

Study: Personalized promotion a potential 'win-win' for retailers, consumers

September 27 2019, by Phil Ciciora



“Personalized promotion” is a potentially lucrative opportunity for retailers to extract even more money from consumer wallets that also enhances customer satisfaction, said Yuqian Xu, a professor of business administration at the Gies College of Business at Illinois. Credit: L. Brian Stauffer

With online-to-offline service platforms such as DoorDash experiencing

rapid growth, consumers reap the convenience of the digital age while retailers get to collect a raft of data on their spending patterns.

According to a paper co-written by a University of Illinois expert who studies operations management, access to consumer data from online-to-offline service platforms affords retailers a distinct opportunity to develop uniquely tailored promotional strategies that can increase sales.

"Personalized [promotion](#)" is a potentially lucrative opportunity for retailers to extract even more money from consumer wallets that also pays the additional dividend of enhancing [customer satisfaction](#), said Yuqian Xu, a professor of business administration at Illinois.

"Personalized promotion is a bit like price discrimination, which is somewhat controversial historically, because you're selling the same product at different prices to different consumers," Xu said. "Scholars have long argued about whether price discrimination is good or bad for the consumer and for society. But in this case, in the form of 'personalized promotion,' we find that not only does it bring more revenue to the retailer, it also increases consumer satisfaction, both of which should be of interest to managers in the highly competitive online shopping marketplace."

The paper examines the economic value of price discounts via a unique field experiment in China with a leading online-to-offline platform that counts more than 50 million active users. The scholars implemented a personalized promotion algorithm with nine big-box retail stores that utilized an online-to-offline platform and compared the results against two stores that didn't implement personalized promotion but still maintained a regular mass-promotion strategy.

The researchers found that, when compared with the control stores, personalized promotion led to, on average, a 1.6% increase in the total monthly transaction amount; a 3.2% increase in the number of items

purchased per order; and a 2.2% increase in the probability of a five-star rating.

"At first glance, those numbers might not seem like a lot, but in the retail industry, 2 percent is a lot," Xu said. "Given a 50 million consumer base, we found that personalized promotion translates into an additional \$270 million in revenue per year. While generating that additional revenue, it also decreases regular promotion costs by almost \$0.25 per consumer per month."

But the timing of the effects are mixed, Xu said.

"We also found that personalized promotion has limited immediate effects," she said. "The positive effects on revenue increase at first, but then decrease over time. On the other hand, the positive effects on consumer satisfaction become significant only after a sufficiently long time period—nine months or so."

The effects are greater for new consumers and less for frequent and high-value consumers, according to the paper.

"The positive effects on revenue are less for consumers with high historical transaction amounts and frequency, but those effects can be offset by generating additional revenue from new consumers," Xu said. "But the longer consumers are involved with the platform, the less likely their purchasing behaviors are affected by personalized promotion. That means that, over time, retailers would need to re-target less-engaged consumers and try to target new consumers."

The paper provides several practical implications for businesses that rely on [consumers](#) who shop through an app on their smartphone or through online-to-offline portals.

"First, our main results demonstrate the personalized promotion can be a 'win-win' for both the retailer and the consumer," Xu said. "It generates more money for the retailer, and it improves overall consumer satisfaction. But it requires nine months or more for those positive effects to take hold. In other words, the platform and the retailer should be patient. But since the [positive effects](#) decrease in the long run, that means that the [platform](#) and the retailer also should be aggressive about courting new customers."

More information: Baile Lu et al. The Value of Personalized Promotion: Field Experiment on O2O Platform, *SSRN Electronic Journal* (2019). [DOI: 10.2139/ssrn.3445110](https://doi.org/10.2139/ssrn.3445110)

Provided by University of Illinois at Urbana-Champaign

Citation: Study: Personalized promotion a potential 'win-win' for retailers, consumers (2019, September 27) retrieved 17 May 2024 from <https://phys.org/news/2019-09-personalized-potential-win-win-retailers-consumers.html>

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