
Drivers of Acceptance for SMS Advertising

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This study aims to determine the drivers of consumer acceptance of SMS advertising in an Australian context. This replicates and extends the work of Merisavo et al. (2007) who conducted their study in Finland. The purpose of this research is to re-examine Merisavo et al.'s (2007) hypotheses within an Australian context and augment their work by testing for one additional driver (Attitude to Advertising in general) of consumer acceptance of SMS advertising. Results indicated that Attitude to Advertising in general was the strongest driver of consumer acceptance. Utility, Context and Sacrifice were also significant drivers of consumer acceptance of SMS advertising. Despite the importance of permission and privacy within the SMS advertising literature, the results did not find Control and Trust to be significant in influencing consumers acceptance of SMS advertising.

Introduction

Mobile phones are highly personalized, and therefore present marketers with the opportunity to send offers at the right time, to the right consumer (Bauer, Barnes, Reichardt, & Neumann, 2005). Mobile advertising exists in the form of internet browsing (Varshney & Vetter, 2002), media downloads (Nysveen, Pedersen, & Thorbjorsen, 2005), bluetooth (Leek & Christodoulides, 2009), MMS (Cheng, Blankson, Wang, & Chen, 2009) and SMS, which is the most popular medium and the focus of this study (Merisavo et al., 2007).

SMS advertising is by far the most popular and profitable form of mobile advertising (Sultan & Rohm, 2005) and by using demographic information collected by mobile service providers, marketers are able to promote goods and services through personalized messages sent directly to the consumer (Grant & O'Donohoe, 2007; Varshney & Vetter, 2002).

SMS and the IMC Mix

In past campaigns, consumers have been sent coupons or other promotional offers, as well as being invited to enter sweepstakes or other competitions (Muk, 2007). At the cutting edge of SMS advertising, providers incorporate GPS (Global Position System) technology into mobile phones, targeting customers with timely information in specific locations (Okazaki & Taylor, 2006). For example, Japanese

agencies transmit local restaurant advertisements on public transportation by using electronic boarding passes to detect a person's final destination, and then sending them advertisements relevant to that destination (Okazaki & Taylor, 2006).

While SMS advertising has become a useful tool for marketers, the lack of knowledge and trust of the medium has seen it being used sparingly and largely tailored towards the youth segment (Grant & O'Donohoe, 2007). SMS is most commonly applied as a support medium, reinforcing traditional channels such as print, broadcast and the internet (Zhang & Mao, 2008).

Effectiveness of SMS Advertising

Studies have shown that SMS advertising results in positive brand awareness (Barnes 2002), is an excellent communicator of brand value (Barnes & Scornavacca, 2004), and is better at targeting the youth market than other media (Maneesoonthorn & Fortin, 2006).

Conversely, other studies found that consumers had a lukewarm response to SMS advertising, especially when used in excess (Grant & O'Donohoe, 2007). Consumers are weary of costs associated with downloads of mobile content (Phau & Teah, 2009) and advertisers should be cautious in their use of mobile advertising (Okazaki & Taylor, 2006).

Research Gaps and Research Objectives

Limited empirical research has been conducted on the drivers of consumer acceptance in an Australian context. To date, the focus has been on European, American and Asian markets (Phau & Teah, 2009). The Australian market is still emerging in terms of SMS advertising, although it is expected to grow (Leung, 2007). The dearth of studies in the Australian market underlines the need to research the drivers of Australian consumers' acceptance of SMS advertising in this region.

The key objective of this study is to determine the drivers of consumer acceptance of SMS advertising in Australia. In addition, this study also aims to apply the Drivers of Consumer Acceptance Scale, developed by Merisavo et al. (2007), in a new context, thereby testing its generalizability across cultures.

Theoretical Framework

Technology Acceptance Model

TAM proposes that an individual's acceptance of a new technology is determined by their attitudes toward it, as well as the perceived ease of use and usefulness of the medium (Muk, 2007). Perceived ease of use relates to an individual's belief that the prospective technology will require little effort, while perceived usefulness refers to a consumers subjective evaluation of the utility it offers (Yang & Jolly, 2008; Zhang & Mao, 2008).

