

**A CONCEPTUAL MODEL OF CONSUMER ATTITUDES  
TOWARDS SMS ADVERTISING**

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### **ABSTRACT**

This paper presents the theoretical applications relevant to a study on the drivers of consumer acceptance of SMS advertising. This paper applies common underlying theories such as the Technology Acceptance Model and Diffusion of Innovation Theory to the field of SMS advertising. Common marketing concepts and theories are also applied to each of the proposed constructs within the study, Utility, Context, Sacrifice, Control, Trust and Attitudes to Advertising in General. This paper then summarises the study in the form of a conceptual framework, presenting a model and proposed hypotheses to be tested.

### **KEY WORDS**

SMS advertising, Conceptual Framework, TAM, Diffusion of Innovation, Acceptance

## **INTRODUCTION**

This section will discuss the relevant theoretical background that supports this study, by highlighting the major theories and concepts that support this research. This chapter will also introduce the hypotheses that have been derived from the preceding literature review, which attempt to answer the underlying research questions. This chapter will begin by restating the key objectives of the study, before introducing the key theories that have an important bearing on consumer acceptance of SMS advertising. Then, based on the review of literature, the relevant constructs for this study are supported using appropriate theories and concepts. Based on the relevant literature, and the theoretical support, hypotheses will be constructed for each of these constructs. This study centers on the testing of six key hypotheses, which have been adapted from previous research conducted by Merisavo et al (2007) and Bauer et al (2005). After presenting the relevant theoretical foundation and hypotheses, a conceptual framework will be provided, which summarises the study in the form of a model.

## **UNDERLYING THEORIES**

### **Technology Acceptance Model**

Consumers willingness to accept SMS advertising can be explained by the Technology Acceptance Model. The Technology Acceptance Model (TAM) is an information systems theory (Peters, Amato, and Hollenbeck 2007) which is an extension of Fishbein and Ajzen's (1974) Theory of Reasoned Action. Introduced by Fred Davis in 1989, 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 utilities it offers (Yang and Jolly 2008; Zhang and Mao 2008). The TAM provides a basic outline of the types of factors that can influence acceptance, and is therefore relevant in this study.

TAM is a robust and well established theory, and has become the most broadly applied model in studies of user acceptance (Asil and Vatanparast 2007). While TAM was originally applied to systems use in the workplace (Davis 1989), it has since been

applied to a range of new technologies, including consumer use of the internet (Teo, Lim, and Lai 1999). Several recent studies have also applied the TAM to understanding mobile advertising attitudes and acceptance (Asil and Vatanparast 2007; Bruner and Kumar 2005; Kim, Park, and Oh 2008; Muk 2007; Nysveen, Pedersen, and Thorbjorsen 2005; Peters, Amato, and Hollenbeck 2007; Zhang and Mao 2008). In applying the TAM to studies on mobile advertising acceptance, researchers have adapted the theory specifically for various forms of mobile advertising. One such study, conducted by Nysveen, Pederson and Thorbjorsen (2005) explored intention to use mobile gaming services by adding the hedonic constructs “enjoyment”, “fun” and “expressiveness” to the original TAM constructs “ease of use” and “perceived usefulness”.

According to Zhang and Mao (2008), TAM is particularly important in explaining consumer acceptance of SMS advertising. This is due to the fact that the use of SMS advertising is a reasoned action, which requires a purposeful and conscious cognitive effort, which is the basic assumption of the TAM and its parent concept, the Theory of Reasoned Action. Recent critics of the Technology Acceptance Model have pointed out that consumers don't necessarily have to consciously process advertising information (Fishbein and Middlestadt 1995), and instead can form attitudes when motivation is low, or exposure to advertising is incidental (McQuarrie and Mick 2003; Zhang and Mao 2008). While this may be true for traditional forms of advertising such as television, SMS advertising is seen to require a comparatively reasoned action, as users have some degree of control over the messages they receive (Bamba and Barnes 2007; Barnes and Scornavacca 2004). In addition, SMS is a more interactive form of advertising, as consumers can directly respond to the advertisement, or forward the communication to others, increasing the possibility that consumers will cognitively process advertising messages (Liu and Shrum 2002). It can therefore be said that the TAM is a valid theory in helping to understand the drivers of consumer acceptance of SMS advertising.

