Exploring antecedents of SMS-based mobile advertising perceptions

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Abstract: A mobile advertising study conducted with college students evaluated the effect of a mobile advertisement’s message length on the receiving mobile user’s perceptions of informativeness, entertainment and consequent attitude toward the advertisement, as well as cultural, gender or age differences. A PLS data analysis indicates positive effects of mobile ads’ message length on the perceived informativeness and entertainment of the mobile ad, which in turn positively influence both attitude toward the mobile ad and the mobile user’s intention to learn more about the advertised brand. The model has high explanatory power. Implications of click through intentions on e-finance are discussed.

Keywords: mobile advertising; SMS; message length; informativeness; entertainment; attitude; culture; cross-cultural; gender; age; electronic finance; e-finance.


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1 Introduction

Advances in services and handsets in developed countries and increased use of mobile health and banking services in the developing world have resulted in an explosive growth of mobile phone adoption. According to the latest data from the International Telecommunication Union (2011), there were 5.9 billion mobile subscribers and 1.2 billion active mobile web users at the end of 2011. These estimates are significantly higher than earlier numbers reported in many scholarly papers, which cite anywhere from one to two billion mobile phone users. Beyond the obvious popularity of this medium and considering the personalisation, physical location tracking and reachability afforded by mobile phones, a tremendous opportunity emerges for marketers to push effective advertisements to target audiences.

IDC (2011) estimates that US-based mobile advertising expenditures reached $2.1 billion in 2011 and 60% of mobile ad budgets were spent on search advertising, with 30% having been spent on mobile display advertising. Also, Gartner forecasts that the mobile advertising market will reach $20.6 billion by the end of 2015 (Gartner, 2011). Hence, it can be easily seen why mobile advertising has attracted so much attention in the media and consideration by marketing executives. There are several forms of potential advertising engagement via the mobile channel. These include pull-type mobile web sites and mobile video, push and pull mobile applications and push mobile messaging (Mobile Marketing Association, 2009). Each tactic offers its own advantages, but mobile messaging is ideal for immediate branding, driving users to mobile web sites and enabling a dialogue between the marketer and the user via mobile message replies, voting, polling and others. In the simple case of a SMS campaign, design considerations pertaining to the text used become critical. Yet, there is extremely limited research in this area and no empirical studies that focus on the design of the mobile advertisement (herein, ‘ad’). In addition, past studies have produced conflicting evidence pertaining to gender differences in mobile ad related evaluations. For example, Shavitt et al. (1998) concluded that men were more favourable (i.e. had a more positive attitude) toward mobile ads than women, whereas Haghirian and Inoue (2007) found no gender differences. Consistent with past efforts to identify antecedents of effective advertising campaigns regardless of the channel used (see, e.g., Batra and Ray, 1986; Chittenden and Ruth, 2003; Drolet and Morrison, 2001; Giaglis et al., 2007; Korgaonkar et al., 1984), this paper is an attempt to offer greater insight on gender differences related to mobile advertising.

In summary, this study deals with the following two research questions:

**RQ1:** How does a mobile advertisement’s message length affect the receiving mobile user’s perceptions of informativeness, entertainment and attitude toward the advertisement?

**RQ2:** Are there age and gender differences in the evaluation of SMS-based mobile advertisements?

2 Antecedents and consequents of attitude toward ads

2.1 Characteristics of mobile ad content and length

In a literature review of effective advertisements performed by Park et al. (2008), various message design factors were identified as having an impact on the audience’s perceptions. These included size, colour, length, music/sound, animation, context/clutter, repetition and
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Involvement. Beyond this effort, there is limited insight on design considerations, particularly for mobile advertising.

