Researchers' model helps predict consumer spending

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When a business wants to predict consumer expenditures at a competing firm, the task can be difficult.

A recent study from The University of Texas at Dallas uses a new methodology to predict consumer spending at competitors.

The study, published in the *International Journal of Research in Marketing*, examines share-of-wallet, a measure of how much of a customer's spending in a defined category is captured by a retailer. For example, if a customer spends $100 per month on fiction books—$80 at Amazon.com and $20 at Barnes and Noble—then Amazon's share-of-wallet would be 80 percent.

"Share-of-wallet is related to untapped customer potential, effectiveness of marketing activities and competitive benchmarking. It also has been used as a loyalty measurement," said Dr. Ashutosh Prasad, professor of marketing in the Naveen Jindal School of Management and one of the study's authors. "It's a useful metric to track because you can determine the spending at the level of the individual. Then you can ask questions like, 'Which customers should we target with our marketing activities?'"

Measuring share-of-wallet is problematic because expenditures at competing stores are not easily available, Prasad said. But marketers can use past information, obtained from surveys or information aggregators, and sales at their own store, to predict it.

The researchers propose a better methodology for prediction. For example, if Amazon has data of expenditures on not only fiction books at Amazon and Barnes and Noble, but also nonfiction books, then the interrelationships between spending on fiction and on nonfiction can be studied to make a better prediction.

With the model, managers can better target customers who spend a large amount of money on fiction books, but do not spend much of that money at their store.

"These are the customers who are potentially very profitable to target," Prasad said. "You hope to increase the amount they spend with you because they already spend lots of dollars."

The firm also can efficiently determine the order of cross-selling—when a company promotes one category, and that category has an effect of encouraging sales in another category. For example, Prasad said, if consumers who buy fiction books also buy more nonfiction books, but less so the reverse, then a store should promote the fiction books.

The methodology also reveals segments of customers. Application of the model to credit card use uncovered a large segment of consumers whose expenditures are based primarily on habit. A smaller segment of consumers tends to be sensitive to how much income they have, and that affects how much they spend on one category versus the others.

"The allocating segment, the ones influenced by income, spends on average twice as much as the habitual segment," Prasad said. "They're also a little bit older, and they have a higher proportion of men, and a higher proportion is self-employed. On average, they also have higher income. The data reveals different segments, and that's really useful."

The paper was developed from a chapter in Sungha Jang's PhD

dissertation under Prasad and co-author Dr. Brian Ratchford, the Charles and Nancy Davidson Chair in Marketing. Jang, now an assistant professor of marketing at Kansas State University, graduated from UT Dallas with a PhD in marketing in 2011.

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