### **Diffusion of Innovation**

While the TAM is a useful predictor in understanding the overall acceptance of a new technology or advertising medium, it examines the influence of just two adopter characteristics. It is here that the Diffusion of Innovation theory is useful, as it

provides a more comprehensive set of attributes that may act as drivers of consumer acceptance (Muk 2007; Rogers 1995). The Diffusion of Innovation theory is the dominant theoretical framework for analysing the rate of adoption of innovative technology (Roach 2009), and can be defined as “*The process by which innovation is communicated through certain channels over time among the members of a social system*” (Rogers 1983). The theory suggests that when exposed to a new technology, an individual will choose to accept or reject the innovation based on their preferences, and the perceived attributes and benefits of the technology (Rogers 1995). The theory also suggests that the rate of adoption of a new technology will differ throughout the various demographic groups in society, as the technology is adopted quickly by some groups and slowly by others. This acceptance is determined by a logical process, based on the hierarchy of effects. First, an individual undertakes an initial period of basic knowledge of an innovation, before forming an attitude toward it, and finally a decision to either adopt or reject it (Asil and Vatanparast 2007; Rogers 1995). This process provides the underlying theoretical basis for the adoption or rejection of SMS advertising, and describes the process by which consumers accept or reject the innovation of SMS advertising.

Rogers (1995) also suggests that adoption is related to beliefs about 5 major attributes of innovation, which are: relative advantage, complexity, compatibility, trialability and observability. These attributes can be compared to the Technology Acceptance Model, with the TAM’s perceived usefulness equivalent of Diffusion of Innovation’s relative advantage, and ease of use equivalent to complexity (Karahanna, Straub, and Chervany 1999). These underlying constructs of the decision process provide an important theoretical basis in determining the drivers of consumer acceptance of SMS advertising.

## **CONCEPTUAL FRAMEWORK**

### **Utility**

As identified in the literature, one of the key drivers of consumer acceptance of SMS advertising is the nature of the advertising message. 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, and researchers believe the higher the perceived benefit associated with the advertisement, the higher the level of acceptance (Bauer et al. 2005). This idea is supported by the Information Economical Model of Communication. This theory purports that the consumer consciously decides on which advertising stimuli it perceives. During this time-limited process of perception, the consumer has to trade off between different sources of advertising (Kaas 1990). According to the model, a consumer will perceive the advertising stimuli if its marginal utility outweighs the marginal utility in engaging in an alternative activity. In the context of this study, this means that a consumer's acceptance of SMS advertising will be strong if the perceived utility of the advertising service is high (Bauer et al. 2005).

The notion that utility is a driver of consumer acceptance of SMS advertising can be further explained by the Uses and Gratifications approach. Uses and Gratifications theory is a research strategy used to understand use of media in terms of psychological or social indulgence or needs (Jun and Lee 2007). The theory states that the consumer is actively involved in the decision to determine media use (Peters, Amato, and Hollenbeck 2007) and use of media is goal oriented (Katz, Gurevitch, and Haas 1973; Phau and Teah 2008). Studies conducted on the use of media have revealed that consumers have the need to express personal identity, build relationships and seek escapism, as well as seek entertainment and information (Katz, Gurevitch, and Haas 1973; Weiss 1971). Katz, Gurevitch and Haas (1973) identified three categories of which needs are most important: the need for information, the need for entertainment and the need for social acceptance. In light of this study, the Uses and Gratifications approach suggests that acceptance will only occur if SMS advertising is perceived to fulfill these basic needs, which are components of the utility concept.

Based on the preceding theoretical discussion and review of relevant literature, it can be said that the benefits of receiving SMS advertisements will 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. Hence:

**H1: Consumers' perceived utility of SMS advertising is positively related to their willingness to accept SMS advertising.**

## **Context**

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, which is known as contextual information (Merisavo et al. 2007). This idea of context adding value to consumer perception, which is found throughout the literature, can be supported by the concept of “conditional value”. Conditional value refers to the external circumstances that impact choice, occurring only within a specific and unique situation (Holbrook 1994; Pura 2005).