More specifically, the effects of an advertisement’s length have never been studied in the context of mobile ads. However, relevant literature may be found regarding television ads. Fabian (1986) and Patzer (1991) argued that length could positively affect the memory of the advertisement by repeating an ad’s content. Also, to ensure brand awareness, a short advertisement may be as effective as a long one, but for delivering the claim of an ad, longer ads perform better. Also, the length of advertisement has been shown to have a negative effect on tedium (see, e.g., Mord and Gilson, 1985; Rethans et al., 1986; Singh and Rothchild, 1983). Accordingly, we hypothesise that the length of advertisement positively influences perceptions associated with the mobile ad’s message informativeness and entertainment:

\[ \text{H1a: Message length positively influences perceptions of a mobile ad message’s informativeness.} \]

\[ \text{H1b: Message length positively influences perceptions of a mobile ad message’s entertainment.} \]

2.2 Informativeness and entertainment of mobile ads

Ducoffe (1996) identified three factors – informativeness, entertainment and irritation – as a starting point for explaining how consumers evaluate the value of advertising. Later, Tsang et al. (2004) extended this work by proposing additional antecedents of advertising value, namely credibility and permission. However, this study focuses solely on the content and form of mobile ad messages (Ducoffe, 1996; Tsang et al., 2004) and as such, concentrates on informativeness and entertainment. This is in line with the theory of reasoned action (TRA), which suggests that the attitude toward an object is determined by one’s salient belief regarding the perceived importance of the object’s characteristics; informativeness and entertainment are the two salient beliefs related to the evaluation of ads (Ducoffe, 1996). Therefore, we focus on the role of these two internal factors on formations of attitude toward mobile ads.

Informativeness refers to the extent to which a web ad satisfies consumers’ needs to know of related product or service information, which is fundamentally a utilitarian value (Edwards et al., 2002). The quality of information included in an ad has an influence on the consumers’ perception of the advertised object, because consumers want the content of mobile ads to be related to them and to be tailored to their interest (Milne and Gordon, 1993; Ricks et al., 1974). Therefore, we consider perceptions of informativeness regarding a mobile ad to be positively associated with consumers’ attitudes toward the mobile ads.

On the other hand, entertainment refers to the extent to which mobile ads please consumers’ needs for passing time, aesthetic enjoyment, or emotional release, which are fundamentally of hedonic value (Ducoffe, 1996; Edwards et al., 2002; McQuail, 1983). A high degree of pleasure and connection with a medium leads to consumers’ positive perceptions of affects and mood (Hoffman and Novak, 1996). Also, especially in mobile advertising, it is important to be funny and concise and thus capture consumers’ attention immediately (Katterbach, 2002). According to Lehmkuhl (2003), providing playful or enjoyable games with embedded advertising on a mobile phone can make them more familiar with the ad and even the product. Therefore, perceptions of enjoyment associated
with an ad play a salient role in the formation of overall attitudes toward an object (Shavitt et al., 1998).

Based on the above discussion, the following hypotheses are proposed:

**H2a:** Higher levels of a mobile ad’s informativeness lead to a more favourable attitude toward the mobile ad.

**H2b:** Higher levels of a mobile ad’s entertainment lead to a more favourable attitude toward the mobile ad.

### 2.3 Synergy of informativeness and entertainment of mobile ads

The respective impacts of informativeness and entertainment have in previous studies been considered as independent of each other and their interaction effect has not been examined. However, there may be a positive interaction effect between two complementary factors and their interaction could affect attitude more favourably. This is known as the ‘synergy effect’ and it occurs when the combined value of opposite factors is greater than the sum of their individual value (Baltas, 2003; Tanriverdi, 2006; Topkis, 1998; Wade and Hulland, 2004). In other words, an increase in one factor (informativeness) could enhance the effect of another factor (entertainment) and consequently, impact attitude more positively. According to various motivational theories, there are crowding-out and crowding-in effects of extrinsic and intrinsic motivation (Deci, 1971; Frey and Jegen, 2001). A crowding-out effect indicates that an extrinsic motivation can decrease the effect of an intrinsic motivation. On the other hand, a crowding-in effect shows that an extrinsic motivation can increase the effect of an intrinsic motivation (Frey and Jegen, 2001). Informativeness can be referred to as an extrinsic motivation because of its utilitarian value, while entertainment may be viewed as an intrinsic motivation because of its hedonic value (Deci and Ryan, 1985). Also, according to the research by Davis et al. (1992), such a significant positive interaction effect between informativeness and entertainment on attitude was found in the context of using computers in the workplace. Therefore, we predict that there will be a positive interaction effect of a mobile ad’s informativeness and entertainment on the attitude toward mobile ads. Hence:

