

Revisiting the Effect of Mobile Advertising Content on Buying Intention

Nor Hazlina Hashim^{1*}, Normalini Md Kassim² and Roshni Ann George³

¹School of Communication, Universiti Sains Malaysia (USM), Pulau Pinang, Malaysia
nhashim@usm.my

²School of Management, Universiti Sains Malaysia (USM), Pulau Pinang, Malaysia
normalini@usm.my

³Graduate School of Business, Universiti Sains Malaysia (USM), Pulau Pinang, Malaysia
roshni.ann.george@gmail.com

*Corresponding author

Abstract: The digital era is known for technological breakthroughs in knowledge exchange through portable computing devices that include android and iOS smart phones. These gadgets, which have become a necessity for many, offer numerous advertising opportunities for companies to reach a wide pool of potential customers. Mobile advertising holds the best promise for one-to-one communication and provides avenues for direct and personalised marketing. Previous studies on consumer attitudes towards mobile advertising have generated conflicting results. This paper conceptualizes the effect of mobile advertising content on buying intention in a framework derived from past models and theories of technology acceptance. In light of the high purchase intentions of the younger generation in Malaysia, antecedents previously used in predicting the behavioural response of consumers towards mobile advertising and purchase intention were reexamined and combined with the personalization factor. Additionally, subjective norms and perceived behavioural control are proposed to have considerable impact on the purchase intentions of consumers in Malaysia. It is hoped that the proposed framework will lead to further clarity about the importance of mobile advertising content on behavioural response and therefore benefit the marketing efforts of companies by providing valuable insights on factors that influence the buying intentions of Malaysian consumers.

Keywords: mobile advertising, perceived behavioural control, personalization, purchase intention, subjective norms

Introduction

In the wake of technological advances in information transfer, mobile devices have emerged as one of the new communication channels for commerce. The rising use of this medium to deliver advertising messages is due to its high penetration rate (Tsang et al. 2004). As mobile subscribers keep increasing with the diffusion of mobile networks and technology, the prospects of mobile marketing have become almost boundless. Mobile advertising, as defined by Salo and Tähtinen (2005), is the sending and receiving of advertisements by mobile devices. These remarkable handheld tools that include mobile phones, personal digital assistants, tablets and other portable devices, allow companies to effectively market products and services to consumers who are on the move constantly. Advertisements are delivered through many different mobile technologies that include Short Messaging Services (SMS), Multimedia Messaging Services (MMS) and mobile applications. Research on mobile advertising has increased in recent years due to the great promise offered by this marketing instrument. Studies have shown that advertisements delivered to mobile phones capture attention, drive response action and build brand awareness (Yunos et al. 2003). Mobile devices are built in with multimedia capabilities and interactivity and therefore offer creative means of attracting the attention of consumers. Marketers are increasingly aware that advertising content and features play a big role in generating a response in behaviour (Rodgers and Thorson 2000). Nevertheless, considerable challenges confront these marketers when using mobile advertising as a medium such as instances of spam, limited user interface, privacy concerns and high costs of mobile data communication (Vatanparast and Asil 2007).

Therefore, studies have examined various factors affecting mobile advertising including message relevance, personalization, privacy costs, message processing costs and monetary benefits (Krishnamurthy 2001). Tsang et al. (2004) investigated the connection between attitude, intention and behaviour in mobile marketing and found that while incentives influenced attitude and intention to receive mobile marketing, absence of permission had a negative effect. They also proposed that attitude was affected by entertainment, informativeness, irritation and credibility. Stewart and Pavlou

(2002) found that consumers may be distracted, confused and overwhelmed by the assortment of information from mobile advertising and therefore have negative attitudes towards them. Wong and Tang (2008) discovered that on the one hand, irritation with the appearance of advertising on mobile device screens led to negative attitudes towards mobile advertising, while, on the other, positive attitudes were generated when they perceived that the information was beneficial to them.

