How location-based messages influence customers' store visit attitudes

an integrative model of message value

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How location-based messages influence customers' store visit attitudes: An integrative model of message value

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Purpose - This study aims to develop an understanding of how customers of a physical retail store valuate receiving location-based mobile phone messages when they are in proximity of the store. It proposes and tests a model relating two benefits (personalization, location congruency) and two sacrifices (privacy concern, intrusiveness) to message value perceptions and store visit attitudes.
Design/methodology/approach – The study uses a vignette-based survey to collect data from a sample of 1225 customers of a fashion retailer. The postulated research model is estimated using SmartPLS 3.0 with the consistent-PLS algorithm and further validated via a post-hoc test.
Findings - The empirical testing confirms the predictive validity and robustness of the model and reveals that location congruency and intrusiveness are the location-based message characteristics with the strongest effects on message value and store visit attitude.
Originality – The paper adds to the underexplored field of store entry research and extends previous location-based messaging studies by integrating personalization, location congruency, privacy concern and intrusiveness into one validated model.
Practical implications – When sending location-based messages to customers to incentivize them to visit the store, retailers benefit most from sending balanced messages that are of high interest given the proximity of the store (e.g., by making use of special, time-limited discounts and offers) without coming across as intrusive (e.g., by making use of informative, short messages).

Keywords - location-based messaging, store visit attitude, message value, personalization, location congruency, privacy concern, intrusiveness.

Introduction

Persuading customers to consider entering a physical store is an important prerequisite for retail success and seems to demand even more attention nowadays because of the transformation of retail into a highly competitive and complex multi-channel industry (Pantano *et al*., 2017; Roozen, 2019). Retailers have started to adopt location-based messaging (LBM), i.e., delivering mobile phone messages using data about the customer's location when that customer is near the physical store (Meents *et al*., 2020), to stimulate that persuasion. This technology benefits from the large-scale consumer adoption of mobile devices and apps, which offers retailers the opportunity to communicate with their customers without geographical constraints (Okazaki and Mendez, 2013). Combined with the rise of outdoor location tracking technologies (e.g., GPS), this enables retailers to send targeted marketing messages when customers are within walking distance from the store. As such, these retailers have a larger geographical reach to stimulate need recognition (Patsiotis *et al*., 2020) and store entry than when using other types of technology such as interactive technology in storefronts (Banerjee and Dholakia, 2012).

Despite all advances made, empirical research on the actual effectiveness of LBM is still in its infancy (Hühn *et al.*, 2017) and there is a shortage of insight into the influence of LBM on consumer behaviour (Bauer and Strauss, 2016). This shortage (also see Roozen, 2019) particularly applies to the impact of LBM on store visits, which has only been investigated in two published empirical studies (Beeck and Toporowski (2017) and Zhu *et al.* (2017)). Our study intends to add to the limited existing body of knowledge by answering this research question: How and to what extent do location-based message characteristics impact location-based message value and customers' attitude to visit a physical store? Location-based message value reflects the customer's subjective evaluation of the relative worth or utility of receiving and using a location-based message (cf. Ducoffe, 1995), whereas the store visit attitude is conceptualized as attitude towards behaviour and accordingly defined as customers' general feelings of favourableness or unfavourableness toward visiting the store after having received the location-based message (cf. Ajzen, 2005; Fishbein and Ajzen, 2010). Our decision to focus on location-based message value is supported by several studies suggesting that value perceptions of location-based communications may play a key role in triggering consumers' behavioural responses (e.g., Gazley *et al.*, 2015; Richard and Meuli, 2013). The store visit attitude is included as behavioural outcome indicator and key dependent in our model as previous research suggests that attitudes are strong determinants of actual behaviour (Fishbein and Ajzen, 2010). In particular, there is accumulating evidence that in spontaneous, immediate situations, consumers act on their attitudes, without the involvement of conscious reflection and formation of explicit intentions (Fazio, 1993; Fazio and Roskos-Ewoldsen, 2005; Olson and Fazio, 2009; Fazio and Olson, 2014). Receiving a location-based message when being nearby a store can be understood as a such a situation, as consumers are confronted suddenly with an unexpected message inviting them to do something that they might not have done otherwise (cf. Henke *et al*., 2018).

This study aims to make three contributions. First, by combining location-based message characteristics, location-based message value and customers' store visit attitude into one novel nomological model and testing it empirically, we bring together research on LBM and on store entry, and generate additional knowledge benefitting both of these relatively underexplored research streams. Second, following calls in information technology research to make scientific studies more salient and relevant to practice, we forgo parsimonious model building and adopt an approach that extends existing theoretical structures by adding constructs specifically relevant to the application/artifact in question (Hong *et al*., 2014; Breward *et al*., 2017). That is, we select two beneficial (personalization, location congruency) and two sacrificial (privacy concern, intrusiveness) characteristics of location-based

messages (referred to as 'benefits' and 'sacrifices' in the remainder of this paper) and test these in an integrated model as determinants of location-based message value and customers' store visit attitude. As such, not only do we intend to get insight into the influence of each of the benefits and sacrifices, but also into the predictive validity of the adopted approach as a whole. Third, from a managerial perspective, the results of our study serve retail managers and providers of LBM by shedding light on the relative importance of the examined benefits and sacrifices, thereby aiding them in optimizing LBM to positively influence customers' store visit attitude.