**H3:** The interaction effect of a mobile ad’s informativeness and entertainment is positively associated with the attitude toward a mobile ad.

### 2.4 Attitude toward and -click throughs of mobile ads

Attitude toward an ad is defined as the predisposition to respond in a favourable or unfavourable manner to a particular advertising stimulus (Lutz, 1985). Also, according to the theory of reasoned action by Fishbein and Ajzen (1975), a person’s behavioural intention depends on the person’s attitude toward the object of that behaviour. For example, the findings of a study by Bauer and Greyser (2007) were consistent with TRA in that a favourable attitude toward specific ads was strongly correlated with the rating of those ads. Therefore, we hypothesise that attitude toward a mobile ad is positively related to the mobile user’s intention to respond to the marketer’s call to action, i.e. here, to click through the mobile ad. Hence:

**H4:** Attitude toward a mobile ad is positively related to the intention to click through the mobile ad.
2.5 Relevant demographic variables

1. **Age**: Mobile services tend to attract a younger audience (Dickinger et al., 2004). Also, according to a study by Shavitt et al. (1998) even in the context of traditional advertising, younger customers showed a more favourable attitude toward the ads. Kaasinen (2003) offered further support regarding younger consumers showing very positive attitudes toward mobile ads. Based upon these studies, we hypothesise that age will be negatively correlated with the attitude toward a mobile ad.

   \[ H5: \text{The recipient's age is negatively correlated with the attitude toward a mobile ad}. \]

2. **Gender**: The importance of consumers’ individual goals and interests in advertising is receiving scholarly attention and gender differences are often studied (Morris et al., 2005; Pavlou and Stewart, 2001; Tsang et al., 2004). Also, Brackett and Carr’s study (2001) unveiled gender as the one factor that directly influences attitude toward web ads. Likewise, the study by Shavitt et al. (1998) showed that male consumers generally show a more favourable attitude toward ads than female consumers; gender was deemed a direct antecedent of attitude. However, direct effect may not be the only way in which gender influences attitude. For example, Myers-Levy (1988, 1989) proposed the selectivity hypothesis, which theorises that women try to take in all information before judging the importance of something, while men process only the information they consider to be salient. Further, men pursue power and performance, while women are driven more by enjoyment and interpersonal harmony (Spence and Helmreich, 1978). Therefore, there could be differences between men and women in the relationships between informativeness, entertainment and attitude. Hence, we propose the following:

   \[ H6a: \text{The perceived informativeness of mobile ads will be different between men and women}. \]

   \[ H6b: \text{The perceived entertainment of mobile ads will be different between men and women}. \]

   \[ H6c: \text{The attitude toward mobile ads will be different between men and women}. \]

   \[ H6d: \text{The intention to click through a mobile ad will be different between men and women}. \]

3 Research methodology

3.1 Dependent variables

The antecedents of attitude toward a mobile ad studied here were informativeness and entertainment, while the consequent measured was the participants’ intention to click through or respond to the mobile ads. The importance of attitude toward an ad as a predictor of attitude toward the brand, purchase intention and in turn, purchase, has been shown in past studies (see, e.g., Bauer and Greyser, 1968; Homer, 1990). Figure 1 shows the research model in which we hypothesise that informativeness and entertainment are affected by the mobile ad’s design, specifically with respect to the length of the message used in the SMS.
3.2 Sample

Undergraduate students from a large, public mid-western university participated in the experiment. A student sample may be better than a sample taken from the general population in terms of predictive validity (Danaher and Mullarkey, 2003). Also, because undergraduates are predominantly in the 18–22 age range, which is representative of mobile user characteristics (Coursaris et al., 2007) and is a target audience in mobile advertising, use of this group in research related to mobile advertising is appropriate. Extra credit was offered to students in return for their participation in the study. A total of 148 subjects participated by making announcements in various random classes across the university reaching 473 students (with a response rate of 73%). The sample consisted of 91 males and 57 females, aged 18–34, with a mean of 20.66 years and all owned a mobile phone and used SMS.