While the impact of context has been broadly studied throughout the marketing literature, it is most often related to consumption experiences at certain events, for example Christmas, and restricted to the impact of time and place (Pura 2005). In applying the concept of conditional value to mobile service, researchers have adapted the traditional idea of conditional value to more appropriately describe the use of mobile services. This updated conceptual model has added concepts such as social environment and availability of technology to the traditional concepts of time and place, reflecting the situational nature of mobile services on the move (Pura 2005).

Based on the review of relevant literature, and the concept of conditional value, it can be said that context will have an important bearing on consumer’s decision to accept SMS advertising. Hence:

**H2: Consumers’ utilization of contextual information in SMS advertising is positively related to their willingness to accept mobile advertising.**

## **Sacrifice**

It has been suggested in the literature that the perceived irritation of receiving SMS advertisements will influence whether consumers accept SMS advertising. This 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. Perceived risk is particularly relevant to the study of SMS advertising as it is seen as an innovation, and consumers lack experience with the new medium, leading to a high risk situation. Consumers therefore 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 perceived risks associated with receiving SMS advertising can be supported by the Perceived Risk Theory. The Theory of Perceived Risk is an underlying concept in the study of consumer behaviour, and can be defined as “*the uncertainty consumers face when they cannot foresee the consequences of their decision*” (Schiffman and Kanuk 2000). In its most basic form, consumer perceived risk occurs when any action taken by a consumer produces consequences that are viewed with some amount of uncertainty (Chen and He 2003). Typically, perceived risk has been conceptualized into six components: financial, performance, social, psychological, safety, and time/convenience loss (Jacoby and Kaplan 1972). Specifically, financial risk refers to the likelihood that purchase results in loss of money. Performance risk refers to the likelihood that a product fails to perform as expected. Social risk refers to the likelihood of a product resulting in disapproval in a social environment. Psychological risk refers to the likelihood of negative impact on self image. Physical risk refers to the likelihood of a product resulting in injury and time risk refers to the likelihood of a purchase resulting in loss of time to perform other tasks (Chen and He 2003). Overall, perceived risk is the sum of these factors.

While the Perceived Risk Theory is a popular concept in consumer behavior, it has not properly been applied to the study of mobile advertising, instead being primarily used to describe risks associated with consumer goods. Despite this lack of application, Merisavo et al (2007) believes some perceived risk factors will have an important bearing on consumer acceptance of SMS advertising. These important factors include the perceived irritation of receiving SMS advertisements, which according to Perceived Risk Theory is a psychological risk. Merisavo et al (2007) also identified the time involved in dealing with SMS advertising as an important factor, which can be categorised as time risk.

Even though consumers give their permission to receive SMS advertisements, what they actually receive may not align with expectations, resulting in the perception of various risks relating to time, unsuitability, irritation and loss of privacy (Merisavo et al. 2007). These risks and irritations represent significant sacrifices that consumers associate with SMS advertising. Hence:

**H3: Consumers' perceived sacrifice in receiving SMS advertising is negatively related to their willingness to accept mobile advertising.**

### **Control**

The influence of permission and privacy on consumer acceptance of SMS advertising is an important issue within the literature. 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. In Australia, mobile advertising is permission based by law, to prevent marketers sending unsolicited messages to consumers (*Spam Act: An Overview for Business* 2003). Therefore, SMS advertising is driven by the concept of permission marketing (Merisavo et al. 2007). Permission marketing represents the opposite of traditional interruption marketing, where consumers provide marketers with consent to send them certain types of promotional messages (Godin 1999). Typically, permission is obtained by asking a consumer to fill out a survey when registering for a service, and the consumers interests are then matched to relevant advertising messages (Krishnamurthy 2001). The fundamental aim of permission marketing is to improve the targeting precision of advertising messages, and move away from the traditional approach of "targeting on averages" where broad and generic profiles are used to expose consumers to advertising (Krishnamurthy 2001). This concept, driven by the various forms of direct marketing, aims to build long term relationships with the consumer, and tailor the marketing mix to the needs of the individual (Carroll et al. 2007; Krishnamurthy 2001). The concept of permission marketing has been widely applied to the study of SMS advertising, and a range of theoretical models have been proposed. For example, Krishnamurthy (2001) identified five factors that determine consumer interest in a permission based wireless campaign: message relevance, monetary benefit, personal information entry costs, message processing costs and privacy costs.

