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**TOPIC ANALYSIS OF ONLINE REVIEWS FOR TWO COMPETITIVE PRODUCTS
USING LATENT DIRICHLET ALLOCATION****Wenxin Wang, Yi Feng (contact author), Wenqiang Dai**

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ABSTRACT

The voice of the customer plays an important role in product competition. Traditional methods in the area have largely focused on market research and questionnaire surveys to obtain customer preferences. However, online product reviews have provided a good and reliable channel for not only understanding customers needs for one product or service but also analyzing products' competition in the market. In this paper, we propose a new framework of applying online product reviews to analyze customer preferences for two competitive products. We extract the key topics of online reviews for two specific competitive products via a text mining approach of *latent Dirichlet allocation* (LDA). Topic difference analysis demonstrates the unique topics of the two products. The relative importance and topic heterogeneity analyses identify the competitive superiorities and weaknesses of both products. Two case studies that are presented demonstrate the efficacy of the proposed framework. The method also provides valuable managerial implications for product designers and e-commerce companies.

Keywords: Competitive analysis; latent Dirichlet allocation; online product reviews; product competition; text mining; topic analysis.

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