3.3 Procedure and measures

The study involved a 15-item survey. The scales for informativeness and entertainment were adapted from a prior study (Ducoffe, 1996) and minor changes were made in the wordings to fit the context of this study. Participants were instructed to respond to the survey assuming they were a frequent customer of the coffee house, ‘Rainbow Café’. Apart from the items measuring the age and gender of the participants and a question on ranking the three SMS messages shown, the other 12 questions (4 questions repeated for each of the three different SMS ads) assessed the informativeness and entertainment of the SMS ad shown, the attitude toward the mobile ad and their intention to click through to learn more, via 7-point Likert-type scales ranging from ‘not at all’ to ‘very much’.

4 Results

The structural model shown in Figure 2 was tested using the variance-based Partial Least Squares (PLS) method through the use of the SmartPLS package. In addition, XLSTAT-PLSPM was used for comparing two groups in the framework of PLS path modelling. PLS enabled us to specify the construct relationships between one another (structural model), as well as with their underlying items (measurement model). Thus, data
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Analysis provided support for both how well the items measured each construct and how well the hypothesised relationships between constructs supported the theory. A strength of PLS is that it only requires small to medium sample sizes (Chin, 1998). The minimum sample size for a PLS analysis should be the larger of (i) 10 times the number of items for the most complex construct; or (ii) 10 times the largest number of independent variables impacting a dependent variable. In our model, the second condition yields a minimum sample size required of 20, which is well exceeded by our sample size of 148.

Figure 2  The structural model with results

Given that the measurement instrument consisted of single-item measures, support is offered in terms of its reliability and validity. Generally, single items are not reliable because of measurement errors and in turn, inconsistent responses might be obtained (Churchill, 1979; Epstein, 1979). On the other hand, there was evidence that additional items also could lead to measurement errors and reduce the value of additional items (Drolet and Morrison, 2001). Also, according to Drolet and Morrion’s study (2001), when respondents are exposed to more items, they tend to be less differentiating among items, in turn, they will give mindless responses to the survey. Moreover, for the multiple items, participants tend to try to answer consistently in their responses to similar questions, which can result in consistency motif bias (Podsakoff et al., 2003). In addition, Bergkvist and Rossiter’s study (2007) compared the predictive validity of single item and multiple item measures of attitude toward the advertisements and attitude toward the brand. They concluded that a single item measure should be used when the single item has a concrete singular object and a concrete attribute. Hence, single item measures are appropriate.

Overall, the model demonstrated high explanatory power. The R-square of the Behavioral Intention construct (shown in Figure 2) was 0.56, or 56% of the variance in user intention to click through to the ad to learn more was explained by our model. The R-square values for the rest of the endogenous variables exceed the 10% benchmark recommended by Falk and Miller (1992). The variance explained is large enough to accept message length as a significant antecedent, but it becomes evident that there are more design factors influencing
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a consumer’s perceptions of a mobile ad’s informativeness beyond the volume of text embedded and received in the ads. Table 1 presents the validation of these hypotheses in more detail.