As research has found conflicting responses towards mobile advertising, the main objective of this study is to conceptualise a model to study the effect of mobile advertising content on consumer purchase intention in the context of Malaysia. Following a review of literature, nine hypotheses are proposed based on the conceptual model to enhance understanding on factors that affect behavioural response and purchase intention in mobile advertising. The model attempts to address several gaps in literature by reviewing the antecedents of behavioural response towards acceptance of mobile advertising as well as the predictors of consumer purchase intention. It is hoped that this paper will benefit researchers and marketers by expanding theoretical insights on the effect of mobile advertising content on the behaviour of consumers and their purchase intentions.

Conceptual Framework

Academicians have taken different stances in the exploration of consumer acceptance and purchase intention in mobile advertising. Most studies have proposed models that utilise underlying theories related to technology acceptance. Some of the common theories and models include the Theory of Reasoned Action (TRA), the Theory of Planned Behaviour (TPB), the Innovation Diffusion Theory, the Technology Acceptance Model (TAM), the extension of TAM (TAM2) and the Unified Theory of Acceptance and Use of Technology (UTAUT). This paper combines a number of theories and models of technology acceptance and expands understanding of this subject by focusing on the effect of mobile advertising content on buying intention.

The TRA (Ajzen and Fishbein 1980) and to a greater extent, its successor, the TPB (Ajzen 1991) have been frequently used to study behavioural predictions from attitudinal variables. Intention to perform a specific behaviour is predicted by attitude towards that behaviour (acceptance of mobile advertising), rather than by attitude towards a product or service. The TPB extends the TRA by adding 'perceived behavioural control' as a predictor of behavioural intention. The TPB suggests that intentions are influenced by attitudes toward behaviour, subjective norms and perceptions of behavioural control and that people act in accordance with their intentions (Ajzen 2001). In this paper, the TPB is used in the conceptual model to examine how these three factors influence intention to purchase in mobile advertising. Therefore, the consumers' behavioural intentions are dependent on whether they are favourable towards the behaviour, their opinions of how other people view the behaviour as well as their perceived control over the behaviour (Chang 1998).

In addition to investigating the ability of the three constructs to predict consumer purchase intention in mobile advertising, a mediating effect of subjective norms on the relationship between attitude towards behaviour and intention is also proposed. Here, the relationship between attitude towards behaviour and intention is decomposed into two causal paths. The first path connects attitude towards behaviour to intention directly (the direct effect). The other path connects attitude towards behaviour to intention through subjective norms, the mediator (the indirect effect). An indirect or mediated effect implies that attitude towards behaviour causes perceived subjective norms, which, in turn causes intention to purchase.

Strong correlations have been found between attitudes and subjective norms in previous studies (Ajzen 2001). Although studies have tested the mediating effect of attitude on the relationship between subjective norms and intention (Chang 1998; Hansen et al. 2004), the ability of social norms to mediate the effects of attitude towards behaviour on purchase intention has not been tested in the context of mobile advertising. It is proposed that subjective norms explain the reason for the relationship between attitude and intention. For example, a consumer may be favourable in attitude towards a mobile advertisement. However, the intention to actually purchase a product or service in the advertisement may be influenced by beliefs about the appropriateness of accepting the particular mobile advertisement which is based on perceived social norm (see Ajzen 2001).

In addition, a number of researchers have questioned the assumption that the predictors in the TPB can adequately account for intentions and behaviour (Ajzen 2001). Significant improvements in the

prediction of intentions or behaviour have been shown by adding measures of additional variables in the prediction model (Ajzen 2001). Therefore, in this paper, the predictive power of the TPB is combined with the models of Ducoffe (1996) and Mackenzie (1989) who suggest that the antecedents of consumer attitudes are entertainment, informativeness, irritation and credibility. These constructs are viewed as a function of mobile advertising content. The model proposed in this paper further incorporates personalisation as an additional antecedent of consumer attitude. The personalisation factor is suggested to be highly relevant to mobile advertising content and therefore able to significantly affect consumer attitude towards mobile advertising acceptance.