Research model and hypotheses

This study mainly draws upon existing literature on perceived value (e.g., Zeithaml, 1988; Zeithaml *et al*., 2018), location-based messaging (e.g., Hühn *et al.*, 2017) and store entry (e.g., Zhu *et al.*, 2017). Figure 1 shows our research model.

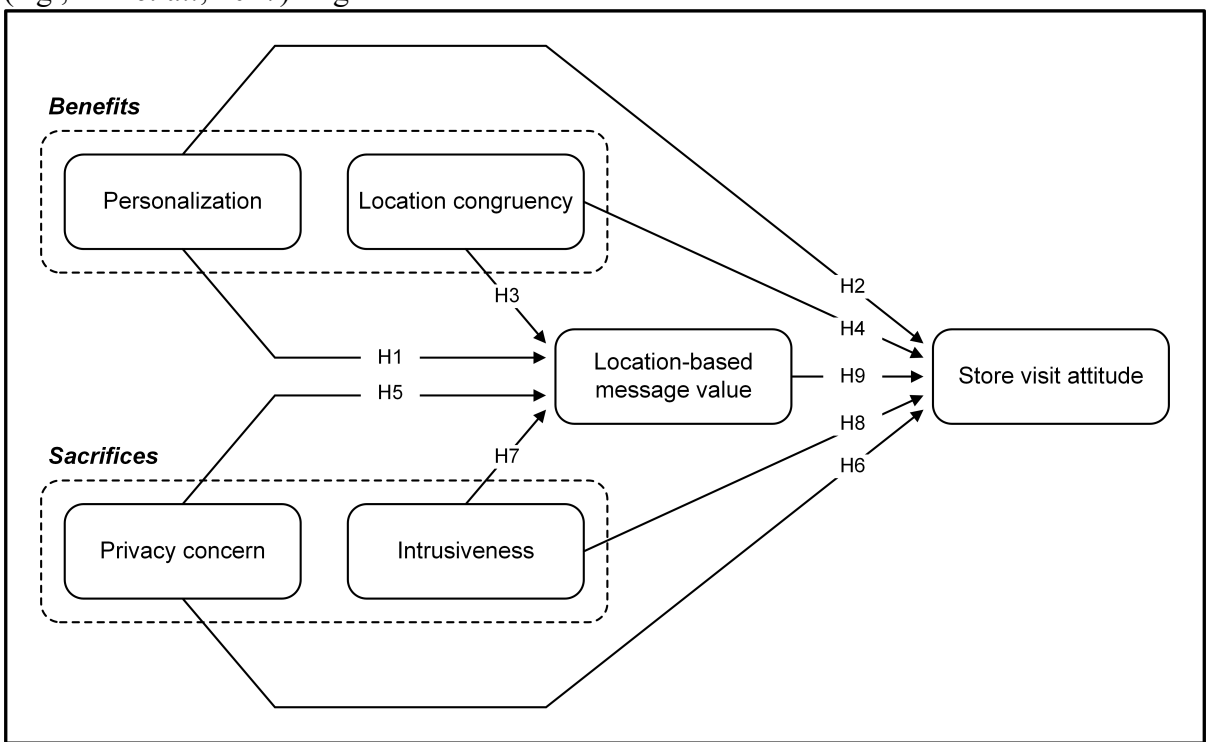

Fig. 1. Research model and hypotheses

The structure of the model is based on three considerations. First, following prior studies that focused on value in LBM-settings (e.g., Hühn *et al.*, 2017; Lin and Bautista, 2018; Unni and Harmon, 2007) and predicated on perceived value theory (e.g., Zeithaml, 1988; Zeithaml e*t al*., 2018), we conceptualize location-based message value as a customer's overall subjective evaluation of the message resulting from an evaluation of the benefits and sacrifices. The benefits and sacrifices function as external cues or *value signals* that customers directly use in forming impressions of value rather than spending time and effort on carefully comparing and weighting them in trade-offs (Zeihaml, 1988, p.15). Such direct use of value-signals helps customers avoid putting too much time and effort into relatively easy choice processes (Zeithaml, 1988; Petty and Briñol, 2011), of which deciding whether and how to act upon a location-based messages seems a typical example. We selected the benefits and sacrifices by deriving them from the specific LBM-literature (cf. Kleijnen *et al.,* 2007) and discussing their academic and managerial relevance with eight academics as well as five practitioners with LBM-expertise. This led to the selection of the following relevant benefits and sacrifices: personalization, location congruency, privacy concern, and intrusiveness. Personalization