<table>
<thead>
<tr>
<th>Hyp</th>
<th>From</th>
<th>To</th>
<th>Beta</th>
<th>t-value</th>
<th>p-value</th>
<th>Sig</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1a</td>
<td>Length</td>
<td>Informativeness</td>
<td>0.328</td>
<td>4.625</td>
<td>0.0000</td>
<td>***</td>
<td>Supported</td>
</tr>
<tr>
<td>H1b</td>
<td>Length</td>
<td>Entertainment</td>
<td>0.433</td>
<td>6.301</td>
<td>0.0000</td>
<td>***</td>
<td>Supported</td>
</tr>
<tr>
<td>H2a</td>
<td>Informativeness</td>
<td>Attitude</td>
<td>0.463</td>
<td>3.075</td>
<td>0.0022</td>
<td>**</td>
<td>Supported</td>
</tr>
<tr>
<td>H2b</td>
<td>Entertainment</td>
<td>Attitude</td>
<td>0.604</td>
<td>6.229</td>
<td>0.0000</td>
<td>***</td>
<td>Supported</td>
</tr>
<tr>
<td>H3</td>
<td>Informativeness × Entertainment</td>
<td>Attitude</td>
<td>-0.111</td>
<td>0.957</td>
<td>0.3391</td>
<td>n.s</td>
<td>n.s</td>
</tr>
<tr>
<td>H4</td>
<td>Attitude</td>
<td>Intention</td>
<td>0.746</td>
<td>18.044</td>
<td>0.0000</td>
<td>***</td>
<td>Supported</td>
</tr>
<tr>
<td>H5</td>
<td>Age</td>
<td>Attitude</td>
<td>-0.173</td>
<td>2.559</td>
<td>0.0108</td>
<td>*</td>
<td>Supported</td>
</tr>
</tbody>
</table>

Reviewing the above results, the following conclusions may be drawn. First, on the topic of mobile ad message design, text message (SMS) length was shown to be positively associated with users’ perceptions of the mobile ad’s informativeness (H1a: $\beta = 0.328$, p < 0.001) and entertainment (H1b: $\beta = 0.433$, p < 0.001).

Second, it was theorised that incremental levels of informativeness and entertainment, as well as their interaction effect, would positively impact the mobile user’s attitude toward a mobile ad. There was strong statistical support for the first two of these hypotheses, i.e. H2a ($\beta = 0.463$, p 0.05).

Third, the often studied relationship between attitude and behavioural intention was adapted in the context of mobile advertising and received strong support, as hypothesized (H4: $\beta = 0.746$, p < 0.001).

A second test of the impact of message length on users’ overall preference between various mobile ads tested offers additional evidence for the positive impact of message length. As shown in Table 2, all of the pair-wise comparisons of means showed significant differences, suggesting that the increases in the mobile ad’s message length from 4 to 12 to 20 words contributed positively to the users’ perceptions regarding the mobile ads and H2b ($\beta = 0.604$, p < 0.001).

<table>
<thead>
<tr>
<th>(I) LONG</th>
<th>(J) LONG</th>
<th>Mean Difference</th>
<th>Std. Error</th>
<th>Sig.</th>
<th>Lower Bound</th>
<th>Lower Bound</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>.750*</td>
<td>.077</td>
<td>.000</td>
<td>0.57</td>
<td>0.93</td>
</tr>
<tr>
<td>1</td>
<td>0</td>
<td>-1.155*</td>
<td>.077</td>
<td>.000</td>
<td>-1.34</td>
<td>-0.57</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td>-.405*</td>
<td>.077</td>
<td>.000</td>
<td>-0.59</td>
<td>-0.22</td>
</tr>
</tbody>
</table>

*The mean difference is significant at the 0.001 level.

Note: Message Length (for I & J columns) was coded as 0 for short, 1 for medium, 2 for long.
Beyond the tests of the hypotheses shown in our research model in Figure 2, a t test was conducted to compare the effect of gender on Informativeness, Entertainment, Attitude and Behavioral Intention \( t(442) = -3.222, p < 0.001 \). As reported in Table 3, there was a significant difference of gender on Informativeness \( t(442) = -3.729, p < 0.001 \), Entertainment \( t(442) = -3.836, p < 0.001 \), Attitude \( t(442) = -5.367, p < 0.001 \) and Behavioral Intention \( t(442) = -3.222, p < 0.001 \), thus offering support for H6a-d.