Figure 1 shows the proposed conceptual framework that examines consumer purchase intention as an outcome of consumer attitude towards acceptance of mobile advertising and perceived behavioural control. Subjective norms on the acceptance of mobile advertising are proposed to mediate the relationship between consumer attitude towards acceptance and purchase intention. The effect of mobile advertising content is captured as the antecedents of behavioural response towards acceptance of mobile advertising. Therefore, the effect of mobile advertising content is suggested to be a factor of entertainment, informativeness, irritation, credibility and personalization. The section below presents the hypotheses derived from the proposed framework.

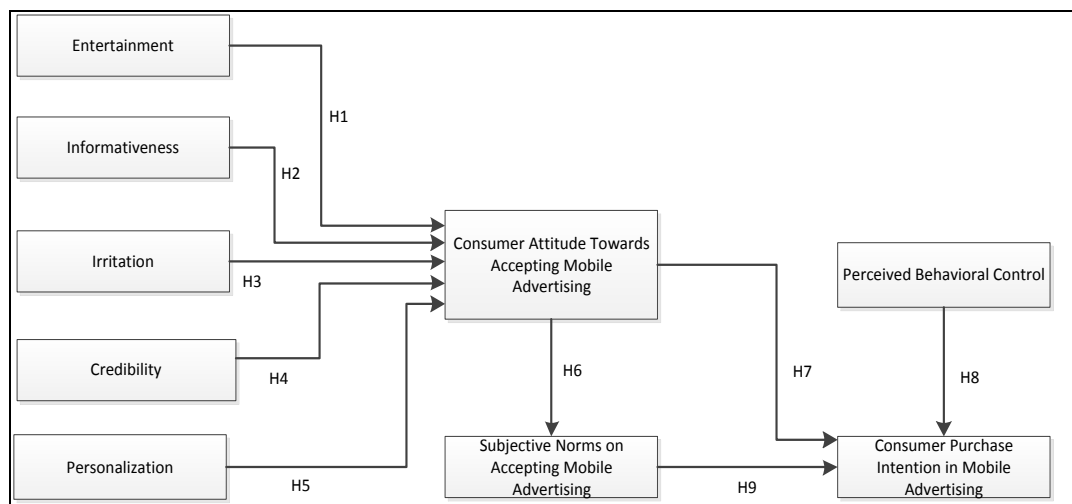


Figure 1: Proposed Conceptual Framework

Hypotheses Development

To explore the relationships between the antecedents of behavioural response towards acceptance of mobile advertising as well as the predictors of consumer purchase intention in mobile advertising, nine hypotheses were formulated. The definitions and characteristics of the constructs pertaining to the proposed conceptual framework are discussed below.

Entertainment

Entertainment is defined by McQuail (1987) as the ability to fulfil the need for escapism, diversion, aesthetic enjoyment or emotional enjoyment. According to Bartsch and Viehoff (2010), entertainment is extremely important in mobile advertising as content that is concise and funny immediately captures the attention of consumers. Engagement through videos, music, games and prizes in mobile advertisements ensure higher participation rates and therefore acceptance.

Entertainment in advertising is significantly related to advertising value in different empirical investigations. A higher degree of entertainment value in mobile advertising messages leads to higher perceived advertising value. Pleasure and involvement during interaction with mobile-based media plays a positive role in developing an overall positive attitude in consumers (Novak et al. 2000). The more enjoyment received from the advertisement, the more likely there will be a positive attitude

towards accepting the mobile advertisement and a higher chance of purchase intention. Therefore, it is hypothesized that:

H1: The entertainment element in mobile advertising content positively influences consumer attitude towards accepting mobile advertising

Informativeness

Ducoffe (1996) defined informativeness as the ability of advertising to inform consumers of product alternatives so that purchases made produce the highest possible satisfaction. In this day and age, quick access to information is required by customers to fulfil their needs (Kaasinen 2003). Mobile advertising ensures that companies remain competitive as the delivery of information is instantaneous. According to Siau (2003), it is imperative that information delivered to mobile devices meet qualitative standards of accuracy, timeliness, and usefulness.