Diffusion of Innovation

The Diffusion of Innovation theory identifies a comprehensive set of attributes that may act as drivers of consumer acceptance (Muk, 2007; Rogers, 1995). The theory suggests that when exposed to a new technology, an individual will choose to accept or reject the innovation based on their preferences, as well as the perceived attributes and benefits of the technology (Rogers, 1995). This process provides the underlying theoretical basis for the adoption or rejection of SMS advertising, and describes the process by which consumers may accept or reject this innovation.

Hypotheses Development

Utility of SMS Advertisements

As identified in the literature, one of the key drivers of consumer acceptance for SMS advertising is the nature of the advertising message (Bauer et al., 2005). This includes important factors such as entertainment value, information value, perceived usefulness, relevance and monetary incentives, and can collectively be referred to as total utility (Merisavo et al., 2007). This perceived utility is the benefit that consumers receive when exposed to an SMS advertising message. The higher the perceived benefit associated with the advertisement, the higher the level of acceptance (Bauer et al., 2005).

The benefits of receiving SMS advertisements have an important bearing on consumer acceptance of SMS advertising. These benefits, including factors such as information value, entertainment value, relevance, usefulness and monetary incentives, form the total utility perceived by the consumer.

H1: There is a positive relationship between consumers' perceived utility of SMS advertising and their willingness to accept SMS advertising.

Context of SMS Advertisements

As highlighted in the literature, one potential driver of consumer acceptance of SMS advertising is context. When receiving mobile advertising messages, it has been found

that consumers perceive value in relation to the time and place they receive it, this is known as contextual information (Merisavo et al., 2007).

Based on the review of relevant literature and the concept of conditional value, it has been noted that consumers perceive value in relation to the time and place they receive an SMS advertisement. It can therefore be said that context will have an important bearing on consumer decisions to accept SMS advertising.

H2: There is a positive relationship between consumers' utilization of contextual information in SMS advertising and their willingness to accept mobile advertising.

Sacrifice in Receiving SMS Advertisements

The perceived risk in receiving SMS advertising messages represents a sacrifice that the consumer has to make when using SMS advertising, and may impact on acceptance. Consumers try to reduce the perceived risk when making an acceptance decision, and may result in the refusal of an innovation (Bauer et al., 2005).

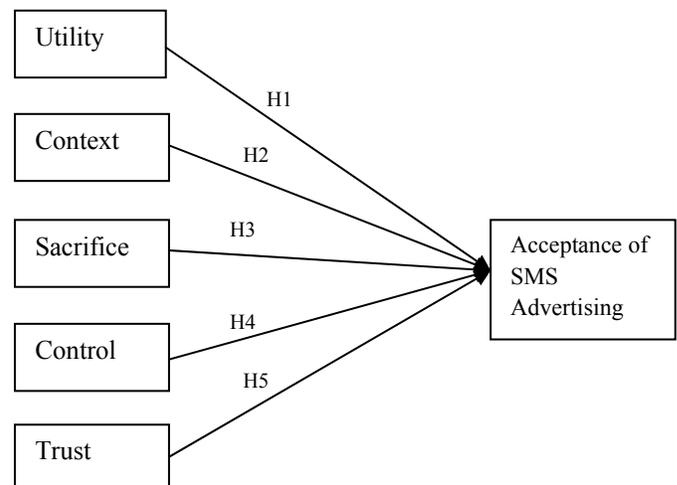
The perception of various risks relating to time, unsuitability, irritation and loss of privacy represent significant sacrifices that consumers associate with SMS advertising. This sacrifice can be said to be an important driver of consumer acceptance of SMS advertising.

H3: There is a negative relationship between consumers' perceived sacrifice in receiving SMS advertising and their willingness to accept mobile advertising.

Control Over SMS Advertisements

The vast majorities of studies conducted in the field have suggested consumers are more likely to accept mobile advertising if permission was given prior to receiving the advertisement. (Krishnamurthy, 2001). Based on this, it can be said that consumer acceptance of SMS as an advertising medium is likely to be influenced by the perceived control

Figure 1: Conceptual Model of the Drivers of Consumer Acceptance of SMS Advertising



that consumers have over the advertising messages they receive.

