



Customer Experience

# Pricing and the Psychology of Consumption

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Ask any executive how pricing policies influence the demand for a product or service, and you'll get a confident, well-reasoned reply. Ask that same executive how pricing policies affect consumption—the extent to which customers use products or services that they've paid for—and you'll get a muted response at best. We find that managers rarely, if ever, think about consumption when they set prices—and that be a costly oversight.



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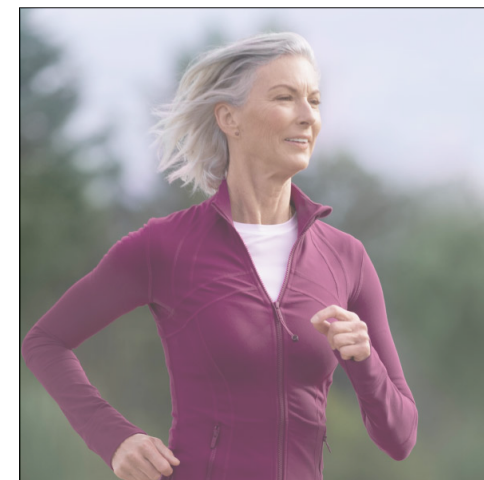
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Consider this example. Two friends, Mary and Bill, join the local health club and commit to one-year memberships. Bill decides on an annual payment plan—\$600 at the time he signs up. Mary decides on a monthly payment plan—\$50 a month. Who is more likely to work out on a regular basis? And who is more likely to renew the membership the following year?

Almost any theory of rational choice would say they are equally likely. After all, they're paying the same amount for the same benefits. But our research shows that Mary is much more likely to exercise at the club than her friend. Bill will feel the need to get his money's worth early in his membership, but that drive will lessen as the pain of his \$600 payment fades into the past. Mary, on the other hand, will be steadily reminded of the cost of her membership because she makes payments every month. She will feel the need to get her money's worth throughout the year and will work out more regularly. Those regular workouts will lead to an extremely important result from the health club's point of view: Mary will be far more likely to renew her membership when the year is over.

For many executives, the idea that they should draw consumers' attention to the price that was paid for a product or service is counterintuitive. Companies have long sought to mask the costs of their goods and services in order to boost sales. And rightly so—if a company fails to make the initial sale, it won't have to worry about consumption. To promote sales, health club managers encourage members to get the payment out of the way early; HMOs encourage automatic payroll deductions; and cruise lines bundle small, specific costs into a single, all-inclusive fee.

However, executives may be discouraging consumption when they apply those pricing practices. People are more likely to consume a product



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when they are aware of its cost—when they feel “out of pocket.” But common pricing practices such as advance sales, season tickets, and price bundling all serve to mask how much a buyer has spent on a given product, decreasing the likelihood that the buyer will actually use it. And a customer who doesn’t use a product is unlikely to buy that product again. Executives who employ those pricing tactics without considering their impact on consumption may be trading off long-term customer retention for short-term increases in sales.

## **The Psychology of Consumption**

Let’s look more closely at why consumption is important and how pricing affects consumption.

### **Higher consumption means higher sales.**

One of the first steps in building long-term relationships with customers, we believe, is to get them to consume products they’ve already purchased. Research has repeatedly shown that the extent to which customers use paid-for products in, say, one year determines whether they will repeat the purchase the next year. One field study, for instance, found that health club members who worked out four times a week were much more likely to renew their memberships than those who worked out just once a week. According to another study, customers who regularly used an enhanced cable television service in one year were more likely to renew their subscriptions in the next year than those who used the service only occasionally.<sup>1</sup>

**The extent to which customers use the products they’ve paid for determines whether they will repeat the purchase.**

Consumption is important to the bottom line in many ways. In businesses that sell subscriptions or memberships—like Time Warner, the YMCA, or the Metropolitan Opera—customer retention is vital. But keeping customers is tough: Most magazines experience renewal rates of 60% or less, and health clubs retain just 50% of their members every year. As competitive pressures intensify and the cost of customer acquisition rises, a key to long-term profitability is making sure that customers actually use the products and services they buy.

