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Multi-Dimensional Observational Learning in Social Networks: Theory and Experimental Evidence

Liangfei Qiu
University of Florida, liangfei.qiu@warrington.ufl.edu

ARUNIMA CHHIKARA
University of Florida, arunima.chhikara@warrington.ufl.edu

Asoo Vakharia
University of Florida, asoo.vakharia@warrington.ufl.edu

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TREO Talk Paper

Liangfei Qiu
University of Florida
Liangfei.qiu@warrington.ufl.edu

Arunima Chhikara
University of Florida
Arunima.chhikara@warrington.ufl.edu

Asoo Vakharia
University of Florida
Asoo.vakharia@warrington.ufl.edu

Abstract

Over the last decade, there has been an unprecedented growth of social media platforms (e.g., Instagram, and Pinterest). This growth has resulted in significant increases in the availability of individual-specific information such as holiday pictures, mobile check-ins at restaurants, to everyday purchases. Besides sharing their data, about 72% of Instagram users also made purchase decisions after seeing something on Instagram, with the most common categories being clothing, makeup, shoes, and jewelry[1]. In a similar vein, Pinterest, an image-based social platform, has product rich pins that facilitate users to discover new products: In 2016, 55% of U.S. online users shared that their primary use of Pinterest was to find and shop for products[2]. The prevalence of consumers sharing their purchases on social media platforms (e.g., Instagram, and Pinterest) and the use of this information by potential future consumers have substantial implications for online retailing. Consumers can observe the purchase information shared by their "friends" or "strangers." The product offerings on a social network are diverse and led us to integrate products with different attributes. One approach to classify product types by distinct characteristics is to consider how these attributes drive consumer choice, i.e., classification of products with vertically and/or horizontally differentiated attributes.

In this study, we examine how product characteristics and the type of information provider jointly moderate the purchase decision in a social network setting. We first propose an analytical observational learning framework integrating the impact of product differentiation and social ties. Then, we use two experimental studies to validate our analytical results and provide additional insights. Our key findings are that the effect of learning from strangers is stronger for vertically differentiated products than for the horizontally differentiated product. However, the impact of learning from friends does not depend on whether the underlying product is horizontally or vertically differentiated.

What is more interesting is the nuanced role of social ties: For horizontally differentiated products, the effect of learning increases with the strength of social ties. In addition, "contact-based" tie strength is more important than "structure-based" tie strength in accelerating observational learning. These findings can motivate online retailers to generate alternative strategies for increasing product sales through social networks. For example, online retailers offering horizontally differentiated products have strong incentives to cooperate with social media platforms (e.g., Instagram and Pinterest) in encouraging customers to share their purchase information.

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[1] See https://www.retaildive.com/news/study-instagram-influences-almost-75-of-user-purchase-decisions/503336/ (last accessed: April 22, 2020).

[2] See http://www.businessinsider.com/pinterest-is-the-top-social-network-among-online-shoppers-2016-6 (last accessed: April 22, 2020).