Consumers prefer that mobile content delivered are tailored to their needs (Robins 2003). Mobile advertisements that supply needed information are likely to be well accepted by consumers. Varshney (2003) found that consumers have positive reactions to advertisements that convey knowledge. Therefore, it can be concluded that informativeness is an importance variable in mobile advertising as it results in positive attitudes towards mobile advertisements. Hence, it is hypothesized that:

H2: The informativeness element in mobile advertising content positively influences consumer attitude towards accepting mobile advertising

Irritation

Irritation in the context of advertising has been defined by Ducoffe (1996) as offending, insulting, or overly manipulative content that leads to irritability in consumers. There is a high possibility that consumers will perceive advertising content negatively if the advertising content is undesirable (Ducoffe 1996). Unwanted messages such as spam intrude consumers' privacy and create low perceptions about the value of mobile advertising (Dickinger 2005). Therefore, it is concluded that:

H3: The irritation element in mobile advertising content negatively influences consumer attitude towards accepting mobile advertising

Credibility

Mackenzie (1989) defines advertisement credibility as the extent to which the consumer perceives claims made about the brand in the advertisement are truthful and believable. Stewart and Pavlou (2002) imply that this relates to the predictability and fulfilment of the implicit and explicit requirements of the advertisement agreement. Credibility of an advertisement is dependent on a company's credibility as the bearer of the message (Smith and Quelch 1996). Although credibility is also influenced by the advertising medium, there is a lack of empirical evidence on the overall credibility of mobile advertising and factors that they affect. Therefore, it is hypothesized that:

H4: The credibility element in mobile advertising content positively influences consumer attitude towards accepting mobile advertising

Personalization

Imhoff et al. (2001) defines personalisation as the ability to recognise and treat customers as individuals through personal messaging or other personal transactions. As mobile devices are most often used exclusively by owners, there is a personal and intimate relationship between users and their devices, allowing for highly personalized advertising (Vatanparast and Asil 2007). Mobile devices facilitate the collection of information through wireless service providers and therefore enable precise advertising with a clear focus on the target group (Varshney and Vetter 2002). Mobile advertisers are

able to track customers and provide up-to-the-minute communication that can reach smaller customer segments more cost effectively and with more personalized messages (Vatanparast and Asil 2007). Kim and Jun (2008) suggest that the implementation of mobile advertising strategies be considered with a personalisation approach. Critical elements underlying advertising can be customised so that content is based on consumer profile, local time, location, and preferences (Rao and Minakakis 2003). According to Riecken (2000), customer loyalty and meaningful one-to one relationships can be built by understanding different kinds of individual preferences, needs, mindsets, lifestyles, and cultural as well as geographical differences. A study by Kim and Jun (2008) on mobile advertising in Korea found that personalisation advertising tactics enhance advertising effects and reduce consumer advertisement avoidance. A survey on Asian mobile users including those in Malaysia found that most users had positive attitudes towards mobile advertising (Kim and Jun 2008). Therefore, it is likely that personalisation may provide an added advantage to increase positive customer attitudes towards specific mobile advertisements. Thus, it is hypothesized that:

H5: The personalization element in mobile advertising content positively influences consumer attitude towards accepting mobile advertising

Consumer Attitude towards Accepting Mobile Advertising

A major focus of theory and research continues to be the ability of attitudes to predict behavioural intentions and behaviour (Ajzen 2001). Attitude is defined as a learned predisposition of human beings in which an individual is presumed to respond to an object (or an idea) or a number of things (or opinions) (Fishbein and Ajzen 1975). Attitude toward an advertisement is described by McKenzie and Lutz (1989) as the learned predisposition to respond in a consistently favourable or unfavourable way to advertising. The value obtained from mobile advertising significantly impacts attitude toward advertising. Therefore, it is important for marketers to know how mobile advertising recipients perceive, value and evaluate mobile devices as a source of advertising to be able to use it as an efficient means of communication (Vatanparast and Asil 2007).

The success of mobile advertising is dependent on acceptance by consumers. Under certain conditions attitude correlates with behaviour and is related to a favourable evaluation, emotional feeling and action tendency (Kotler 2000). Marketing activities may lead to either positive or negative reactions in consumers (Robins, 2003). Ajzen (1991) showed that the most significant determinant of actual consumer behaviour is the intention to perform the behaviour, which was positively related to attitude toward the behaviour. It is therefore expected that positive attitudes towards mobile advertising will lead to purchase intention (see H7).