Consumption also helps establish switching costs. In the software business, for example, companies often make more money selling upgrades than selling the initial application. Once customers start using an application, they have to either buy upgrades or make the painful transition to another system. Companies whose software is purchased but never used—shelfware, as it's disparagingly called—miss the opportunity to lock customers in for the long term.

Consumption is no less important for businesses that rely on a two-part revenue stream. For movie theaters, sports arenas, and concert halls, ticket sales are just one source of revenue; parking, food and drink, and souvenir sales are a profitable second source. *Team Marketing Report* estimated that the cost for a family of four to attend a major league baseball game in 2000 was \$121.36. Only half of that sum was used to buy tickets; the other half was spent on beer, soda, hot dogs, programs, baseball caps, and the like. Clearly, if ticket holders don't attend events, these high-margin secondary sales are lost.

Still other organizations believe that their core mission includes encouraging certain kinds of consumption. HMOs, for instance, know that their clients' overall health will improve—and their own costs will be contained—if patients can be persuaded to get regular

immunizations and periodic checkups. But they have limited success making this happen. By one estimate, 15% of insured children do not get all the immunizations they need, 30% of insured at-risk women fail to get mammograms within any two-year window, and 50% of insured men over 50 fail to have physical exams within any three-year period.

Finally, consumption is important to any business that relies on satisfaction to generate repeat sales and positive word-of-mouth. For products as diverse as wine, books, and PDAs, customers won't purchase again or evangelize about products if they don't use them in the first place. Indeed, it's difficult to think of any business in which consumption does not make a difference.

### **Costs drive consumption.**

People are more likely to consume a product if they're aware of its cost. This is known as the sunk-cost effect: Consumers feel compelled to use products they've paid for to avoid feeling that they've wasted their money. It's well documented that consumers routinely consider sunk costs when deciding future courses of action. In one example made famous by Richard Thaler, a behavioral economist at the University of Chicago, a man joins a tennis club and pays a \$300 membership fee for the year. After just two weeks of playing, he develops an acute case of tennis elbow. Despite being in pain, the man continues to play, saying: "I don't want to waste the \$300."

In a similar vein, Hal Arkes, a psychologist at Ohio University, asked 61 college students to assume that, by mistake, they'd purchased tickets for a \$50 and a \$100 ski trip for the same weekend. The students were informed they'd have much more fun on the \$50 trip. They were then told they had to choose between the two trips and let the other ticket go to waste. Amazingly, more than half the students reported that they

would go on the less enjoyable \$100 trip. For those students, the larger sunk cost mattered more than the greater enjoyment they'd get out of the less expensive trip.

### **Pricing drives perceptions of cost.**

Our research also suggests that consumption is driven not so much by the actual cost of a paid-for product as by its perceived cost. This perception is influenced greatly by the manner in which the product is priced. Some pricing policies highlight the perceived cost of a paid-for product while other pricing policies mask the cost.

Consider something as simple as the method of payment. A \$10 cash transaction feels different than a \$100 cash transaction. Counting out currency and receiving change make a buyer very aware of the magnitude of a transaction. But a \$10 credit card transaction is, in important ways, indistinguishable from one for \$100—both involve merely signing a slip of paper.

### **Pricing tactics that mask rather than highlight prices reduce pressure on buyers to use the product in order to get their money's worth.**

Not surprisingly, people are better able to remember the cost of products if they pay with cash than if they pay with credit cards. In addition, they feel more pressure to consume products if they paid with cash than if they paid with a credit card. In one theater company we studied, the no-show rate for credit card customers was ten times higher than the no-show rate for cash customers. Other pricing tactics that mask rather than

highlight prices—like season tickets, advance purchases, and subscriptions—also reduce the pressure to consume the product in order to get the money’s worth.

### **Putting the Pieces Together**

Because pricing has such a powerful effect on consumption, managers must make careful decisions about when and how to charge for goods and services.