concerns the extent to which a location-based message is perceived as being adapted to what the individual recipient wants by making use of his/her location (Li, 2016). Location congruency refers to the extent to which a customer perceives it to be appropriate to receive, view and respond to a location-based message given his/her current location (Lee *et al.*, 2015). Personalization and location congruency are seen as benefits in this study since they can enhance the relevance of marketing messages and therefore support recipients of these messages in their activities (see e.g., Hühn *et al.*, 2017; Gazley *et al.*, 2015). The sacrifices privacy concern and intrusiveness are interpreted as follows. Privacy concern means the perceived degree to which a location-based message involves a possible loss of the recipient's privacy (Gu *et al.*, 2017). Intrusiveness refers to the perceived degree to which the message interrupts the recipient's goals (Edwards *et al.*, 2002). Privacy concern and intrusiveness are conceptualized as sacrifices since messages that raise privacy concern or that are intrusive are likely to result in negative feelings and thus hinder customers in their activities when they receive the message (see e.g., Baek and Morimoto, 2012; Grewal *et al.*, 2016).

Second, the anticipated relationship between location-based message value and the store visit attitude is based on Eagly and Chaiken's (1993) Composite Attitude-Behaviour Model, an extension of the well-established Theory of Reasoned Action (see Fishbein and Ajzen, 2010). According to Eagly and Chaiken's work, the overall evaluation of an object is a direct determinant of the attitude towards the behaviour that is associated with that object.

Finally, the direct impact of location-based message characteristics on the store visit attitude is supported by theory on net valence (see e.g., Peter and Tarpey Sr., 1975). This theory describes that consumers may make a particular behavioural decision, such as represented by their behavioural attitude (Breward *et al*., 2017), based on the perceived gains and the perceived losses associated with the involved object.

Overall, the structure of the model is supported by accumulating empirical evidence in the field of marketing messaging suggesting that overall marketing message valuations (e.g., Brackett and Carr, 2001; Tsang *et al*., 2004; Xu *et al*., 2009) as well as the specific benefits and sacrifices related to the message (e.g., Beneke *et al.*, 2010; Limpf and Voorveld, 2015; Xu, 2006) may directly contribute to the formation of consumer attitudes. In the remainder of this section, we elaborate on the individual hypotheses.

Personalization

Personalization, i.e., adapting the content of advertisements to individual recipients, is said to be an important aspect of mobile advertising (e.g., Groß, 2015; Peters *et al.*, 2007). When a recipient (subconsciously) believes that the message has been customized so that it already meets his or her needs and is relevant, this reduces cognitive dissonance and eases the decision making process (Gazley *et al.*, 2015). In line with this reasoning, Gazley *et al.* and Li (2016) report a positive effect of message personalization on the recipient's evaluation of the message. Therefore, we propose that:

H1: Personalization positively influences location-based message value.

Receiving messages that appear to have been personalized instead of generic messages increases the attention given to the message as well as stimulates the actual processing of the message content (Grunert, 1996; Noar *et al.*, 2009). Given that the persuasiveness of a message depends on it receiving sufficient attention and its content being processed, this increases the likelihood that the message will convince its recipients to behave in accordance with the message content (Rimer and Kreuter, 2006). Consequently, and in line with Li's (2016) findings, it is expected that:

H2: Personalization positively influences store visit attitude.

Location congruency
Locationally congruent messages are tailored to and therefore appropriate for the recipient's current locational context and as such readily provide information that clarifies the ad context (Lee *et al.*, 2015). This reduces the mental effort that recipients of such messages need to invest to assess the usefulness of the message (cf. De Pelsmacker *et al.*, 2002). Consequently, locationally congruent messages tend to be perceived more favourably by their recipients and have a stronger persuasive impact on their behaviour (Lee *et al.*, 2015). In accordance with the above and extant empirical research outcomes (Hühn *et al*., 2017; Lee *et al.*, 2015; Lin and Bautista, 2018), we posit that:

H3: Location congruency positively influences location-based message value.
H4: Location congruency positively influences store visit attitude.

Privacy concern
In order to receive (personalized) location-based messages, consumers need to share particular personal details and location-related data with service providers (Krishen *et al.*, 2017; Xu *et al.*, 2011), among which is the retailer. This exposes consumers to the risk of invasion of privacy (Zhu *et al.*, 2017). The extant research on privacy concerns (for an overview see Krafft *et al.*, 2017) provides strong empirical evidence of a negative impact of such concerns in general. More specifically, in the context of LBM, when customers believe that a retailer invades their privacy and thus is an unreliable company, this increases customers' scepticism about the reliability of the message content and therefore about the value provided by the message (cf. Baek and Morimoto, 2012; Grewal *et al.*, 2016). Consequently and based on Lin *et al.*'s (2016) empirical findings, we hypothesize that:

H5: Privacy concern negatively influences location-based message value.