H4: There is a positive relationship between consumers' perceived control of SMS advertising and their willingness to accept mobile advertising.

Trust in Advertisers and Laws

If consumers trust that marketers will not misuse the personal information they provide, they may be more accepting of SMS advertising (Merisavo et al., 2007). In addition, it is anticipated that consumer's knowledge and trust in the anti-spam laws that protect them may also be a factor in determining consumer acceptance of SMS advertising.

H5: There is a positive relationship between consumers' trust in information privacy of SMS advertising and their willingness to accept mobile advertising.

Research Methodology

Type of Study

The purpose of this study is to replicate and extend the research of Merisavo et al. (2007), and determine the drivers of consumer acceptance of SMS advertising in an Australian context. Little empirical research exists of this nature in the Australian market, and therefore the results will offer new evidence about the acceptance of SMS advertising (Sekeran, 2003).

Sampling Method and Data Collection

In keeping with the study conducted by Merisavo et al. (2007), the population comprises young Australian mobile phone users between 18 and 44 years of age. Surveys are distributed via personal administration and electronic distribution.

A convenience sampling method generated a total of 290 surveys with 135 personally administered and 155 distributed via email. In total, 202 (69%) responses were valid. The response rate was evenly split across males (49.8%) and females (50.2%) with 94.1% of respondents below 35 years of age.

Scales and Measures

The five drivers of SMS acceptance (Utility, Context, Sacrifice, Control and Trust) were adapted from the Merisavo et al. (2007) paper. Preliminary questions were adapted from Phau and Teah (2009), whose scale was used to determine user's motives and perceptions of SMS advertising. In keeping with the replicated paper, a 7-point likert scale was employed, ranging from "strongly disagree" to "strongly agree".

Data Analysis

Multiple regression analysis was used to examine the relationship between the proposed drivers of consumer acceptance (independent variables) and acceptance of SMS advertising (dependent variable).

Analysis of Data and Findings

Reliability Testing

All of the constructs were associated with acceptable reliabilities ($\alpha > 0.7$) with the exception of utility. Although the Utility construct, ($\alpha = 0.679$) is lower than the generally accepted threshold, it was retained since it appears to have face validity and is logically important to this study (Hair, Anderson, Tatham, & Black, 1998). As highlighted by Merisavo et al. (2007), utility is comprised of important aspects such as relevance, information value and entertainment value, which have been found to be important variables in previous studies on the acceptance of SMS advertising. Cronbach alpha scores were improved across the study following the removal of poor-fitting items.

Factor Analysis

Although the factor analysis identifies six factors explaining 68.2% of the total variance, some of the items did not load into the expected factors, per the Merisavo et al. (2007) study. Overall, 20 of the 24 remaining items were retained after factor analysis and the scale was demonstrated to be a valid measure of the drivers of consumer acceptance of SMS advertising.

Multiple Regression Analysis

Utility, Context, Control, Sacrifice, and Trust to Advertising explain 48.7% ($R^2 = 0.487$) of the variance for acceptance of SMS advertising. Three independent variables (Utility, Context, Sacrifice and Attitudes to Advertising) are significant drivers ($p < 0.01$) for Acceptance of SMS advertising. Therefore, hypothesis 1, 2, and 3 are supported. However, Control and Trust are not significant drivers of Acceptance of SMS advertising ($p > 0.05$) and consequently, hypotheses 4 and 5 are not accepted.

Utility (0.221) and Context (0.191) also had a positive influence on acceptance. In contrast, Sacrifice (-0.215) had

Table 1: Multiple Regression Analysis

Construct	Standardized Coefficients Beta	Significance
<i>Utility</i>	0.221	0.001
<i>Context</i>	0.191	0.003
<i>Sacrifice</i>	-0.215	0.000
<i>Control</i>	-0.100	0.085
<i>Trust</i>	-0.014	0.806

a strong negative relationship with acceptance of SMS advertising.

