Spiegel research reveals 4.5 stars are better than 5

8/04/2015

By Beth Moellers

New data shows that shoppers are most likely to buy a product ranked between 4.2 and 4.5 stars in online reviews. As the rating gets closer to a perfect 5.0, purchase likelihood drops.

The IMC Spiegel Digital & Database Research Center fellows worked with a database of ratings data in the consumer packaged goods category supplied by PowerReviews, a Chicago-based firm that provides reviews and ratings service to online retailers. The team recently presented its findings first to PowerReviews CEO Matt Moog and then later to PowerReviews' top clients.

The fellows found two key insights about star ratings for products.

1) **Five-star ratings are infrequently the most desirable.** The research team believes this is because of the "too good to be true" factor. Shoppers perceive a lack of credibility if reviews are too positive. Low star ratings contribute to the deviation in average star rating, which allows products to attain an

rating, which allows products to attain an optimal average star rating where purchase likelihood is at a maximum.

2) The **impact of star rating varies across product segments, as well as between expensive and inexpensive items within high-involvement product categories**. Our findings show that stars matter most with expensive items within high-consideration categories, where safety and quality are of concern.

The fellows found even in less expensive but high-involvement products, ratings matter because involvement outweighs cost in the importance of ratings. For example that star ratings of baby food really matter even though it is a low-priced item, because it is a high-involvement product. Baby food is a high-involvement product because parents care deeply about giving their baby safe, healthy food.

"If people sense any kind of risk, then reviews matter more," Spiegel Center's Executive Director Tom Collinger said.

The project was ideal for Spiegel researchers to tackle, said Collinger, because reviews are an area where consumers engage. Spiegel Research Center's mission is to do evidence-based, data driven analysis to prove the relationship between customer engagement and purchase behavior.

"Reading and posting reviews are important types brand dialogue behavior," Collinger said. Star ratings and reviews are peer-generated content, and are often not prompted or moderated by a brand, so are perceived by consumers as unbiased.

The Spiegel Research Fellows are a team of graduate students in the [Integrated Marketing Communication program at the Medill School of Journalism, Media, Integrated Marketing Communications](#). As part of the fellowship, during the winter quarter, the students took an advanced data analysis class taught by Spiegel Research Director Ed Malthouse.

In the spring quarter, the team took an independent study class "Spiegel Research Center Engagement Study," where they began work on the PowerReviews database.

For Spiegel Fellow Karen Wang, learning to mine big data for marketing insights was invaluable.

"I not only had more sophisticated training in manipulating data and applying statistical models, but also gained deeper insights of the e-commerce environment and online purchase behaviors," Wang said. "The project is definitely one of the best parts in my IMC education."

The research experience is already paying dividends while Wang is working at Zoro an e-commerce B2B company this summer as part of her [Immersion Quarter](#) project.

"The step-by-step data research training of Spiegel offers me a mindset of how to raise hypotheses and then prove them through different models," Wang said.

For Spiegel Fellow Chirag Shankaraswamy the project provided a chance to get comfortable with handling large datasets which have various limitations. For example the team didn't have data about what other items the

consumers bought or the marketing mix used to promote each of the products.

"This was an exposure into how the real world actually is," Shankaraswamy said.

The chance to dive into data has helped shape Shankaraswamy's interest in data analysis in his future career. "I wasn't aware of the option of taking a path like this," Shankaraswamy said. "I have to say that the research fellowship that really pushed me in this direction."

The process of analyzing the data, working with the models, uncovering the insights and then learning how to step back from the data and use it to tell a larger story was an eye-opening opportunity for Shankaraswamy.

"I had a lot of access to (Research Director) Ed (Malthouse) and it really made me very, very comfortable with handling data," Shankaraswamy said. "When I look at a large dataset now, I know where to start."

It should be enticing for prospective IMC students to see the scale of the opportunities that students have at Medill, Shankaraswamy said.

"I think this should be a nice opportunity to showcase what you can achieve here."