Abstract:
The proliferation of mobile technologies makes it possible for mobile advertisers to leap beyond the real-time snapshot of the static location and context information about consumers. In this study, we propose a new mobile advertising strategy that leverages full information on consumers' offline moving trajectories from four different mobility dimensions (i.e., temporal duration, spatial dispersion, semantic information, and movement velocity). To examine the effectiveness of this new mobile trajectory-based advertising strategy, we design a large-scale randomized field experiment in one of the largest shopping malls in Beijing in June 2014. Our experiment results are validated based on 83,370 unique user responses for a 14-day period. We found that mobile trajectory-based advertising can lead to highest redemption probability, fastest redemption behavior, and highest satisfaction rate from customers at the focal advertising store. Interestingly, our findings also indicate that although mobile trajectory-based advertising can lead to a significant increase in the revenues of the focal advertising store, its indirect benefit on the overall revenues of the shopping mall is significantly lower during the weekend. This finding suggests that customers are likely to be in an “exploratory” shopping mode during the weekend and are likely to incur “impulse buy.” However, closely-targeted mobile advertising tends to limit consumer focus and significantly reduce the impulse purchase behavior. Our finding suggests that marketers need to be careful when implementing mobile advertising strategies, depending on different business scopes. Finally, we also found that mobile trajectory-based advertising is especially effective in attracting high income consumers, suggesting the potential of mobile advertising in approaching high-end customers to achieve better customer lifetime value. On a broader note, our work can be viewed as a first step to study the digitalization of individual offline behavior and how it can be linked to better understand individual preferences and decision making.