Concluding Comments

The results of hypotheses testing indicated that the constructs Utility, Context, and Sacrifice were important drivers of consumer acceptance of SMS advertising, while Control and Trust were not important drivers of acceptance. Consistent with Merisavo et al. (2007), perceived Utility is an important driver of consumer acceptance of SMS advertising. This result reflects the notion that the benefits consumers perceive within advertisements are important determinants of whether they accept that advertising medium. This finding also reflects other studies within the field of mobile advertising, supporting the notion that the nature of an advertising message plays an important role in the acceptance of that advertising medium (Bauer et al., 2005; Carroll, Barnes, Scornavacca, & Fletcher, 2007; Kim, Park, & Oh, 2008; Krishnamurthy, 2001; Maneesoonthorn & Fortin, 2006).

The results confirm that context influences acceptance of SMS advertising and this result is consistent with Merisavo et al.'s (2007) findings. Sacrifice has a significant influence on the acceptance of SMS advertising. This finding is consistent with Merisavo et al. (2007) study, in which there was also a strong negative relationship between Sacrifice and Acceptance. In addition, the results in this study reflect the broad findings of other research within the literature, which identify the risks and irritations associated with SMS and other forms of mobile advertising (Chowdhury et al., 2006; Grant & O'Donohoe, 2007; Peters, Amato, & Hollenbeck, 2007).

Control is not perceived as being an important determinant in whether consumers accept SMS advertising. This result is inconsistent with a several studies suggesting that consumers are more likely to have favorable attitudes to mobile advertising if permission was obtained before receiving advertisements (Bauer et al., 2005; Carroll et al., 2007; Dickinger et al., 2004; Grant & O'Donohoe, 2007; Muk, 2007; Tsang, Ho, & Liang, 2004).

While this result is surprising in the overall context of mobile advertising literature, it does support Merisavo et al. (2007) findings. One possible explanation for this finding is that consumers may take it for granted that advertisers do not send consumers unsolicited messages, and therefore the issue of permission and privacy is irrelevant to them (Merisavo et al., 2007). This notion is supported by the strict anti-spam laws in Australia, which dictate that advertisers cannot send messages without prior permission (*Spam Act: An Overview for Business*, 2003). Similar anti-spam laws exist in Finland, the origin of the previous study, which may explain the similarity in findings for the studies in these two countries. As highlighted by Merisavo et al. (2007), this finding warrants further research in countries

where permission legislation is less stringent, and mobile advertisers may use their discretion when sending communications.

No significant relationship emerged between Trust and Acceptance of SMS advertising. Australian consumers do not perceive Trust to be an important driver of consumer acceptance of SMS advertising. This result is inconsistent the findings of Merisavo et al. (2007), who found a significant but weak relationship between Trust and Acceptance. Since Australia has such stringent laws on sending unsolicited messages, the issue of trust may be less important to consumers.

References

- Barnes, S. (2002). Wireless digital advertising: nature and implications. *International Journal of Advertising*, 21(3): 399-420.
- Barnes, S., & Scornavacca, E. (2004). Mobile marketing: The role of permission and acceptance. *International Journal of Mobile Communications*, 2(2): 128-39.
- Bauer, H., Barnes, S., Reichardt, T., & Neumann, M. (2005). Driving consumer acceptance of mobile marketing: A theoretical framework and empirical study. *Electronic Commerce Research*, 6(3): 181-92.
- Carroll, A., Barnes, S., Scornavacca, E., & Fletcher, K. (2007). Consumer perceptions and attitudes towards SMS advertising: Recent evidence from New Zealand. *International Journal of Advertising*, 26(1): 79-98.
- Cheng, M., Blankson, C., Wang, S., & Chen, S. (2009). Consumer attitudes and interactive digital advertising. *International Journal of Advertising*, 28(3): 501-25.
- Chowdhury, H., Parvin, N., Weitenberner, C., & Becker, M. (2006). Consumer attitude toward mobile advertising in an emerging market: An empirical study. *International Journal of Mobile Marketing*, 1(2): 33-41.
- Dickinger, A., Haghirian, P., Murphy, J., & Scharl, A. (2004). *An investigation and conceptual model of SMS Marketing*. Paper presented at Proceedings of the 37th Hawaii International Conference on System Sciences, Hawaii. Retrieved July 22, 2009 from ProQuest 5000 database.
- Grant, I., & O'Donohoe, S. (2007). Why young consumers are not open to mobile marketing communication. *International Journal of Advertising*, 26(2): 223-46.
- Hair, J., Anderson, R., Tatham, R., & Black, W. (1998). *Multivariate Data Analysis 5ED*. New Jersey: Prentice Hall.
- Heinonen, K., & Strandvik, T. (2003). Consumer responsiveness to mobile marketing. In *Stockholm Mobility Roundtable*. Stockholm, Sweden.
- Hoyer, W., & MacInnis, D. (2004). *Consumer Behavior*. New York: Houghton Mifflin.