However, consumer attitude has been found to vary based on different factors and certain studies have found significant correlations between attitudes and subjective norms (Ajzen 2001). Subjective norms have been found to have a greater influence on intentions than attitude in collectivist cultures compared to individualistic cultures (Abrams et al 1998). Intentions were under the control of either subjective norms or attitudinal considerations in different circumstances (Ajzen 2001). Considering this ambiguity, there is a need for more research to evaluate factors affecting purchase intention in mobile advertising under various contextual circumstances. As the culture in Malaysia is skewed towards collectivism, it is proposed that subjective norms provide an explanation for the relationship between attitudes towards accepting mobile advertising and purchase intention. A positive attitude towards mobile advertising may or may not necessarily lead to purchase intention depending on whether it influences perceived subjective norms. Hence, it is hypothesized that:

H6: Consumer attitude towards accepting mobile advertising positively influences perceived subjective norms on accepting mobile advertising

H7: Consumer attitude towards accepting mobile advertising positively influences consumer purchase intention in mobile advertising

Perceived Behavioural Control

Perceived behavioural control is defined by Ajzen (1991) to be the perceived ease or difficulty of executing the behaviour and is assumed to be a reflection of past experience as well as anticipated impediments and consequences. The consumer's subjective belief about how difficult it will be to generate the behaviour in question is the perception of behavioural control (Hansen et al. 2004). According to TPB, intentions to perform the behaviour as well as the actual performance of the behaviour are impacted directly by the perception of behavioural control instead of the degree of actual behavioural control. Research on the control-behaviour relation has shown that perceived behavioural control is an important predictor of intention and subsequent behaviour (Ajzen 2001). Therefore, it is hypothesized that:

H8: Consumers' perceived behavioural control of mobile advertising positively influences consumer purchase intention in mobile advertising

Subjective Norms

According to Rogers (1995), social learning theory and diffusion theory highlight the role of interpersonal connections and exchange of information in behaviour change. The vagueness surrounding adoption of new things is reduced by informational influence, thus making it a major factor of conformity (Baron & Byrne 2000). Within TPB, subjective norm is defined as the perceived social pressure to perform or not to perform the behaviour by the individual (Ajzen 1991). Consumers have been found to act consistently with social norms and are more likely to accept normative influences from social circles.

In the context of communication networks found in mobile user communities, consumers are inclined to conform to group pressure due to the interconnectedness that comes from high interactivity between users (Mowen & Minor 2001). Subjective norms have been found to greatly impact consumers' marketing attitudes and intentions (Soroa-Koury and Yang 2010). Malaysian consumers are likely to develop purchasing tendencies from mobile advertising if they perceive that it has become a social norm among their peers. Mobile advertising are shared among peers by forwarding advertisements. This leads to acceptance of the advertisement and positively influences intention to purchase the product or service. Therefore, it is expected that:

H9: Consumers' perceived subjective norms on accepting mobile advertising positively influences consumer purchase intention in mobile advertising

Discussion & Conclusion

The purpose of this paper was to review the effect of mobile advertising content on purchase intention by examining existing models and related research. Nine hypotheses were put forward based on the conceptual model that was formulated by combining the models of Ducoffe (1996) and Mackenzie (1989) as well as the Theory of Planned Behaviour. Several theoretical contributions are offered through the revision of the antecedents of consumer attitudes towards mobile advertising and the reconsideration of the predictors of consumer purchase intention. As noted by Ajzen (2001), although attitude is found to be useful in the prediction of behaviour, several questions are still present. Certain features of the theories of reasoned action and planned behaviour continue to be explored.

Differences have been noted in the predictive qualities of perceived behavioural control, attitudes and subjective norms in relation to intention depending on the context and culture of the populations of study (Ajzen 2001). Although studies by Chang (1998) and Hansen et al. (2004) have found a significant improvement in model fit when including attitude as a mediating variable for the relationship between subjective norms and intention, the mediating value of subjective norms in the attitude-intention relationship has not been explored. It is proposed that the inclusion of a path from attitude to subjective norms in the TPB will offer a better prediction of consumer purchase intention in the context of mobile advertising. The addition of perceived behavioural control is also thought to increase the prediction value of the model for purchase intentions in mobile advertising.

