized attention to consumers could present an honest description of the specific benefits of customization. Firms would need to be artful in presenting the fact of individualized pricing; but, firms with traditional pricing are also artful in identifying their costs and profits. An unwillingness to point out the difference between price and cost is understandable, for any pricing tactic, and should not be taken as dishonesty merely because pricing is customized.

In general, the effects of perceived unfairness, as is true for any negative, will be reduced by consumer trust and loyalty. To the extent that firms can treat customers well, with honesty and integrity, fulfilling their promises and delivering value over time, loyal consumers will be less concerned with perceptions of unfair pricing. Further, the perception that customized pricing is unfair would likely fade over time as norms of entitlement change. As noted, consumers already accept individualized pricing in several contexts. Kimes (1994) observed that acceptance of dynamic pricing by airlines was initially low but has increased with use. Thus, initial resistance to pioneering efforts in customized pricing may be overcome in time.

A more general challenge of customized pricing for marketers is delivering satisfaction. Because satisfaction is a function of perceived performance versus expectation, subject to the constraint that perceived performance must exceed perceived cost of purchase. Customized pricing presents consumers individually with a price that is perceived to be high. It is not so high as to preclude purchase; but it is high enough to reduce the margin for error on the performance

side of the value equation. Marketers must assure that products deliver the expected benefits. Managers must also be sensitive to the effects of situational factors on willingness to pay. As we observed in the pizza study, some consumers may be unwilling to buy at the reservation prices estimated from past behaviors. Those estimates may have been accurate but may not apply in the present. Managers need to accommodate such fluctuations in order to assure prices that result in positive exchange perceptions for consumers.

DISCUSSION AND CONCLUSIONS

Customized pricing is a powerful management tool. Firms can use it in a variety of ways: to retain loyal customers by giving them special discounts, to appeal to targeted non-users, to offer price reductions in various forms, to counter strong price threats from specific competitors, to stimulate overall demand by offering random or irregular price discounts, and to deal with higher service demanders (either discouraging them with higher prices or mitigating their problems with appropriate promotions).

The tactic is not without challenges. Chief among them is the ethical question of using individual information. Marketers should be honest about the pricing practice and forthright about what data they collect and how they use it. They should also take special care to ensure accuracy and security. The requirement to justify the use of the information to consumers may prove to be beneficial to marketing planning. Unless the benefits to consumers truly outweigh the costs, it will be difficult for marketers to make a good case. Marketers should not fall back on vagueness or jargon. Even worse, marketers should not risk the negative publicity that likely would attend discovery of covert customized pricing. If customized pricing is part of an integrated customization approach, the increased value to consumers should be legitimate and should be capable of clear communication. The long run benefits of honesty to the firm's reputation may serve as additional incentive. Moreover, although it is arguable that competitive forces drive value back to the consumer, limited research has shown that although the collected information is definitely valuable to the firm, there is no evidence that savings are passed on to consumers (Gertz 2002). Further research is required.

Other practical challenges remain. Customized pricing requires individualized transactions. It is well-suited for e-commerce, other direct marketing, and personal selling. Some face-to-face marketing opportunities may also exist. The interactions at the cash register may afford sufficient time and privacy for customized add-ons or up-selling, for example. Individualized price offers for future sales can certainly be included with sales receipts.

We have avoided discussion of the technical aspects of customized pricing. We should note, however, that a requirement for success with the tactic is that the prices be good estimates of willingness to pay. As with other aspects of customization, individualized pricing will be more acceptable to consumers to the extent that firms are successful in using data to generate appropriate fits with the individual consumers.

A limitation of our discussion is our presumption in most places of a single supplier. We have done so for simplicity of expression. In fact, research suggests that if competing firms engaged in customized pricing, the effects for consumers would be improved. Chen and Iyer (2002) showed that consumer surplus (they use the term "welfare") is decreased as more consumers are served by only one price customizing firm (they speak in terms of "addressability) and

increased as more firms are able to engage in price customization (their terms—lower costs of "addressability").

An interesting avenue for future research is the effect of customized pricing on consumer behavior. How will people respond to the knowledge that the prices they receive depend on estimates of their demand, which, in turn, depend on behaviors leading up to the price encounter? Skilled negotiators know the importance of hiding any indication of demand. In terms of the Persuasion Knowledge Model of Friestad and Wright (1994), customized pricing would be a seller tactic, based upon knowledge of consumers; and one should expect a consumer response to that tactic. Already, we have heard anecdotal reports of logging on via independent computers or under other identities to get access to promotions aimed at new customers. Others report that repeated visits to some internet sites can yield lower price offers (perhaps because the repeated visits demonstrate resistance to initial prices). We can expect consumers to show creativity once they get a sense of how customized pricing works. And, of course, marketers will be watching, anticipating.

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