In addition, when message recipients have privacy concerns, they tend to feel that their personal freedom is being impeded and that they are vulnerable to the actions of the company (Bleier and Eisenbeiss, 2015). As explained by psychological reactance theory (Brehm, 1966), recipients will try to re-establish that freedom by taking defensive actions (Aguirre *et al.*, 2015; Krafft *et al*., 2017). One of these actions, as shown empirically by Baek and Morimoto (2012) and Tucker (2014), is resisting to respond to the advertising message as desired by the company. This leads to the following hypothesis:

H6: Privacy concern negatively influences store visit attitude.

Intrusiveness
By sharing their information with the company that is sending them location-based messages, customers do not only face the possibility of an invasion of their privacy, but also the chance of being disturbed by advertising messages at an inconvenient time or location (Hühn *et al.*, 2017; Lee *et al.*, 2015). When an advertising message disturbs the recipient and thus interrupts his or her current activities and keeps this individual from achieving his or her goals (Edwards *et al.*, 2002; Van Doorn and Hoekstra, 2013), this message is likely to come across as distracting, confusing or annoying (Ducoffe, 1996; Edwards *et al.*, 2002). This has been found to make the recipient appreciate the message less (Gazley *et al.*, 2015; Lee *et al.*, 2015). Therefore, it is anticipated that:

H7: Intrusiveness negatively influences location-based message value.

Similarly to when customers perceive an invasion of their privacy, they are likely to associate an intrusive advertising message with reduced personal freedom and control, and with an increased vulnerability (Grewal *et al.*, 2016; McCoy *et al.*, 2017).Therefore, as established empirically by Edwards *et al.* (2002) and Lee *et al.* (2015), these customers will try to protect themselves by avoiding the message as well as its intended behavioural outcomes. Accordingly, we propose that:

H8: Intrusiveness negatively influences store visit attitude.

Location-based message value
According to the earlier mentioned Composite Attitude-Behaviour Model (Eagly and Chaiken, 1993), the overall evaluation of an object influences the attitude towards the behaviour that is associated with that object. More specifically, according to past research (e.g., Huang *et al.*, 2013; Mitchell and Olson, 1981), consumers' overall evaluations of a marketing message tend to transfer mentally to the company responsible for sending it, thereby influencing their judgment of this company and their attitude towards doing business with it. Accordingly, when recipients deem a location-based message valuable, this is likely to make them believe that interacting and transacting with the sender will also be worthwhile, making them more favourably disposed to visit the store in order to engage in such behaviour. Therefore, and based on empirical findings in other IT-mediated commercial contexts (e.g., Kuo *et al.*, 2009; Lin *et al.*, 2005), we expect that:

H9: Location-based message value positively influences store visit attitude.

Method

Procedure
We conducted a quantitative study, consisting of a vignette and a follow-up online survey (Atzmüller and Steiner, 2010). To develop valid and reliable vignettes, we followed existing guidelines, that is, we selected a participant group that matched the context of the vignette (Hughes and Huby, 2004), made the hypothetical situation in the vignette as concrete, realistic and representative as possible (Steiner *et al.*, 2016), used a between-subject factorial design with randomized vignette selection (Jasso, 2006), used experts from practice to evaluate the vignette (Hughes and Huby, 2004), and assured alignment of the questions in the follow-up survey with the vignette (Wason *et al.*, 2002).

The sample consisted of customers of a relatively large, Dutch fashion retailer who were registered as users of the retailer's research panel. 40,000 panel users were invited by e-mail to participate in the study. The e-mail contained a link to an online survey. On the first page of this survey, the respondents were shown the vignette. In this vignette, they were asked to imagine themselves walking in a familiar shopping area containing one of the fashion retailer's stores. Then, the respondents were confronted with the hypothetical situation that they received a location-based message in the retailer's app while being within walking distance from the store. To avoid a potential bias in our findings due to the content shown in the location-based message, we made use of multiple, disparate messages and distributed these to the respondents randomly (cf. Atzmüller and Steiner, 2010). In collaboration with the retailer's marketeers, the following four messages were selected: "Visit our store now and experience the expertise of our trained stylists", "Visit our store now and benefit only today from a 20% discount on a product of your choice", "Visit our store

now and experience the customer service that other customers rate as excellent" and "Visit our store now and get a free cup of coffee or tea". To make the situation match practice, the messages were shown to the respondents in a picture of a smartphone. This picture did not contain any recognizable brand-related attributes to avoid any brand effects. After carefully reading the vignette, the respondents completed the survey. As incentive, the respondents were offered the opportunity to participate in a raffle of four gift coupons, each worth 25 Euro, and one gift coupon worth 100 Euro.

Measures

We made use of scales derived from previously validated multi-item measurement instruments (see appendix 1). We took care to only select scales that represented the content domain of each construct to be measured following its definition in the current study (i.e., content validity). Where needed, we fitted the scales to the LBM context of our study by making some modifications in the wording of the scale items. For instance, we replaced the word "the application" by "the location-based message" for the personalization construct and specified the target of the attitude towards behaviour construct to store visiting. Finally, all measurement scales were evaluated for their applicability and linguistic clarity by five professionals working for the marketing department of the Dutch fashion retailer and the members of the research team.