The proposed model suggests that both attitude and social normative influences are important in the consideration of purchase intention in mobile advertising. However, attitude is thought to affect

purchase intention indirectly as although attitude towards acceptance of mobile advertising is important, its predictive value for intention is suggested to be improved by subjective norms. This is because attitude is based on experiential information concerning past experiences with mobile advertising content. As Malaysia is mainly a collectivist society, it is highly likely that these personal experiences are related to norms present in social groups. Therefore, the perceived opinions of others concerning mobile advertising plays an important role in purchase intentions.

The addition of personalisation as an antecedent of attitude towards mobile advertising acceptance also adds value to the predictive capability of the proposed framework. Mapping and satisfying customer needs through personalisation ensures that companies have a competitive advantage by increasing attitude towards acceptance of the companies' mobile advertising efforts. Without the consideration of personalisation factors, a key aspect of mobile advertising content that influences consumer attitude would not be taken into account. Thus, by including important aspects of mobile advertising content, this conceptual framework has practical as well as theoretical implications. Companies are able to more fully comprehend the important factors in mobile advertising content and make the necessary changes to influence consumer attitudes towards their mobile advertisements.

It should be emphasized that the framework has several limitations. The focus of the model was on purchase intention instead of actual purchase behaviour. Future frameworks may consider adding and testing behaviour in the model to improve predictive value. In addition, various other factors affecting mobile advertising have not been included in the model. Studies using this model may consider adding relevant constructs that are better able to predict purchase intention and behaviour in their specific contexts. Information privacy for example is becoming an increasing concern for many as consumers are unaware of what information is collected and how companies collect, store and use, information (Baek et al. 2014). In conclusion, it is hoped that this conceptual model will address the important concerns present in the Malaysian mobile advertising industry and thus benefit researchers, marketers and consumers.

References

- Abrams D, Ando K, Hinkle S (1998) Psychological attachment to the group: cross-cultural differences in organizational identification and subjective norms as predictors of workers' turnover intentions. *Personality and Social Psychology Bulletin*, 24(10): 1027–1039
- Ajzen I (1991) The Theory of Planned Behaviour. *Organizational Behaviour & Human Decision Processes*, 50(2): 179–211
- Ajzen I (2001) Nature and operation of attitudes. *Annual Review of Psychology*, 52(1): 27-58
- Ajzen I, Fishbein M (1980) *Understanding Attitudes and Predicting Social Behavior*. Englewood Cliffs, Prentice Hall: NJ.
- Baek YM, Kim E, Bae Y (2014) My privacy is okay, but theirs is endangered: Why comparative optimism matters in online privacy concerns. *Computers in Human Behavior*, 31: 48–56
- Baron R, Byrne D (2000) *Social Psychology*. Allyn & Bacon: Boston.
- Bartsch A, Viehoff R (2010) The Use of Media Entertainment and Emotional Gratification. *Procedia Social and Behavioral Sciences*, 5: 2247–2255
- Chang MK (1998) Predicting unethical behavior: a comparison of the theory of reasoned action and the theory of planned behavior. *Journal of Business Ethics*, 17: 1825–1834
- Dickinger AS (2005) Diffusion and success factors of mobile Marketing. *Electronic Commerce Research and Applications*. 4(2): 159–173
- Ducoffe R (1995) How consumers assess the value of advertising. *Journal of Current Issues and Research in Advertising*, 17(1): 1–18
- Ducoffe RH (1996) Advertising Value and Advertising on the Web. *Journal of Advertising Research*, 36(9): 21–36
- Fishbein M, Ajzen I (1975) *Belief, Attitude, Intention and Behaviour: An Introduction to Theory and Research*. Addison-Wesley: MA.
- Hansen T, Jensen JM, Solgaard HS (2004) Predicting online grocery buying intention: a comparison of the theory of reasoned action and the theory of planned behavior. *International Journal of Information Management*, 24(6): 539-550