#### **Timing.**

Companies often have great discretion about when to bill for goods and services. Some companies demand payment at or near the time the product is to be consumed—this is true when you buy a Big Mac or a movie ticket. Other businesses require payment far in advance of consumption. Concert promoters and sports teams have long operated on this principle. Health clubs and country clubs also charge large, up-front initiation fees. Finally, some businesses allow customers to pay long after a product is purchased. Increasingly, automakers and consumer electronics companies advertise “buy now, pay later” schemes.

Companies make these timing decisions based on either financial considerations (payment sooner is better than later) or demand considerations (“buy now, pay later” increases customer demand). But that may be shortsighted. Payments that occur at or near the time of consumption increase attention to a product’s cost, boosting the likelihood of its consumption. By contrast, payments made either long before or after the actual purchase reduce attention to a product’s cost and decrease the likelihood that it will be used.

We conducted a survey at the Chicago Science Museum in 1997 to determine how timing affects consumption. We presented the following hypothetical scenario to 80 visitors: “Six months ago, you saw an ad for a theater event and called to reserve a \$50 ticket. Yesterday, you went to the box office and paid \$50 in cash for your ticket, which is nonrefundable. This morning, you woke up with the flu. The event is tonight. Will you go to the theater or stay home?” Almost 60% of the people reported that they would go to the theater. They were not willing to let the \$50 they had just paid for the ticket go to waste.

We then presented a slightly different scenario to another group of 80 visitors. This group was told that they had paid for the ticket six months prior to the event, rather than the day before. This time, less than 30% of the people surveyed told us that they would go to the theater. The only difference between the two scenarios was the timing of the payment. Yet that difference was sufficient to reduce the predicted consumption by 50%. The results of this as well as several similar surveys show that the immediacy of payment can be critical for the consumption of a paid-for product.

In fact, consumption closely tracks the timing of payments by customers. We analyzed data on the payment and attendance records of 200 members of a prestigious Colorado-based health club. All the members were contractually committed to one-year memberships that cost them \$600 each. The club’s pricing policies allowed members to choose from among four payment plans: annual, semiannual, quarterly, and monthly.

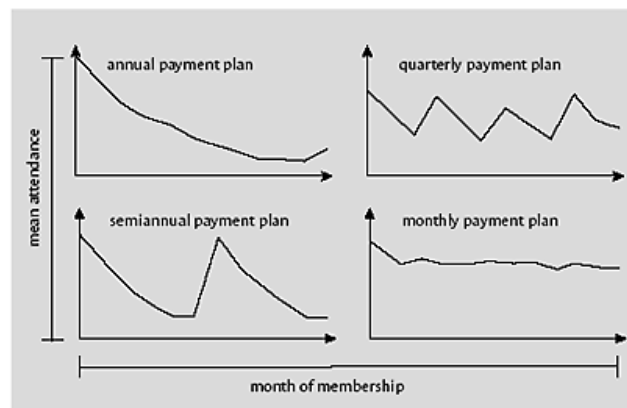
Members who made a single annual payment used the club most frequently in the months immediately following payment, reflecting a strong sunk-cost effect. But as time passed, the sunk-cost effect



dissipated. By the final months, individuals seemed to be treating their memberships as if they were free and worked out at a rate that was only a quarter of what it had been in the first few months. The same pattern held for members who had paid on a semiannual or quarterly basis: Attendance was highest immediately following payment, only to decline steadily until the next payment. This resulted in a sawtooth pattern of usage, spiking in the first and seventh months for semiannual payment members and every three months for quarterly members. By contrast, the usage pattern of members who paid on a monthly basis was smoother. Since they were reminded of the cost of their memberships every month, they used the facility at a steady rate (see the exhibit “Consumption Follows the Timing of Payments”). The timing of payments is important because it influences the club’s retention of customers. Members who paid on a monthly basis used the gym most consistently, making this pricing scheme the most likely to generate membership renewals.

#### Consumption Follows the Timing of Payments

Our analysis of one health club's records showed that consumption closely follows the timing of payments. Whether members made annual, semiannual, or quarterly payments, club use was the highest in the months immediately following payment and declined steadily until the next payment. Members who paid on a monthly basis used the gym most consistently, making this pricing scheme the most likely to generate membership renewals.