Sample

Of the 40,000 invited customers, 1,225 answered all survey questions (completion rate: 68.35%). Table 1 displays the sample characteristics.

Table 1

Sample characteristics (n = 1225)

Measure	**Percent (*n*)**	**Measure**	**Percent (*n*)**
Gender		*Frequency of visiting the store(s)*	
Male	30.3% (371)	A couple of times per week	1.0% (12)
Female	69.7% (854)	Once per week	1.7% (21)
		A couple of times per month	16.3% (200)
Age		Once per month	22.4% (274)
< 26	12.4% (152)	A couple of times per year	53.1% (651)
26 – 35	17.0% (208)	Once per year or less	5.5% (67)
36 – 45	25.0% (307)		
46 – 55	29.5% (361)	*Frequency of buying at the store(s)*	
56 – 65	13.3% (163)	A couple of times per week	0.3% (4)
> 65	2.8% (34)	Once per week	0.2% (4)
		A couple of times per month	5.4% (66)
User of the store's app		Once per month	14.2% (174)
Yes	30.4% (373)	A couple of times per year	70.6% (865)
No	69.6% (852)	Once per year or less	9.3% (113)

Location-based message confronted with in study	
Visit our store now and …	
experience the expertise of our trained stylists	25.6% (314)
benefit only today from a 20% discount on a product of your choice	26.1% (319)
experience the customer service that other customers rate as excellent	21.2% (260)
get a free cup of coffee or tea	27.1% (332)

The sample characteristics show that 69.7% (n = 854) of the respondents were women and 30.3% (n = 371) were men. The majority of the sample was between 36 and 55 years old (n = 668, 54.5%). In terms of store patronage, a majority of the respondents reported to visit the retailer's store once per month or a couple of times per year (n = 925, 75.5%) and buy there a couple of times per year (n = 865, 70.6%). Together, the sample characteristics indicate that our sample is biased toward middle-aged women that visit and buy at the retailer's stores once per month or less.

Results

Validity and reliability

To estimate the measurement model and assess the validity and reliability of the measures, we used Partial Least Squares (PLS) modelling using SmartPLS 3.0 (Ringle *et al.*, 2015) with the consistent-PLS algorithm (500 iterations). The selection of the consistent-PLS algorithm was not only made since all research variables were reflective in nature, but also since this PLS algorithm is less subject to inflated Type I and Type II errors (Dijkstra and Henseler, 2015) and is as accurate in the estimation of parameters and achievement of statistical power as covariance-based structural equation modelling (Hair *et al.*, 2017).

We evaluated the convergent validity and reliability of the multi-item scales by making use of the (standardized) factor loadings, Average Variance Extracted (AVE), Cronbach's alphas and composite reliabilities. A first look at the factor loadings revealed that one of the intrusiveness items needed to be removed due to a very low factor loading (- 0.19). We removed this item and reran the measurement model. Table 2 shows the results. Overall, these results confirm the convergent validity and reliability of the measures since recommended values (see e.g., MacKenzie *et al.*, 2011; Ping, 2004) are achieved.

Table 2

Convergent validity and reliability statistics

Construct (number of items)	Factor loadings CFA	Cronbach's alpha	Composite reliability	AVE
Personalisation (2)	0.90; 0.92	0.90	0.90	0.91
Location congruency (3)	0.88; 0.84; 0.90	0.91	0.91	0.87
Privacy concern (4)	0.93; 0.92; 0.90; 0.73	0.93	0.93	0.87
Intrusiveness (3)	0.84; 0.75; 0.97	0.89	0.89	0.86
Location-based message value (3)	0.93; 0.90; 0.85	0.92	0.92	0.90

Store visit attitude (4)	0.96; 0.84; 0.90; 0.91	0.95	0.95	0.90
Recommended value	≥ 0.70	≥ 0.70	≥ 0.70	≥ 0.50

To assess the discriminant validity of the measures, we assessed the heterotrait-monotrait (HTMT) ratio of correlations between constructs (cf. Henseler *et al.*, 2015). None of the HTMT-values between the constructs (see Table 3) surpasses the conservative criterion of 0.85, thereby providing evidence of the measures' discriminant validity.

Table 3
HTMT-ratio of correlations

Construct	Personali-sation	Location congruency	Privacy concern	Intrusive-ness	Location-based message value	Store visit attitude
Personalization	**1**					
Location congruency	0.59	**1**				
Privacy concern	0.26	0.42	**1**			
Intrusiveness	0.38	0.60	0.69	**1**		
Location-based message value	0.54	0.67	0.41	0.59	**1**	
Store visit attitude	0.52	0.73	0.54	0.66	0.71	**1**

Finally, we tested for common method bias by performing a full collinearity test (cf. Kock and Lynn, 2012). For each of our six research constructs, we estimated a model (SmartPLS 3.0; consistent-PLS algorithm, 500 iterations) incorporating the construct as dependent and the other five constructs as independents. The variance inflation factor (VIF) scores between the constructs did not exceed the conservative value of 3.3 for any of the estimated models. As such, absence of common method bias was established.