- Imhoff C, Loftis L, Geiger J (2001) *Building the Customer-Centric Enterprise: Data Warehousing Techniques for Supporting Customer Relationship Management*. New York: Wiley.
- Kaasinen E (2003) User Needs for Location - aware of Mobile Services. *Personal and Ubiquitous Computing*, 7: 70 - 79
- Kim MJ, Jun JW (2008) A case study of mobile advertising in South Korea: Personalisation and digital multimedia broadcasting (DMB). *Journal of Targeting, Measurement and Analysis for Marketing*, 16(2): 129-138
- Kotler P (2000) *Marketing Management: The Millennium Edition*. Prentice Hall: NJ.
- Krishnamurthy S (2001) A Comprehensive Analysis of Permission Marketing. *Journal of Computer Mediated Communication*, 6(2): 0 doi:10.1111/j.1083-6101.2001.tb00119.x
- Mackenzie SR (1989) An empirical examination of the structural antecedents of attitude toward the ad in an advertising pretesting context. *Journal of Marketing*, 53(4): 48-65
- McKenzie SB, Lutz RL (1989) An Empirical Examination of the Structural Antecedents of Attitude Toward the Ad in an Advertising Pretesting Context. *Journal of Marketing*, 53(April): 48-65
- McQuail D (1987) *Mass Communication Theory: An Introduction*. London. Sage Publications: UK.
- Mowen J, Minor M (2001) *Consumer Behavior: A Framework*. New Jersey: Prentice Hall.
- Novak TP, Hoffman DL, Yung Y (2000) Measuring the Customer Experience in Online Environments: A Structural Modeling Approach. *Marketing Science*, 19(1): 22-42
- Rao B, Minakakis L (2003) Evolution of Mobile Location-Based Services. *Communications of the ACM*, 46(12): 61-65
- Riecken D (2000) Personalized views of personalization. *Communications of the ACM*, 43(8): 27-28
- Robins F (2003) The Marketing of 3G. *Marketing Intelligence & Planning*, 21(6): 370-378
- Rodgers S, Thorson E (2000) The interactive advertising model: How users perceive and process online ads. *Journal of interactive advertising*, 1(1): 41-60
- Rogers E (1995) *Diffusion of Innovations*. New York: The Free Press.
- Salo J, Tähtinen J (2005) Retailer Use of Permission-Based Mobile Advertising. *Advances in electronic marketing*, 2005: 139-156
- Siau KS (2003) Building customer trust in mobile commerce. *Communications of the ACM*, 46(4): 91-94
- Smith NC, Quelch JA (1996) *Ethics in Marketing*. McGraw Hill: NY.
- Soroa-Koury S, Yang KC (2010) Factors affecting consumers' responses to mobile advertising from a social norm theoretical perspective. *Telematics and informatics*, 27(1): 103-113
- Stewart DW, Pavlou PA (2002) From Consumer Response to Active Consumer: Measuring the Effectiveness of Interactive Media. *Journal of the Academy of Marketing Science*, 30(4): 376-396
- Tsang MM, Ho S, Liang T (2004) Consumer attitudes towards mobile advertising: an empirical study. *International Journal of Electronic Commerce*, 8(3): 65-78
- Varshney U (2003) Location Management for Mobile commerce Applications in wireless internet environment. *ACM Transactions on Internet Technology*, 3(3): 236-255
- Varshney U, Vetter, R (2002) *Mobile Commerce: Framework, Applications and Networking Support*. *Mobile Networks and Applications*, 7: 185-198
- Vatanparast R, Asil M (2007) Factors Affecting the Use of Mobile Advertising. *International Journal of Mobile Marketing*, 2(2): 21-34
- Wong M, Tang E (2008) Consumers attitudes towards mobile advertising: The role of permission. *Review of Business Research*, 8(3): 181-187
- Yunos HM, Gao JZ, Shim S (2003) Wireless advertising's challenges and opportunities. *Computer*, 36(5), 30-37
- Zhang J, Mao, E (2008) Understanding the acceptance of mobile SMS advertising among young Chinese consumers. *Psychology and Marketing*, 25(8): 787-805