

# Online buzz forecasts new product performance months before product release

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Companies can significantly improve the forecasting accuracy of forthcoming products' performance by mining online consumer buzz prior to product release, according to a study being published by *Marketing Science*, a journal of the Institute for Operations Research and the Management Sciences (INFORMS).

Social media attention to a firm's forthcoming products also influences its stock price, the study shows.

[Pre-Release Buzz Evolution Patterns and New Product Performance](#) is by Guiyang Xiong and Sundar Bharadwaj, professors at Terry College of Business at the University of Georgia.

Sales forecasting before product release has been an important but challenging task, especially for new products without prior sales history.

Pre-release buzz refers to consumers' online conversations (e.g., in blogs and online forums) about a new product before its release. "Online buzz is frequent, curated, and can be conveniently tracked. With increasing consumer chatter and declining computing and storage costs, such buzz can be mined for evolving patterns over time," said Xiong. These patterns reflect changes in consumer interest, vary by product, and can predict new product performance.

For example, the game *Alan Wake* gained increasing buzz over time before its release, making it one of the most anticipated and successful

games released in 2010.

"Amazingly, the partial pattern of buzz evolution months before product release can forecast new product sales more accurately than the cumulative buzz until the day of product release," said Xiong. Such accurate forecasts of a new product's sales well before its release allow sufficient time for managers to make critical changes to the product's design or marketing. In contrast, traditional forecasting relies on past sales to predict future sales, which is not useful for pre-release strategies.

In addition, the research finds a key link between pre-release consumer buzz and firm stock prices: Stock prices react immediately and positively to increases in buzz volume before product release. This means that firms do not have to wait until product release to capitalize on the new product.

"Firms may consider communicating early to investors about pre-release buzz to increase investor awareness of the buzz," Bharadwaj said.

For their study, the authors examined over 800,000 blog and forum postings of more than 600 new video games released in 2009 and 2010. Building on recent advances in statistics and math modeling, they employed Functional Data Analysis.

By analyzing the shapes of pre-release buzz evolution, this statistical model reduces forecasting error by 15-40% compared to the model based on product characteristics alone.

The authors also examined the factors that influence pre-release buzz, such as advertising and new product alliances, thus providing firms with guidance on how to manage the dynamics of pre-release buzz to enhance new product performance.

Provided by Institute for Operations Research and the Management Sciences

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