Hypothesis testing
We then tested the structural model (SmartPLS 3.0; consistent-PLS with 500 iterations; consistent-PLS bootstrapping with 5,000 subsamples). Figure 2 shows the standardized path coefficients and amounts of variance explained. Together, personalization ($\beta = 0.21$, $p < 0.001$), location congruency ($\beta = 0.38$, $p < 0.001$) and intrusiveness ($\beta = -0.28$, $p < 0.001$) 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 ($\beta = 0.06$, $p < 0.05$), location congruency ($\beta = 0.34$, $p < 0.001$), privacy concern ($\beta = -0.16$, $p < 0.001$), intrusiveness ($\beta = -0.15$, $p < 0.001$) and location-based message value ($\beta = 0.29$, $p < 0.001$).

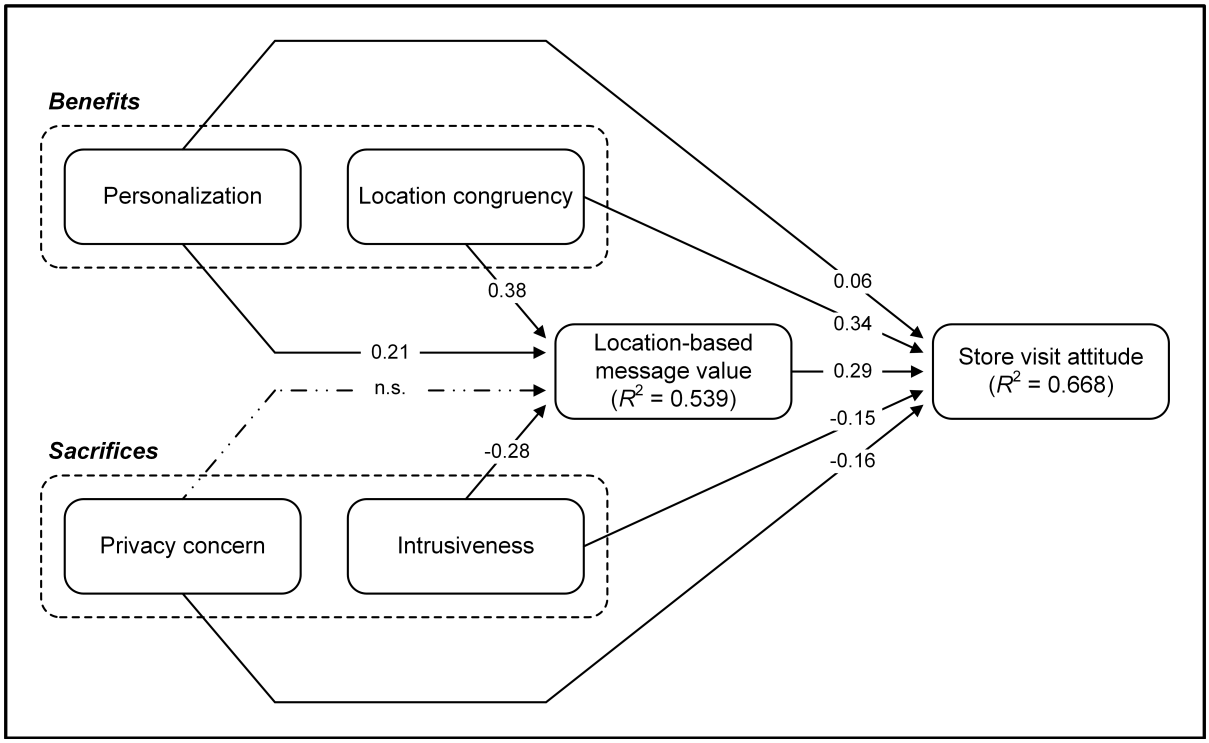

Fig. 2. Results structural model.

Note: All standardized path coefficients significant at the $p < 0.001$ level, except for personalization → store visit attitude ($p < 0.01$). R^2 = explained variance. A dashed arrow concerns a non-significant effect.

Following Hair *et al.* (2017), we also computed the Stone-Geisser's Q^2-value to assess the out-of-sample predictive power of the structural model by using the blindfolding technique (omission distance: 6). The results show a Q^2-value for location-based message value of 0.378 and a Q^2-value of 0.482 for the store visit attitude. Overall, the results underline the predictive power of our model and lead to the support of eight hypotheses (hypotheses 1, 2, 3, 4, 6, 7, 8, 9) and rejection of one hypothesis (hypothesis 5).

