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Understanding the impact of emergent technologies on retail business models, processes and places

Traditional forms of retailing have been significantly affected by the growth of emergent and often disruptive digital technologies.
How location-based message characteristics lead to message value and store visit attitudes: An empirical study (EXTENDED ABSTRACT)

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Introduction

Having customers decide to enter a store is an important prerequisite for retail success and seems to demand even more attention nowadays given the transformation of retail into a highly competitive and complex multi-channel industry (cf. Pantano, Priporas, Sorace, and Iazzolino, 2017). Surprisingly, except for some pioneering exploratory research into how interactive technology in storefronts can be used to communicate with passers-by (see Pantano, 2016), the role of advanced technology in store entry decision-making has largely been left unaddressed. This has motivated us to setup this study into the effects of location-based messaging (LBM), that is, the sending of marketer-controlled information tailored to customers’ geographic position (Bruner and Kumar, 2007, p.4). In particular, this study aims to answer the question of how and to what extent location-based message characteristics generate location-based message value and influence customers’ attitudes to visit a physical store.
Research model

To answer our research question, we draw upon perceived value research (Zeithaml, 1988), the theory on net valence (see e.g., Peter and Tarpey Sr., 1975), and mental accounting theory (Thaler, 1985; Thaler, 1999) to propose and test a model. Next to location-based message value and the store visit attitude, the model contains location-based message characteristics that represent two benefits (personalization, location congruency) and two sacrifices (privacy concern, intrusiveness). The inclusion of these particular benefits and sacrifices follows calls for adding contextual richness to research models when studying IT-mediated settings (e.g., see Breward, Hassanein, and Head, 2017; Burton-Jones and Gallivan, 2007; Burton-Jones and Volkoff, 2017; Hong, Chan, Thong, Chasalow, and Dhillon, 2014). Accordingly, personalization, location congruency, privacy concern and intrusiveness were selected as they specifically pertain to the typical nature of LBM; it is a marketing application that offers recipients the opportunity to receive rather personal messages that are tailored to their location, yet at the same time sending location-based messages appropriately is challenging for retailers since such messages may invade customers’ privacy and may interrupt and therefore irritate recipients (Gazley, Hunt, and McLaren, 2015; Hühn et al., 2017; Lee and Rha, 2016). Figure 1 shows our research model and the corresponding hypotheses\textsuperscript{1}.

\textsuperscript{1} Extensive support the model structure and each of the hypotheses is excluded from this extended abstract due to page limit considerations, but is available from the authors upon request.
Method

To test our research model we conducted a quantitative vignette study, consisting of a vignette and a follow-up online survey which was used to measure the research constructs and basic socio-demographics (Atzmüller and Steiner, 2010). The sample consisted of 1225 customers of a fashion retailer in the Netherlands. In the vignette, the respondents were asked to imagine themselves walking in a shopping area that they are familiar with and that contains a store of the fashion retailer. Then, the respondents were confronted with the hypothetical situation that they would receive a location-based message on the retailer’ app while being within walking distance from the store. Given that message content plays an important role in shaping recipients’ message perceptions (Chang, Yu, and Lu, 2015; Chou et al., 2014; Lin, Zhou, and Chen, 2014; Schindler and Bickart, 2012), we decided to make use of multiple, disparate messages and distribute these at random to the respondents (a between subjects design, see Atzmüller and Steiner, 2010). In collaboration with a team of marketing professionals from the retailer, who indicated to prefer messages tapping into the persuasion principles authority, scarcity, social proof and reciprocity as these were part of their current

![Fig. 1. Research model and hypotheses](image)
marketing communication practices, and drawing upon previous literature in the field of persuasion (e.g., Cialdini, 2007, 2009; Griskevicius et al., 2009; Kaptein and Eckles, 2012; Orji, Mandryk, and Vassileva, 2015), the following four messages were selected: “Visit our store now and experience the expertise of our trained stylists” (authority-related), “Visit our store now and benefit only today from a 20% discount on a product of your choice” (scarcity-related), “Visit our store now and experience the customer service that other customers rate as excellent” (social proof-related), ”Visit our store now and get a free cup of coffee or tea” (reciprocity-related).

Results
We used Partial Least Squares (PLS) modeling using the software SmartPLS 3.0 (Ringle, Wende, and Becker, 2015) with the consistent-PLS algorithm (500 iterations) to estimate the model. After having established the validity and reliability of the multi-item measures and absence of common method bias, we computed the standardized path coefficients and amounts of variance explained. Together, personalization ($\beta = 0.21$, $p < .001$), location concruency ($\beta = 0.38$, $p < .001$) and intrusiveness ($\beta = -0.28$, $p < .001$) accounted for 53.9% of the location-based message value variance. The influence of privacy concern on location-based message value was non-significant. Furthermore, a total of 66.8% of store visit attitude was explained by personalization ($\beta = 0.06$, $p < .05$), location congruency ($\beta = 0.34$, $p < .001$), privacy concern ($\beta = -0.16$, $p < .001$), intrusiveness ($\beta = -0.15$, $p < .001$) and location-based message value ($\beta = 0.29$, $p < .001$). Post-hoc tests were run to evaluate the specified partial mediation model structure and test for possible effects of app usage and differences in message type. Overall, the empirical testing confirms the predictive validity and robustness of the model and reveal that location congruency and intrusiveness are the location-based message facets with the strongest effect on both message value and store visit.
attitude. Together, the results lead to the support of eight hypotheses (hypotheses 1, 2, 3, 4, 6, 7, 8, 9) and rejection of one hypothesis (hypothesis 5).

Conclusions and implications

This study examined the influence of four location-based message characteristics (personalization, location congruency, privacy concern, and intrusiveness) on location-based message value and the attitude towards visiting the physical store. Except for the insignificant influence of privacy concern on location-based message value, all tested relationships were significant. As such, our findings add to the scarce literature (e.g., Pantano, 2016) on the effect of advanced mobile technology on consumer store entry decision-making. When centering on the relative relevance of the location-based message characteristics, our study especially highlights the key role of location congruency as a benefit and intrusiveness as a sacrifice. Location congruency was the main determinant of the perceived value of location-based messages as well as of the customers’ attitude towards visiting the physical store, thereby adding to previous studies demonstrating the importance of contextual relevance of location-based messages (e.g., Luo, Andrews, Fang, and Phang, 2014). The found negative effect of intrusiveness is in keeping with previous marketing literature on intrusive advertising messages (e.g., Edwards, Li, and Lee, 2002; Wang and Calder, 2006). For retailers, the fact that location congruency seems the strongest predictor of the dependents in our model implies that creating and sending locational congruent messages should have priority when engaging in LBM-activities but not without taking into account that the specific message may come across as intrusive. One way to accomplish well-balanced location-based messages could be, for instance, by ensuring that the sent messages are of high interest given the proximity of the store (e.g., by making use of special, time-limited discounts and offers), instead of reflecting generic store promotions (cf. Unni and Harmon, 2007), while at the same
time making use of a friendly, more social communication style (cf. Alhakami and Slovic, 1994; Keeling, McGoldrick, and Beatty, 2010).

Key references


Kaptein, Maurits, & Eckles, Dean. (2012). Heterogeneity in the effects of online persuasion. *Journal of Interactive Marketing, 26*, 176-188.