According to Rettie and Brum (2001), the idea of consumer consent is particularly relevant to mobile marketing, as the low cost of sending advertising messages can create a potential volume problem for the consumer. Furthermore, the mainly social use of the medium and invasiveness of receiving an SMS advertising message is likely to cause irritation unless permission is given. The highly personal nature of the mobile phone means that consumer's ability to control the number and type of

advertising messages they receive is an important factor in acceptance of SMS as an advertising medium (Merisavo et al. 2007). Based on the review of literature, and application of the concept of permission marketing, it can be said that consumer acceptance of SMS as an advertising medium is likely to be influenced by the perceived control that consumers have over the advertising messages they receive. Hence:

**H4: Consumers' perceived control of SMS advertising is positively related to their willingness to accept mobile advertising.**

### **Trust**

In an extension of the issue of perceived control over the SMS advertising messages they receive, consumers are also likely to be influenced by the issue of privacy. It was noted in the review of literature that consumers acceptance of SMS advertising is affected by their trust in marketers use of the personal information obtained when providing permission to receive SMS advertisements. For example, if a consumer believes a marketer will divulge their personal information to a third party or external source, they will be less accepting of SMS advertising. Conversely, 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. Hence:

**H5: Consumers' trust in information privacy of SMS advertising is positively related to their willingness to accept mobile advertising.**

### **Attitudes Toward Advertising in General**

In the literature, it has been found that a potential driver of consumer acceptance of SMS advertising is the consumer's attitude toward advertising in general. It is therefore pertinent to analyse the relationship between attitudes toward advertising and consumer acceptance of SMS advertising. The notion that attitudes toward advertising in general could be a factor in determining acceptance of advertising in one specific medium is supported by the Theory of Cognitive Dissonance. The Theory of Cognitive Dissonance is an important concept in psychology, and is useful in explaining the integration of a single attitude into an individual's entire attitudinal

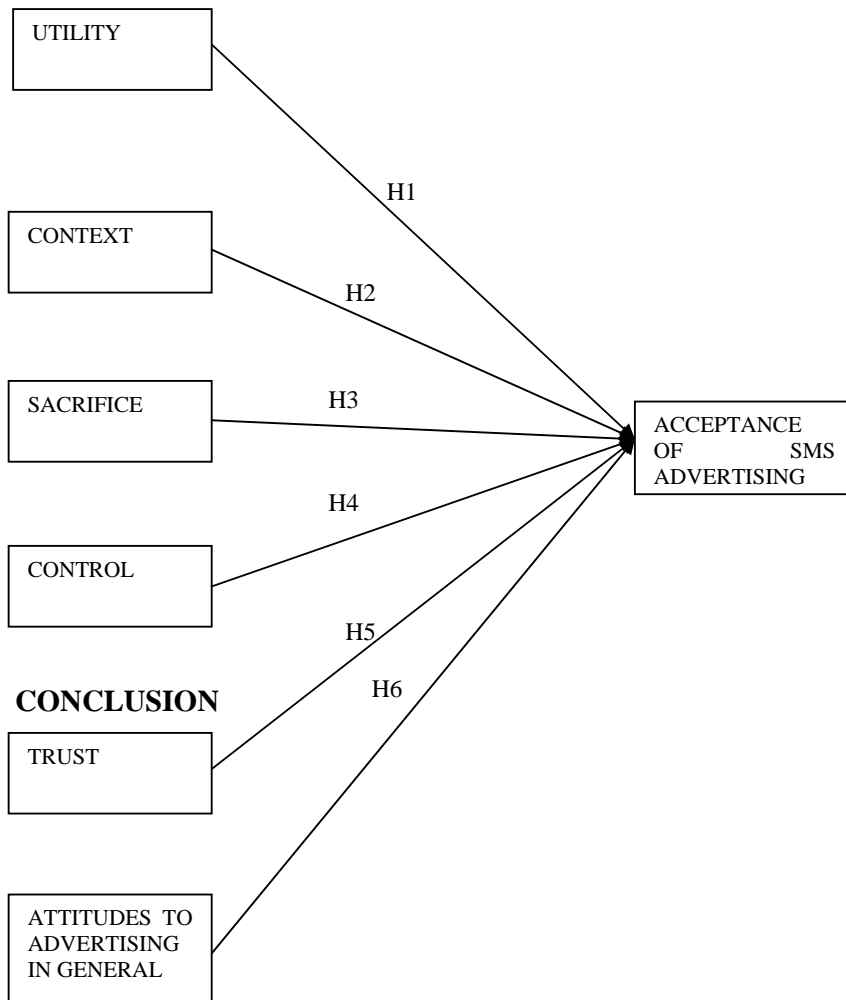
system (Festinger 1978). The theory explains the relationship between an individual's attitude structure, and how a person will try to keep their cognitive systems in balance (Bauer et al. 2005). The theory purports that if an inconsistency arises between cognitive processes such as attitudes, opinion or expectations, the individual will be experience a feeling of uneasiness. To reduce this feeling of dissonance, the individual will be motivated to reduce the difference between cognitive beliefs. In this situation, the individual generally reshapes the attitude of lowest resistance, allowing it to become consistent with the more dominant attitude or belief (Güttler 2003).