Post-hoc testing

To assess the robustness of our findings, a post-hoc test was done using the same PLS-software and settings as applied in our structural model testing. We compared the validity of the nomological structure of our original research model, which reflects partial mediation, with an alternative model in which the impact of the benefits and sacrifices on store visit attitude is fully mediated by location-based message value. In terms of predictive validity, the results reconfirmed that personalization ($\beta = 0.21$, $p < 0.001$), location congruency ($\beta = 0.38$, $p < 0.001$) and intrusiveness ($\beta = -0.28$, $p < 0.001$) significantly contribute to location-based message value, privacy concern is not a significant determinant of location-based message value, and location-based message value has a significant influence ($\beta = 0.71$, $p < 0.001$) on store visit attitude. The full mediation model explained a comparable amount of the location-based message value variance ($R^2 = 53.7\%$), but a substantially lower amount of variance of the store visit attitude ($R^2 = 49.7\%$). Similar outcomes were found for Stone-Geisser's Q^2; the Q^2-values for location-based message value (0.38) were equal for both models, while the Q^2-value for store visit attitude (0.34) was clearly lower for the full mediation model.

Together, the results suggest that the full mediation model performs worse in terms of explanatory power than our original model when the objective is to predict the store visit attitude. Then, we considered the common fit indices SRMR and NFI (cf. Hair *et al.*, 2019). These provided first evidence that our original model (SRMR = 0.027; NFI = 0.92) had a better fit with the data than the full mediation model (SRMR = 0.098; NFI = 0.87). We subsequently used the Bayesian information criterion (BIC) and the Geweke-Meese criterion (GM) to compare both models (cf. Sharma *et al.*, 2019a, 2019b). Again, our original model (BIC = -1301.69; GM = 1266.66) had a better fit with the data than the full mediation model (BIC = - 828.56; GM = 1857.55). In sum, the original model outperforms the fully mediated model, which supports our original use of a nomological structure with location-based message value as partial mediator.

Conclusions and implications

This study yields a number of key findings. First, it reveals significant influences of personalization ($\beta = 0.21$), location congruency ($\beta = 0.38$) and intrusiveness ($\beta = - 0.28$) on location-based message value. Contrary to our expectations, privacy concern did not have a significant influence on location-based message value formation. Together, these findings suggest that benefits as well as sacrifices are relevant when customers assess the value of location-based messages and that such messages are mainly seen as valuable if they are, in order of relevance, locationally congruent, non-intrusive, and personal. Second, all benefits and sacrifices were found to significantly contribute to recipients' store visit attitude directly and, with the exception of privacy concern, also indirectly through location-based message value. Of the studied determinants of store visit attitude, location congruency, again, was the most influential ($\beta = 0.34$), having an even larger impact than location-based message value. This further underlines the key role of location congruency when striving for effective LBM. Interestingly, while our results indicate a non-significant impact of privacy concern on location-based message value, this concern did have a significant, negative effect on store visit attitude. A possible explanation for this finding is that the respondents in our study, i.e., registered members of the retailer's research panel, were already used to sharing data with the company digitally. As such, sharing personal data with the retailer when using a digital communication medium such as a mobile phone may not lead to significant privacy concern and thus impact location-based message value for these particular customers. It is conceivable, however, that the prospect of actually visiting the physical store after having received a location-based message on their mobile phone does raise such concern. After all, people tend to feel less anonymous and more exposed in a physical than in a computer-mediated setting (cf. Lapidot-Lefler and Barak, 2012; Postmes and Spears, 2002) and visiting the store may enable the retailer to collect additional, even more sensitive data (for example concerning visitors' physical traits and actual shopping behaviour).

From a theoretical perspective, the findings of this study add to the existing body of knowledge by being among the first to conceptualize and empirically investigate the effect of advanced mobile technology on consumer store entry decision-making. In particular, our findings add to the scarce literature (e.g., Pantano, 2016) on this aspect of consumer behaviour by identifying and demonstrating which beneficial and sacrificial location-based message characteristics have the potential to influence customers' store visit attitude, indicating that LBM contributes to retailers' marketing efforts to increase store traffic. The found relevance of location congruency adds to previous studies demonstrating the importance of contextual relevance of location-based messages (e.g., Luo *et al.*, 2014), whereas the found negative effect of intrusiveness is in keeping with previous marketing literature on intrusive advertising messages (e.g., Edwards *et al.*, 2002). This study also adds to perceived value theory (Zeithaml, 1988; Zeithaml *et al*., 2018) as our research outcomes

support one of the premises central to this theory, namely that perceptions of benefits as well as of sacrifices determine the value of services. Finally, from a modelling point of view, this study confirms the value of developing models that aim to explain and predict the use of technological applications by adopting a more contextualized approach (Breward *et al.*, 2017; Hong *et al.*, 2014), that is, by adding constructs specifically relevant to the application/artifact in question. Combined, the benefits and sacrifices explained 66.6% of the variance of store visit attitude. This amount of explained variance can be considered rather large, particularly because a consumer's inclination to visit a store is also likely to be determined by other factors such as his or her shopping motivation and perceptions of the store window (cf. Oh and Petrie, 2012; Sen *et al.*, 2002).

