

Training customers to help your business

All those people in the TV commercials announcing that they would celebrate by going to Disney World might have shorter waiting lines for the rides if the folks at Disney have paid attention to research by [Ali Parlaktürk](#).

Parlaktürk, assistant professor of operations, technology and innovation management at UNC Kenan-Flagler, studies the interactions between firms and their customers, how businesses can dictate customer behavior and how decisions businesses make can inadvertently train customers to behave in ways that are counterproductive to the business.

"Oftentimes in the operations management literature, customers are treated like robots – you set a price, and they buy it," Parlaktürk said. "We don't really think too much about choices customers can make to use to their advantage."

In some of his early work, Parlaktürk looked at the impact of customers' self-interested routing in a service network. Customers should be making decisions based on what's best for them. How can a business that operates as a service network use that to increase customer satisfaction and ultimately increase the customers in its network? Parlaktürk used the attractions at Disney as an example.

Without any intervention from Disney service managers, the lines for the most popular attractions will be the longest. But long lines make customers grumpy and color their feelings toward the business. Parlaktürk used analytical mathematical equations and computer simulations to show how businesses could apply priority rules to achieve a more uniform distribution of customers across attractions. For example, Disney could give a priority service pass for the most popular attraction to customers who had first visited two of the less popular rides. Disney could change the incentivized routing sequence at different times during the day, depending on the flow of customer volume and the length of the ride, to reduce the line buildup at various attractions.

"My research shows that priority rules are an important lever," Parlaktürk said. "The firm dictates a policy; the customer responds."

Parlaktürk's latest research analyzes the value of having a variety of products when selling to strategic customers, those buyers who decide not only whether or which model to buy but also when to buy to best suit their goals. Some researchers have studied how firms inadvertently train their customers to wait to buy once the price has been marked down. Other researchers have looked at how offering lower-priced models cannibalizes the demand for higher-end products. Parlaktürk marries the two literature streams to mimic the way many firms operate -- offering a variety of product models to choose among and periodically putting some or all of them on sale. His findings are most relevant to fashion, technology and seasonal product purveyors.

"When you offer more product variants, will it make this problem of waiting for a discount worse, or will it help alleviate the problem a little bit?" Parlaktürk said. "If firms use product variety carefully, they can reduce the loss due to strategic customer waiting. If they apply the variance carelessly, they may actually hurt themselves."

Customers have become more sophisticated buyers as Internet shopping grows more pervasive. Parlaktürk sees a trend of customers waiting for discounts. "They've become very

good at guessing when discounts will happen," he said. "They'll communicate with each other. This is a big problem for retailers."

Such strategic customer behavior affects firms' pricing as well as product assortment decisions. Firms give discounts if not enough people buy their product at full price. If, several months after the start of a product's selling season, there is still a sizeable number of customers who haven't purchased the product yet, a firm will offer a discount. Customers know this, and the market segment that wants to buy at a lower price waits for the price reduction. But if the company offers a lower-priced model concomitantly with the higher-priced version, some of the discount-loving customers will buy the lower-priced model at the start of the selling season.

"By serving a larger market upfront, the firm is less likely to give discounts later on, and the customer learns that the chance of getting a discount by waiting is low," Parlaktürk said.

One way to counter the trend is to offer only a limited amount of product for sale. Once that limited stock has been sold, no more will be available. This encourages customers to buy sooner, instead of waiting to see whether the price will drop over time.

Another method is to offer price guarantees. A customer can buy the item early in its selling season, knowing that if the price drops later on, the company will refund the difference to the full-price buyers. Companies thus reduce the hesitancy discount-loving customers have in buying early. The more customers who buy early, the less chance that there will be inventory left later on that will be discounted.

In a down economy, customers will wait more patiently for a discount, Parlaktürk said. Offering a low-price variant along with the high-priced model would work best in a slow economy. A product's value decreases over time, so if price were not a factor, all customers would be motivated to buy the product as soon as it came out. Offering a low-priced variant reduces the motivation for discount-loving customers to wait. Budget-conscious consumers can buy a version of the product at the height of its value -- when the product first comes on the market -- and still get it for a good price. The more buyers upfront, the less inventory left to discount several months down the road.

"Changes in the economy force you to think about what your optimal product line should be," he said. "The quality gap between the two products is critical. You need to think carefully about product assortment and strategic customer behavior because they are closely related to one another."