This notion of Cognitive Dissonance is particularly relevant in studying the consumer acceptance of SMS advertising. According to Bauer et al (2005), the attitudes toward advertising in general and SMS advertising are related, as SMS advertising can be considered a subset of all available advertising mediums. As SMS advertising is a relatively new concept, consumer's are likely to be relatively unfamiliar with it, and their attitudes toward this medium are likely to be unstable and interchangeable. In contrast, consumer beliefs about advertising in general are much more rigid and stable, as individuals are familiar with it, and exposed to it regularly. Beliefs about SMS advertising are therefore likely to be heavily influenced by the attitudes toward advertising in general, which have a greater resistance to change (Bauer et al. 2005). Based on the findings of previous studies, and application of the Theory of Cognitive Dissonance, it is expected that acceptance of SMS advertising will be dependent on a consumers attitudes toward advertising in general. Hence:

**H6: Consumers acceptance of advertising in general is positively related to their willingness to accept SMS advertising.**

### **CONCEPTUAL MODEL**

A summary of the above conceptual framework is illustrated below in the form of a conceptual model. It is expected that Acceptance of SMS advertising is the dependant variable, while the other constructs are independent.



This section has presented the key academic theories and concepts that form the basis of this study, as well as present the hypotheses to be tested. After reiterating the objectives of the study, Davis’s (1989) Technology Acceptance Model, as well as Roger’s (1995) Diffusion of Innovation theory, were found to be an important basis on which consumer acceptance of SMS advertising could be studied. After the application of these two core concepts, more specific theories and concepts were applied to each of the proposed drivers of consumer acceptance. First, the notion of perceived utility being a driver of acceptance was supported by the Information Economical Model of Communication, as well as the Uses and Gratification’s theory. Next, the impact of context on consumer acceptance of SMS advertising was supported by the marketing concept of “conditional value”. Third, the idea that sacrifices perceived by consumers impact on acceptance was supported by Perceived Risk theory. The identified issue of perceived control over SMS advertisements was

derived from the concept of permission marketing, which was also extended to the issue of trust as being a driver of acceptance. Finally, the idea that general attitudes toward advertising could impact on acceptance of SMS advertising was supported by the Theory of Cognitive Dissonance. For each of the above constructs, hypotheses were constructed to describe the expected relationship between the concept and acceptance of SMS advertising. Finally, a conceptual model was used to summarise the conceptual framework of the study. The next chapter will describe the research methods in undertaking this study.

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