



Here Today, Discounted Tomorrow: Strategic Shoppers Know When to Buy, and at What Price

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Some shoppers just can't help themselves and buy mostly on impulse without regard to price. Others are die-hard bargain hunters, who only open their wallets for a discount.

Then there are the strategic consumers, who are willing to buy full-price sometimes, but at other times they will wait for a bargain. According to new Wharton research, it's these customers that retailers need to focus on in order to reap the full benefits of lean retail inventory management and variable pricing.



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In a paper titled, "[Purchasing, Pricing and Quick Response in the Presence of Strategic Consumers](#)," [G rard P. Cachon](#), professor of operations and information management at Wharton, and doctoral student Robert Swinney show how lean inventory systems are far more effective than initially thought in helping retailers determine the ideal size of their orders and the best markdown strategies when taking strategic buyers into account.

"The consumers are thinking 'Should I buy it now or later?' They form expectations about how likely it is the item will be around and how big the markdown will be," says Cachon. "If a strategic consumer concludes the markdown will be big and available, they will wait. There is an interaction between retailers and consumers when it comes to deciding on pricing and quantity.... They are playing a game."

The research shows that when strategic consumers are factored into a theoretical model, lean inventory -- or so-called "quick response" -- systems are, on average, 67% more profitable.

"Although it is well established in the literature that quick response provides value by allowing better matching of supply with demand, it provides more value, often substantially more value, by allowing a retailer to control the negative consequences of strategic behavior. Furthermore, this latter benefit can be substantial," Cachon and Swinney write in their study.

Breaking the Pattern

In 2004, after company research found that about 20% of Best Buy customers were not profitable, CEO Brad Anderson labeled them "devils." At the same time, another 20% of the retail chain's customers accounted for its profitability. Anderson dubbed them "angels."

Cachon and Swinney set out to learn more about the remaining consumers, so-called strategic buyers, and constructed a model to predict consumer behavior in various retail inventory and markdown situations. The model represents a retailer selling a single product over two periods. In the first period, the retailer sells the product at full price, and in the second at a discount. The model then factors in three types of consumers: myopic consumers, who always purchase at the initial full price; bargain-hunting consumers, who purchase only at a discount, and strategic consumers, who deliberate about when to make their purchase. For example, the authors say, a strategic consumer may be willing to purchase a barbecue for \$350 at the start of summer but would prefer the chance to purchase it at the end of summer for 50% off the initial price.

Over time shoppers have been trained -- primarily by department stores -- to expect to pay full-price at the beginning of a retail selling season, but far less if they wait until inventory clearances roll in, says

Cachon. More recently, the availability of coupons from Internet shopping discount sites has made it easier for every day to be a "sale day" for hard-driving bargain seekers.

Cachon's study highlights one retailer that is breaking the now-familiar full-price/markdown pattern: Spanish apparel retailer Zara, which has developed a new retail business model limiting price discounts. The chain manufactures much of its inventory in Europe. Even though the cost of production is higher than it would be in Asia, the company can take advantage of quick turnaround on hot-selling items. When an item sells out -- that's it. Zara offers very little in the way of sales.

"When consumers walk into Zara, if they like an item they are trained to buy it then and there, because waiting doesn't pay off. If you wait, it's not available anymore," says Cachon. "Even if it doesn't sell out, it's not marked down that much."

Cachon stresses that the key to Zara's successful strategy is its investment in information technology and other tools that make up its quick response system. He notes that quick response is not a new concept in retailing, but the new study shows the strategy has enormous, untapped potential when turned toward helping retailers target strategic buyers. "Quick response increases profits, even without taking into account strategic consumers, by just enabling retailers to update inventory when they learn about demand. But when you throw in strategic consumers [the increase] is even greater, often substantially greater."

More Barrys, Jills and Buzzes

Cachon says there is no hard evidence that the number of strategic consumers is increasing, but he points to anecdotal signals, including Best Buy's efforts to identify and develop new strategies for its own best shoppers, which it divides into three segments: High-income men, referred to internally as Barrys, tend to be enthusiasts of action movies and cameras. Suburban moms, called Jills, are busy but usually willing to talk to sales clerks about products that might help their families; and finally, male technology lovers, nicknamed Buzzes, are interested in acquiring and showing off the latest gadgets.

Consumers like these have ever-increasing access to pricing information, from Internet shopping site comparisons to competitor discount coupons, Cachon notes. "Consumers have a lot more information than they used to.... Over time people have become aware that there is this pattern in retailing. The price starts high, then there is a deep discount."

Zara has trained consumers the other way, although Cachon says he does not think the company set out to do that intentionally. "I think it was just a coincidence. They did production in Spain and had a quick response system and started this philosophy. Then at some point, they realized the power of that model."

According to Cachon, the importance of the research is recognizing the link between retailers' own strategies and the consumers' reaction to them, which then feeds into the profit equation. "We find that a retailer can incur a substantial loss in profit by ignoring strategic behavior," Cachon and Swinney write. "Failing to recognize strategic behavior leads the firm to order too much inventory, which makes deep discounts to clear inventory at the end of the season more likely. When consumers expect deep discounts, they are more likely to be patient and wait for a sale. Although retailers may dislike having to take markdowns, we find that a commitment to never markdown merchandise is generally not the best approach to deal with strategic consumers (even if such a commitment could be made credibly). The better approach is to be prudent with the initial inventory and then to dynamically and optimally discount."

This model is most powerful for retailers selling products affected by timeliness, Cachon adds -- for example, high-fashion apparel or technology items that might quickly be supplanted by new devices. "Apparel is very seasonal, and when you have a little too much inventory at the end of the season, the temptation is to mark it down, just to move the inventory out." Products that are commodities, such as many consumer packaged goods, are not particularly suited to adjusting for strategic consumers. "If the retailer doesn't sell a box of Tide today, he will sell it in the future," says Cachon. "This really does apply to something that has a short lifespan."

Waiting for Cheaper Tickets

The research by Cachon and Swinney might also be useful for airlines.

"[Airlines] used to be able to charge an outrageous amount for walk-ups, but in the past five to 10 years, the price differential between the most expensive and the cheapest tickets has come down," says Cachon. "I think that's partly because consumers are a little more savvy. They may be willing to pay \$1,000 for a flight from Philadelphia to Chicago, but if they can get it for \$150 -- why not?"

Southwest Airlines, he notes, offers low fares daily. The airline loses out on the big spenders, identified as "myopic" customers in the research, but it is also less vulnerable to strategic consumers who will adjust their behavior to save money.

A consumer's income level is just one way to determine which buyer might become a hard-core bargain hunter, a myopic spendthrift, or a strategic buyer, according to Cachon. Another consideration is the amount of time available for shopping, with time-pressed consumers willing to pay more for an item to save time.

"A really rich person does not want to be bothered with finding a good deal, but there is a middle ground -- people who make a good income and could buy something at full price but are willing to shop a little," Cachon notes.

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