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### **Price Bundling.**

Organizations often bundle prices to increase the demand for products and services. This practice does increase short-term demand—but it may also reduce consumption.

Several studies demonstrate this tendency. We conducted a survey in a Colorado ski town, for example, presenting two slightly different scenarios to two groups of 50 skiers. The first group was told: “It’s early spring in Colorado, and you’re on a four-day ski vacation. The day you arrived, you purchased four one-day ski tickets for \$40 each. It’s now the morning of the last day. You’ve had three excellent days of skiing, but rain hit the area last night, making a mess of the slopes. A friend suggests that, rather than skiing, you take it easy and leave early to beat the traffic home.” We presented the same scenario to the other group with one important difference. We told members of the second group that, instead of purchasing four one-day tickets for \$40 apiece, they had each bought a four-day ski pass for \$160.

We asked members of both groups to report their likelihood of skiing on a scale of one to ten, where one indicated “definitely would not ski” and ten indicated “definitely would ski.” The average response of the first group was 7.0, indicating a high likelihood of skiing on the fourth day. The average response of the second group was 3.3, indicating a low likelihood of skiing.

The two scenarios were financially identical, so why the difference? In this study and in several others, we found that price bundling influenced consumption considerably. Quite simply, it is far easier to identify and account for the cost of an individual product in an unbundled transaction than within a bundled transaction. The one-to-one relationship between price and benefits in an unbundled transaction makes the cost of that item obvious, creating a strong sunk-cost effect and a high likelihood of consumption.

Nowhere is the impact of price bundling on consumption more obvious than in the case of season tickets. The purchaser pays one bundled sum for a collection of individual events, making it difficult to allocate costs to any one performance or game. This reduces the likelihood of its usage. We tested this out by analyzing ticket purchase and attendance data at a Shakespearean summer festival. The festival ran from June through August 1997 and involved the production of four plays. Some ticket holders had purchased tickets to a single play, some to two or three of the plays, and others to all four plays. What we found was that the no-show rate for people who had bought tickets to a single play was 0.6%, indicating that almost all ticket holders showed up. But the no-show rate for those purchasing tickets to two plays was 3.5%; for three plays, 13.1%; and for four plays, 21.5%. As the bundling of tickets increased from one to four plays, the likelihood of a person not showing up for one of the plays rose 35-fold.

One could argue that the higher no-show rate for those who had bought tickets to more than one play was due to other factors: boredom (ticket holders got sick of Shakespeare) or perhaps dissatisfaction (after the first play, ticket holders realized the quality of the performances was not very good). However, when we looked at only the first play each person had bought tickets for, the pattern remained the same. Compared with the

no-show rate of 0.6% for the single-play ticket holders, the no-show rate at the first play for those patrons who had purchased tickets to two, three, and four plays was 2.8%, 7.8%, and 15.8%, respectively. So, the bundling of tickets had much the same effect as the advance selling of tickets in our earlier examples: It hid the cost of each ticket. Unable to link the costs and benefits of any given play, patrons who purchased tickets to multiple plays increasingly treated their tickets as if they were free. With little sunk-cost pressure, many of these customers did not use tickets they had previously paid for, reducing their likelihood of repeating their ticket purchases for the following season.

### **Linking Price and Consumption**

We're not suggesting that executives throw out their current, demand-centered pricing policies and focus exclusively on encouraging consumption through pricing decisions. It wouldn't be realistic, and it wouldn't be smart. Many companies lack the ability (or the desire) to restructure their pricing practices. In some cases, industry norms or consumer expectations dictate the use of advance selling or price bundling. However, we believe that executives should take consumption into account when they set prices. Here are some suggestions on how to do that.

#### **Practice yield management.**

Managers can run operations more efficiently by anticipating actual demand given the naturally occurring mix of bundled versus unbundled purchases or the ratio of advance to current purchases. Consider the case of a theater manager. She might forecast a no-show rate of 20% if the proportion of season ticket holders is high but a no-show rate of only 5% if the proportion of season ticket holders is low. Armed with this knowledge, she could better manage costs by staffing according to

actual, as opposed to paid, demand. Alternatively, she could increase revenues by overselling some events and not others. In much the same way that an airline oversells a flight in proportion to the expected rate of no-shows, a theater manager could oversell performances where the no-show rate is expected to be high.