### Table 3  Gender differences in mobile ad informativeness, entertainment, attitudes and intention

<table>
<thead>
<tr>
<th>Gender</th>
<th>Mean</th>
<th>SD</th>
<th>df</th>
<th>t</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Informativeness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>2.69</td>
<td>1.179</td>
<td>442</td>
<td>–3.729</td>
<td>0.000</td>
</tr>
<tr>
<td>Female</td>
<td>3.32</td>
<td>1.706</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Entertainment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>3.16</td>
<td>1.843</td>
<td>442</td>
<td>–3.836</td>
<td>0.000</td>
</tr>
<tr>
<td>Female</td>
<td>3.84</td>
<td>1.757</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attitude</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>3.16</td>
<td>1.780</td>
<td>442</td>
<td>–5.367</td>
<td>0.000</td>
</tr>
<tr>
<td>Female</td>
<td>4.06</td>
<td>1.622</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intention</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>2.51</td>
<td>1.689</td>
<td>442</td>
<td>–3.222</td>
<td>0.000</td>
</tr>
<tr>
<td>Female</td>
<td>3.05</td>
<td>1.763</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Study participants were also asked to provide information regarding their age in addition to gender. It was hypothesised that age would be negatively correlated with the attitude toward a mobile ad. Results showed that age had a strong negative effect (H5: \( \beta = -0.173, p < 0.05 \)) on attitude toward the mobile ad. This would suggest that older participants have less favourable attitudes toward mobile ads than younger users.

### 5 Discussion

This paper proposed and obtained support for a new theoretical model that furthers our understanding of mobile advertising. Specifically, message length in a mobile ad was examined for its potential impact on the mobile ad’s perceived value (here, informativeness and entertainment), in turn, their respective impact on the attitude toward the ad, and, ultimately, on behavioural intention to click through the ad. From a theoretical point of view, this work contributes to advertising research by providing an initial understanding of the role of message design in the effectiveness of mobile ad campaigns. We found that longer text messages have a significant positive impact on recipients’ perceptions regarding the informativeness and entertainment of a mobile ad.

With respect to advertising value, we observed a comparable effect of informativeness and entertainment on a consumer’s attitude toward a mobile ad. Thus, marketers are charged with the task of designing mobile ads that add both utilitarian value (e.g., they learn something new about the advertised brand or brand item promoted) and hedonic value (e.g., they find the mobile ad humorous or engaging) in the reached mobile user’s mind. Interestingly, an interaction effect between informativeness and entertainment was not present, but each of them significantly impacted recipients’ attitudes toward the mobile ads.

The frequently studied relationship between attitude toward an object and the intention to use the object was once again confirmed, this time in the context of mobile advertising. A strong predictor of whether the receiving party would in fact click through the received advertisement to learn more indicates that paying attention to what consumers perceive as favourable regarding mobile advertising is critical. A number of studies have recently
been reported that attempt to answer questions, such as what the ideal type of mobile ad is (Drossos et al., 2009; Park et al., 2008), or when is it appropriate to push a mobile ad to a mobile user. The related body of literature is still limited and given the rapid advances in mobile telephony, the very nature of the engagement will change over time. Research that is current and relevant is warranted, as marketers will attempt to maximize the perceived value in the two areas studied here, i.e. informativeness and entertainment, whilst managing the risks associated with factors such as increasing levels of engagement and interactivity.

A further practical implication lies in the fact that longer SMS-based advertising messages produce more favourable reactions. This may be explained by the amount of information that is afforded with more copy embedded in the ad; it could also explain higher levels of entertainment, as more text requires increased time periods of attention and consequently, engagement. Increased engagement is likely to elicit a favourable reaction, assuming that there has not been a violation of perceived ‘prerequisites’ or breach of the protocol in areas such as the time of day or frequency with which a marketer attempts to contact a mobile user.