- Kavassalis, P., Spyropoulou, N., Drossos, D., Mitrokostas, E., Gikas, G., & Hatzistamatiou, A. (2003). Mobile permission marketing: Framing the market inquiry. *International Journal of Electronic Commerce*, 8(1): 55-79.
- Kim, G. S., Park, S. B., & Oh, J. (2008). An examination of factors influencing consumer adoption of Short Message Service (SMS). *Psychology and Marketing*, 25(8): 768-86.
- Krishnamurthy, S. (2001). A comprehensive analysis of permission marketing. *Journal of Computer Mediated Communication*, 6(2).
- Leek, S., & Christodoulides, G. (2009). Next-generation mobile marketing: How young consumers react to bluetooth-enabled advertising. *Journal of Advertising Research*, 49(1): 44-53.
- Leung, L. (2007). Unwillingness-to-communicate and college students' motives in SMS mobile messaging. *Telematics and Informatics*, 24(2): 115-29.
- Maneesoonthorn, C., & Fortin, D. (2006). Texting behaviour and attitudes toward permission mobile advertising. *International Journal of Mobile Marketing*, 1(1): 66-72.
- Merisavo, M., Kajalo, S., Karjaluoto, H., Virtanen, V., Salmenkivi, S., Raulas, M., & Leppäniemi, M. (2007). An empirical study of the drivers of consumer acceptance of mobile advertising. *Interactive Advertising*, 7(2): 1-18.
- Muk, A. (2007). Consumers' intentions to opt in to SMS advertising. *International Journal of Advertising*, 26(2): 177-98.
- Nysveen, H., Pedersen, P., & Thorbjorsen, H. (2005). Intentions to use mobile services: Antecedents and cross-service comparisons. *Journal of the Academy of Marketing Science*, 33(3): 330-46.
- Okazaki, S., & Taylor, C. (2006). What is SMS advertising and why do multinationals adopt it? Answers from an empirical study in European markets. *Journal of Business Research*, 61(1): 4-12.
- Peters, C., Amato, C., & Hollenbeck, C. (2007). An exploratory investigation of consumers perception of wireless advertising. *Journal of Advertising*, 36(4): 129-45.
- Phau, I., & Teah, M. (2009). Young consumers' motives for using SMS and perceptions towards SMS advertising. *Direct Marketing: An International Journal*, 3(2009): 97-108.
- Rogers, E. (1995). *Diffusion of innovations*. New York: Free Press.
- Sekeran, U. (2003). *Research Methods for Business, A Skill Building Approach 4ED*. New York: John Wiley and Sons.
- Spam act: An overview for business*. (2003). Retrieved August 11, 2009, from <http://www.bulksms.com.au/spamact.htm>
- Speck, P. S., & Elliott, M. T. (1998). Consumer perceptions of advertising clutter and its impact across various media. *Journal of Advertising Research*, 38(1): 29-41.
- Sultan, F., & Rohm, A. (2005). The coming era of "Brand in the Hand" marketing. *MIT Sloan Management Review*, 47(1): 82-90.
- Tsang, M., Ho, S., & Liang, T. (2004). Consumer attitudes toward mobile advertising: An empirical study. *International Journal of Electronic Commerce*, 8(3): 65-78.
- Varshney, U., & Vetter, R. (2002). Mobile commerce: Framework, applications and network support. *Mobile Networks and Applications*, 7(3): 185-99.
- Yang, K., & Jolly, L. (2008). Age cohort analysis in adoption of mobile data services: Gen Xers versus baby boomers. *Journal of Consumer Marketing*, 25(5): 272-80.
- Zhang, J., & Mao, E. (2008). Understanding the acceptance of mobile SMS advertising among young chinese consumers. *Psychology and Marketing*, 25(8): 787-805.