

## Understand Omnichannel Experience Through Mobile Application Customer Reviews

Muzhen Li, University of Kentucky

Li Zhao, University of Missouri

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**Introduction:** In omnichannel retailing, mobile applications (apps) play a vital role. They bridge the gap between online and offline channels, transforming the purchasing process and experiences of consumers (Brynjolfsson et al., 2013). In the fashion field, different types of retailers begin to adopt different efficient mobile marketing strategies (Shankar et al., 2010) to booster omnichannel retailing and add customer value. However, there has been limited research conducted on customer experiences of using mobile apps from different types of retailers. Mobile apps enable customers to leave praise/complaints through online reviews, expressing satisfaction or raising issues about various aspects of the entire omnichannel experience, at any place and time (Brynjolfsson et al., 2013). As a result, mobile app customer reviews provide substantial information related to omnichannel experience. Therefore, through the text analysis of mobile app customer reviews, this study seeks to comprehend customers' expectations and the targeted value regarding to different types of omnichannel retailers and explored the challenges and opportunities that retail mobile apps faced with under the omnichannel retailing context, based on retailers' different positioning and competitive advantages.

In this research, the user experience (UX) model (Thüring & Mahlke, 2007) was utilized to understand the human-machine interaction experience when using the retail mobile apps. Human-machine UX consists of three elements: the instrumental qualities, the non-instrumental qualities, and the user's emotional responses. Instrumental qualities concern the experienced support the system provides, including the ease of use, usability, etc. Under the omnichannel retailing context, fluency, considered as the capacity of services to support user's cross-platform activity, is also included into the instrumental qualities (Majrashi & Hamilton, 2015). Non-instrumental qualities concern the look and the feel of the system, such as visual aesthetics. The emotional components are characterized as subjective feelings accompanied by specific physiological reactions. The customer value theory was also adopted to understand the customer benefit gained in omnichannel shopping experience when using retail mobile apps. Value is a trade-off between the perceived benefits and the perceived costs of acquiring or using a product (Boksberger & Melsen, 2011). In this study, customer perceived benefits were revealed from the positive comments, while negative comments showed the perceived cost. Overall, the user experience model and the customer value theory were combined to interpret the results and used through an inductive approach (Walter & Ophir, 2019).

**Research method:** To achieve the research goals, ten fashion retailers were chosen, which are Bloomingdale's, Nordstrom, Nordstrom Rack, Saks Fifth Avenue, Macy's, JCPenney, NET-A-PORTER, T.J.Maxx, Target, and Kohl's. These retailers were categorized as high-end fashion retailers, mid-tier retailers, and off-price retailers, based on their product offering and

positioning. 500 latest customer reviews from each iOS retail mobile app were crawled in June 2021. In total, 5,000 app reviews were collected. To accurately classify the sentiments, each review was split into sentences. 18,225 sentences were obtained from the whole textual dataset. After data cleaning, sentiment analysis of each sentence was conducted using Python. Each sentence was classified as “positive”, “negative” or “neutral”. Then the word co-occurrence network was utilized to visualize the comparison of positive/negative reviews from different types of retail mobile apps. Word co-occurrence refers to the co-occurrence of two words in one sentence. In this study, word co-occurrence frequencies in positive and negative sentences of high-end fashion retail mobile apps, mid-tier retail mobile apps, and off-price retail mobile apps were counted separately in R. The network of these co-occurring words was visualized to show the importance and relationships of words in data sets (Choudhury et al., 2010).

**Findings:** The word co-occurrence network of positive reviews from high-end fashion retail mobile apps is shown in Figure 1 as an example. In this network, the words “happy”, “enjoy”, “amazing” linking to “app”, reflected the emotional components in the user experience and

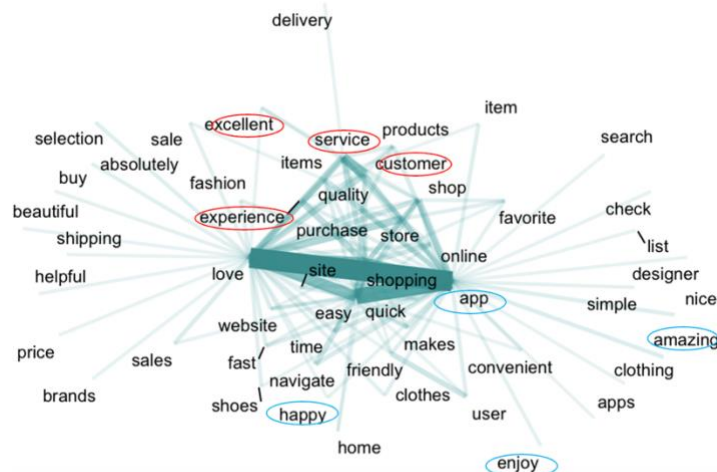


Figure 1. Word Co-occurrence Network of Positive Reviews from High-end Fashion Retail Mobile Apps

hedonic value in the luxury consumption experience. Meanwhile, the term “customer service” connects to “excellent” and “experience” in the network. The in-person experience is an important part of in-store experience offered by high-end fashion retailers in physical stores. In mobile apps, high-end fashion retailers insist to provide excellent customer service to keep conveying this customer value. When it comes to the network of negative reviews from mid-tier retailers, the words “time”, “update”, “fix”, “freeze” have the thickest link with the center word “app”, showing that customers complained a lot about the instrumental quality in app update. In addition, the words “app”, “website”, “phone”, “store” are all linked together. Mid-tier retailers, such as Macy’s, JCPenney and Kohl’s, all have much more brick-mortar store than other two types of retailers, which allow customers in mid-tier retailers have more opportunities to switch between different channels and require mid-tier retailers to have a higher fluency in their mobile apps. Otherwise, customers would say “*The barcode scanner for in-store price checking has not worked a single time. I have the most updated version of the app. Useless.*” Regards to the negative feedback toward mobile apps using experience of off-price retailers, customers also complain a lot about the payment process. The words “password”, “pay”, “rewards”, “bill”, “credit” linked together, showing that some customers have issues when check-out, and it would be disappointed if the customers could not get the rewards and lose the financial value.

**Discussion:** This is the first attempt to integrate the human-machine user experience model to understand the omnichannel shopping experience when using mobile apps. The findings show the importance of the user experience in human-machine interfaces in omnichannel experience and imply that consumers have different expectations of different types of retail mobile apps, depending on their positioning and business features. Consumers from mid-tier retailers require high perceived fluency in every channel, while consumers from high-end retailers focus more on high-quality customer service. For off-price retailers, consumers mainly seek financial value, which not only means sales, deals, and discounts, but also needs high fluency in the checkout process for customers to redeem promotion codes from different channels. Therefore, the findings could help retailers to develop practical strategies to convey customer value via mobile apps, based on their positioning. Future research would explore user/consumer experiences in more types of retail mobile apps under the omnichannel context. And would also cover more channels, including customers from both online and offline channels to deeply understand their experience in the omnichannel shopping journey.

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