Additionally, strong beta coefficients and corresponding t-values indicate that women may perceive more informativeness and entertainment in a mobile ad campaign than men; in light of this, the mobile channel seems to be better suited for female-focused marketing campaigns. This is further supported by similarly strong beta coefficients and t-values for attitude toward the mobile ad and a behavioural intention to respond by clicking through and learning more about the advertised brand.

Furthermore, the influence of age on perceptions of a mobile ad was found to be significant. Hence, when marketers attempt to reach older users in this market, a more prudent approach is recommended in terms of the design and execution of the mobile ad campaign. A negative relationship between age and attitude toward mobile ads would emphasise the importance of paying attention to the potential negative reactions not studied here (e.g., irritation), as they are likely to reach such levels of annoyance faster or easier than younger mobile users.

This study contributes to a recent thrust of adoption studies pertaining to e-finance by modelling antecedents of behavioural intentions as they pertain to e-finance transactions, from brokerage trading (Roca et al., 2010) to retail purchasing (e.g., Sakkthivel, 2011; 2010). Here, the focus is on enabling future transactions by first facilitating a call to action enabled via SMS-based mobile advertisements. Advancing our understanding of the factors influencing the degree of success of marketing campaigns helps minimise the uncertainty surrounding marketing campaign investments, increases the efficiency and effectiveness of launched campaigns and ultimately increases the likelihood of a positive return on investment.

6 Limitation and future research

As with all studies, there are limitations associated with this study that prompt future research in this area. First, the study’s tasks were simulated in a scenario described in the questionnaire used. Thus, any sense of urgency or other contextual responses that a user may experience in a real-world setting may not arise here, particularly as we are describing mobile advertising stimuli that are highly contextual. While this is a limitation in terms of the realism of the study, it is a means of controlling for additional variables that could not be otherwise measured during the experiment or a different approach such as an ethnographic study. Second, this study employs only undergraduate student samples at a large midwestern
An improved understanding of advertising message design can facilitate improved revenue generation for advertisers, whilst generating the leads for advertised retailers hoping to collect on electronic financial transactions downstream. Future research could focus on optimal strategies for online retailers once the leads have been generated by such SMS-based mobile advertisements.

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References


Exploring antecedents of SMS-based mobile advertising perceptions


Appendix: Questionnaire

For the first six questions you will be presented SMS advertisements (text messaging ads). Please answer the questions that follow the SMS advertisements by circling a number 1–7 (1 being ‘not at all’ and 7 being ‘very much’) assuming that you were a frequent customer of the coffee house ‘Rainbow Café’.

1. ‘Great coffee served here!’
   a. How entertaining did you find the ad you chose? (1–7)
   b. How informative did you find the ad you chose? (1–7)
   c. How positive was your attitude toward the ad you chose? (1–7)
   d. How likely are you to click through to learn more? (1–7)

2. ‘Great coffee served in a relaxing atmosphere, in a neighbourhood near you!’
   a. How entertaining did you find the ad you chose? (1–7)
   b. How informative did you find the ad you chose? (1–7)
   c. How positive was your attitude toward the ad you chose? (1–7)
   d. How likely are you to click through to learn more? (1–7)

3. ‘The Rainbow Café offers not only a great, freshly brewed coffee, but also a relaxing environment for studying and leisure!’
   a. How entertaining did you find the ad you chose? (1–7)
   b. How informative did you find the ad you chose? (1–7)
   c. How positive was your attitude toward the ad you chose? (1–7)
   d. How likely are you to click through to learn more? (1–7)

4. Please rank the following ads from 1-3 with 1 being your MOST favourite and 3 being your LEAST favourite.
   a. _______Great coffee served here.
   b. _______Great coffee served in a relaxing atmosphere, in a neighbourhood near you.
   c. _______The Rainbow Café offers not only a great, freshly brewed coffee, but also a relaxing environment for studying and leisure.

5. Please indicate your age: ______________

6. Please indicate your gender: Male/Female