### **Stagger payments to smooth consumption.**

A second course of action, slightly more proactive but still within current pricing practices, would be to stagger billing cycles so that demand is smoothed over time. This is another form of yield management. Health clubs, for example, know that most of their new members sign up at specific times of the year, most commonly in January. But many still offer discounts to members who pay in full at the start of the calendar year. The net effect is that peak usage occurs in January, February, and March, which reduces customer satisfaction because of the strain it places on the facilities. Health clubs could stagger billing cycles to offset that trend. For instance, a health club could offer ten- or 14-month contracts, perhaps on a discounted basis, to break the cycle of January renewals. Over time, this change would help smooth demand and increase customer satisfaction.

### **Time payments to maximize consumption.**

Some executives can do more than react to demand: They can use their pricing policies to actively encourage consumption. Perhaps the most dramatic way to do this is to link payments more closely to benefits. Consider Boston Red Sox season ticket holders, who are asked to pay for tickets five months before the season begins. To promote attendance over the course of the season, Red Sox executives could spread out that one large payment. They could, say, bill patrons in four installments. Customers might even prefer this approach because smaller

installments are financially more manageable. Similarly, the health club we studied could increase usage and, thus customer retention, by promoting annual memberships with monthly, rather than annual, payments.

### **Psychologically link payments to benefits.**

Some companies view price bundling as a necessary tool to promote initial sales: If they eliminate price bundling, they could eliminate the sale. However, organizations could psychologically unbundle those offerings to promote consumption. One way of doing this would be to highlight the prices of individual items in the bundle after the payment has been made. For instance, travel companies could itemize the approximate cost of offerings in vacation packages. Some all-inclusive cruise ships already make guests pay for drinks, meals, and entertainment with beads to highlight the fact that nothing is really free. Restaurants could offer the same dishes both à la carte and as part of a fixed-price dinner, so that the cost of each item in the latter becomes clear. In the same way, HMOs could promote preventive care by itemizing the cost of individual services within the bundled fee, making the cost of those services more apparent to the customer. This would increase enrollees' likelihood of consuming the benefits (getting checkups, immunizations, and so on) they've already paid for.

### **Reduce consumption.**

Not all organizations want to encourage consumption all the time. Consider the manager of a truly scarce resource, such as a private golf course on a beautiful Sunday morning in June. Managing peak demand is the main concern. The current alternatives are to limit the number of customers admitted, as when a country club caps membership, or to accept all customers and run the risk of dissatisfaction when the facility

is at capacity. The first solution limits revenues; the second increases customer frustration. By managing when and how payments are made, executives can maximize the total number of customers who pay for their services and, at the same time, limit peak demand. If the golf course manager charges annual membership fees in January or February, long before the golf season has begun, a member's pain of payment will fade by the time the peak summer months come, reducing the need to get his money's worth. That should allow the club to maximize its membership base without turning away members wanting to play during the peak period. By contrast, if the club bills its members just prior to the peak season, say in May or June, it will be inadvertently promoting demand at its busiest time. Similarly, when vacationers at a ski resort buy a week's worth of lift tickets, the resort has the option of providing them with seven daily tickets or a bundled pass. The former will encourage consumption every day ("I'm not going to let today's ticket go to waste!"), while the latter will mask the cost of skiing on any given day and reduce crowds on the slopes. . . .

Managers spend a lot of time thinking about how to get customers to buy their products and services. But that's just half the battle. If organizations wish to build long-term relationships with customers, they must make sure their customers actually use their products. A first step is pricing.

1. Stefano DellaVigna and Ulrike Malmendier, "Self-Control in the Market: Evidence from the Health Club Industry," Working Paper (Harvard University, 2001). Katherine N. Lemon, Tiffany Barnett White, and Russell S. Winer, "Dynamic Customer Relationship Management: Incorporating Future Considerations into the Service Retention Decision," *Journal of Marketing*, January 2002.

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