

# Research focuses on impact of strategic shopping

July 16 2018

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The study found that producing a product that is significantly more innovative than its older version can persuade strategic customers to buy the newer version right away. Credit: University of Texas at Dallas

A new study from the Naveen Jindal School of Management at UT Dallas examines how companies that push product innovation can persuade consumers to purchase the latest gear.

Dr. Metin Cakanyildirim, professor of [operations management](#), and Dr. Suresh Sethi, Eugene McDermott Chair of Operations Management, are co-authors of the study, which was published online in *Production and Operations Management*.

"When people know that a new [version](#) of a product is coming, they either wait to buy the new one, or when the new one comes, they buy the old one at a discounted price," Sethi said. "Some people just want to have the newest products. Others wait until the new product becomes bug-free or less expensive."

The paper uses Apple and Zara as examples of companies that make significant investments in research and development activities and frequently bring out new products.

For example, Apple has introduced a new iPhone version each year for several years at predictable times, and there was hype about the new technology and price points. Spanish fashion retailer Zara is famous for its short design-to-market cycle time of only a few weeks.

With the introduction of new product versions, companies usually mark down the price of old versions, which cannibalizes the sales of new versions.

While some consumers are shortsighted, or myopic, others are forward-thinking, or strategic. When deciding on their purchases, strategic customers may delay their purchases of the old version in the anticipation of the introduction of a new version. They also may wait for a markdown of the old version, which usually occurs together with the

arrival of a new version.

Cakanyildirim said strategic customers have become more common as consumers have gained access to more information through news outlets and social media. They can track changes to prices, quality and forthcoming innovation.

Persuasion of strategic customers to buy early at full prices, instead of waiting for markdowns, has become a challenge for many [firms](#). On the other hand, because myopic customers don't think about the future, companies have a better idea of how to deal with them.

### Incentive to Innovate

The study shows that, contrary to conventional wisdom, having customers who strategically wait for a new product can give a firm more incentive to innovate when dealing with an unknown demand.

"Conventional wisdom says that if you are facing strategic customers you suffer in terms of profit because you have to reduce the price to persuade them to buy early," Cakanyildirim said. "This reduces your return on innovation investment and in turn your incentive to innovate."

However, the analysis found the opposite could happen. To optimize profits, a firm should produce less of the old product version to motivate strategic customers to buy early and purchase fewer old version items as the company innovates more.

When a firm produces fewer of the old version, a greater number of customers who were unable to buy that version may instead buy the [new product](#), giving the firm more incentive to innovate. A lower production level also leads to less leftover inventory of the old version.

## Persuading Strategic Customers

Introducing a product that is significantly more innovative than its older version can persuade strategic customers to buy the newer version right away, again giving the firm more incentive to innovate. In this scenario, even strategic customers are more likely to buy a significantly improved product rather than settle for a price reduction of an older version.

"The [customer](#) has to decide whether, 'I want to buy now,' or 'I want to wait,'" Sethi said. "When you wait, you have a fork in the road. In some cases, you may get nothing because the old inventory runs out. In some cases, you may get a discount. The customer has to weigh between these options, and the result depends on how much inventory there is."

The study looks into other decisions, including [prices](#), inventory levels and rollover strategies—whether or not to keep leftover inventory in the market. If a firm changes some of these decisions in accordance with what strategic customers are likely to do, it can reduce the amount of profit erosion caused by them and sometimes totally eliminate the erosion.

The researchers built a stylized model with a monopolistic firm to determine how different customer behavior affects a firm's innovation decisions. They said while this research deals with monopolies, future studies may incorporate the competition aspect.

**More information:** Chao Liang et al. Can Strategic Customer Behavior Speed Up Product Innovation?, *Production and Operations Management* (2018). [DOI: 10.1111/poms.12880](https://doi.org/10.1111/poms.12880)

Provided by University of Texas at Dallas

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