Cost savings from add-on pricing may result in profit loss

September 29 2015, by Brittany Magelssen

When Dr. Xianjun Geng traveled to a conference in San Francisco in 2009, he booked a four-star hotel on a discount travel website for $80 a night. Upon his arrival, he learned of some unexpected add-on fees, including $40 for parking and $18 for Internet per day.

Geng, an associate professor of information systems in the Naveen Jindal School of Management, said he was annoyed that he was unaware of these extra fees, but he also was curious.

The experience inspired him to conduct a study examining the increasingly popular add-on pricing model of hotels, airlines and banks. He and co-author Dr. Jeffery Shulman of the University of Washington built a new model to see if cost savings can trigger more intense competition among firms.

"My colleague and I thought, 'We have to do something about this issue,'" Geng said. "We think this is something that is getting really annoying for consumers, and at the same time, businesses seem to enjoy the whole thing."

The paper recently was published in *Production and Operations Management*.

Geng said the add-on concept is not limited to a particular industry. Add-on prices have created an opportunity to increase revenue from the customers who value the add-on products or services.

"It's not something new. It's just getting more and more intense," he said. "Hotels may charge for access to the pool, and some airlines now charge for snacks. We all know that banks charge you all kinds of fees. The number of fees invented in the banking industry in the last 10 years has almost doubled."

According to the study, firms often cite savings as a reason why they charge separately for add-ons, rather than adopting all-inclusive pricing, in which add-ons are included for free.

Nevertheless, Geng's study suggests that cost savings from add-on pricing may result in profit loss for firms when compared to all-inclusive pricing when consumers are diverse in price sensitivity. Price sensitivity is the degree to which price affects the sales of a product or service.

The study also found that firms can get locked into a "prisoner's dilemma," in which they adopt add-on pricing, even if it means losing profits.

"For example, say my competitor does not do add-on pricing," Geng said. "Then it becomes profitable for me to do add-on pricing. If I separate the prices, I have more flexibility in terms of pricing, but that benefits me only if my rival doesn't follow me.

"There are some cases where the rival says, 'If you are doing add-on pricing, then the best response is for me to also do add-on pricing,' and then the firms cannot get out of the prisoner's dilemma. Our paper is the first to say that add-on pricing can lead to less profit for both competing firms."

Also according to the study, the greater the cost of providing the add-on, and the greater the cost savings generated from add-on pricing, the worse the profit loss can become.

Another contribution of the study is a tool that managers can use to identify if add-on pricing will make or lose money for a firm.

"Add-on pricing provides a good chance for firms to discourage wasteful spending," Geng said. "The person on the plane who drinks only if the alcohol is free will stop drinking all the liquor, once they charge for it. Although it appears apparent that add-ons can save firms some cost, firms should be very cautious because the same action could lead to more intense competition and thus eventually hurt their profit."

Key Questions

According to the study, when considering separating a service from the all-inclusive price, a manager should use market research to address these questions:

- How does the price sensitivity of consumers who buy only the base product compare to the price sensitivity of consumers who value the add-on?
- How many consumers will use the add-on only if it is offered for free?
- How great is the marginal add-on cost?
- Will the competitor independently discover and implement the add-on pricing opportunity?

More information: "How Costs and Heterogeneous Consumer Price Sensitivity Interact with Add-On Pricing." *Production and Operations Management* (2015), DOI: 10.1111/poms.12400

Provided by University of Texas at Dallas