From a managerial standpoint, the fact that location congruency seems the strongest predictor of the studied dependents implies that creating and sending locationally congruent messages should have priority when engaging in LBM-activities. Still, given that intrusiveness has a negative impact that is close in weight to the positive influence of location congruency, and that intrusiveness can therefore be seen as having an offsetting effect on location-based message value, retailers are advised to create *well-balanced* location-based messages. Such messages are of high interest given the proximity of the store (e.g., by making use of special, time-limited discounts and offers (cf. Unni and Harmon, 2007)) without being intrusive (e.g., by making use of informative, short messages that lack distractive visual components (Goodrich *et al.*, 2015; Riedel *et al.*, 2018)). We also recommend that retailers let customers evaluate messages in terms of location congruency and intrusiveness before actually sending them. The relevance of this approach is demonstrated by comparing the effects of four disparate messages used in this study. The results of two unifactor ANOVAs (IBM SPSS Statistics 25) indicate significant differences in message effect on location congruency ($F(3, 1221) = 25.59$, $p < 0.001$) as well as on intrusiveness ($F(3, 1221) = 41.94$, $p < 0.001$). The discount-focused message clearly outperforms the other three messages; it scores significantly higher in terms of location congruency ($M = 3.76$, $SD = 1.13$) and significantly lower in terms of intrusiveness ($M = 2.52$, $SD = 1.13$). Whether these outcomes can be generalized to all retail settings is doubtful. Accordingly, it seems prudent for retailers to pre-test alternative messages themselves.

Limitations and recommendations

This study is subject to three limitations. First, we made use of a large-scale sample consisting of real customers of a Dutch fashion retailer. Although the sample was representative of the customer population of the retailer, and the use of single-case empirics is generally sufficient from an academic perspective because it serves as an illustration of paradigms, principles and theories (Hanssens, 2018), we acknowledge that caution is required when extrapolating our findings. We encourage researchers to conduct cross-validation studies with customers from dissimilar retail stores and product categories (also see Holmes *et al*., 2013) across different countries.

Second, despite the fact that our model explained a promising amount of variance in the dependent constructs, it by no means is intended to be complete. For instance, meta-analysis suggests (see Schmidt and Eisend, 2015) that the frequency of message exposure is likely to influence how consumers evaluate and respond to marketing messages. It is well-conceivable that an extension of our research model with the frequency of message exposure could lead to additional insights. Future studies could test such an extension.

Third, since LBM is a phenomenon that is still in an early stage of the diffusion process (also see Hüseyinoğlu *et al*., 2017) and therefore hypothetical for the vast majority of retailers and their customers, the use of a vignette technique in combination with a survey seemed a suitable method to gain insights into the studied customer perceptions and attitude

(cf. Atzmüller and Steiner, 2010). Despite this suitability, using the method might have reduced the external validity of the findings (Steiner *et al.*, 2016). Future research could replicate our study in real-life settings, in which retailers actually send location-based messages to attract customers to stores.

APPENDICES

Appendix 1: Measurement scales

*** = removed based upon low standardized factor loading (- 0.19) in PLS.

Personalization (Choi *et al.*, 2017). Mean (SD) = 3.11 (1.29).
1. The location-based message seems to be based on what I want according to my current location.
2. The location-based message seems to be based on what I want according to where I am.

Location congruency (Banerjee and Dholakia, 2008). Mean (SD) = 3.28 (1.26).
1. When being within walking distance from <name store>, how appropriate would you consider it to receive the location-based message?
2. When being within walking distance from <name store>, how appropriate would you consider it to view the location-based message?
3. When being within walking distance from <name store>, how appropriate would you consider it to respond to the location-based message?

Privacy concern (Gu *et al.*, 2017). Mean (SD) = 2.97 (1.27).
1. When receiving location-based messages, I think <name store> over-collects my personal information.
2. When receiving location-based messages, I am concerned that <name store> violates my privacy.
3. When receiving location-based messages, I am concerned that <name store> misuses my personal information.
4. When receiving location-based messages, I worry that <name store> shares my personal information with third parties.

Intrusiveness (Edwards *et al.*, 2002; Lee *et al.*, 2015)). Mean (SD) = 2.97 (1.03).
1. The location-based message is invasive.
2. The location-based message is forceful. ***
3. The location-based message is interfering.
4. The location-based message is disturbing.

Location-based message value (Xu *et al.*, 2009; Logan *et al.*, 2012). Mean (SD) = 2.52 (1.16).
1. The location-based message is useful to me.
2. The location-based message is valuable to me.
3. The location-based message is important to me.

Store visit attitude (Ajzen, 2001; Moon and Kim, 2001). Mean (SD) = 3.12 (1.15).
1. Bad idea – good idea
2. Foolish idea – wise idea
3. Unpleasant idea – pleasant idea
4. Negative idea – positive idea

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