Mobile Marketing: Examining the Impact of Trust, Privacy Concern and Consumers' Attitudes on Intention to Purchase

Basheer. A.M. Al-alak
Department of Marketing, AL-Zaytoonah Private University of Jordan
Faculty of Economics and Administrative Sciences
P.O. Box 130, Amman, 11733, Jordan
Tel: 96-26-4291-511   E-mail: ALALAK_2003@yahoo.com

Ibrahim, A.M. Alnawas
Marketing and International Management: Reading University
Department of Marketing, AL-Zaytoonah Private University of Jordan
Faculty of Economics and Administrative Sciences, Jordan
Tel: 96-25-3650978   E-mail: Alnawas_s3s@hotmail.com

Abstract
The aim of the study was to examine the impact of mobile marketing on consumers' attitudes and purchase intentions. More specifically the research intended to measure Jordanian consumers' acceptance of SMS advertising. A number of hypotheses were formulated for this purpose. The findings of the study show that there existed positive relationship between perceived usefulness, perceived entertainment and intention to participate and purchase intention. Whereas there existed negative relationship between personal use, extensive advertising, privacy concern and intention to participate and purchase intention. Based on the results a number of recommendations were proposed, and suggestions for future studies were made.

Keywords: Mobile marketing, SMS, Permission marketing, Attitudes, Intentions, Jordan

1. Introduction
Mobile phones are far reaching the globe and leading to dramatically unprecedented change in the way people communicate (Friedrich et al. 2009; Xinze, 2008). Such technology has made almost every body reachable (Marez et al. 2007). The penetration and adoption of mobile is almost 100% in many western and Asian countries (Netsize, 2007; The Economist, 2005). This ubiquitous phenomenon has made a revolutionary contribution in the adoption and diffusion of mobile commerce since it allows marketing activities to be tailored to actual customers' needs and tastes (Barutçu, 2007), and targeting customers more accurately through using one-to-one marketing communications compared to impersonal and mass media (Carter, 2009; Shaw et al. 2001). The incredible number of innovations which are introduced yearly, and the fast technological developments (Easingwood and Koustelos, 2000), have also changed the advertising philosophy (Barwise & Farley, 2005), leading firms to adopt mobile marketing strategy as a way to make their advertising messages break through the clutters (Zhang and Mao, 2008).

Early scholars conclude that mobile marketing provides marketers with a real opportunity to get a high response rate compared to traditional media (e.g. Woodside and Soni, 1991). The justification for that is that people within the mobile marketing network such as customers, businesses, advertising agencies, marketers and brands can interact with each other in more creative and fashionable way unlike before (Hanley and Becker, 2009). Recent statistics show that mobile marketing budgets particularly mobile advertisings will exceed 11 billion by 2011 rising from almost 1 billion in 2007 (Leek and Christodoulides, 2009; O’Shea, 2007), since its expected that mobile subscribers will surpass 4 billion by 2011 (Higginbotham, 2009). Other research findings indicate that around 22% of firms which use online advertising as a promotional tool have actually attempted to do mobile marketing (Ask, 2006).
In the Middle East, particularly in Jordan, there are four mobile service providers, and the number of subscribers is more than 6 million, slightly exceeding the number of population. In terms of percentage, the mobile penetration in Jordan is 101% compared to the population (The Jordan Times, 2009). In addition, according to the Telecommunications Regulatory Commission, the internet penetration in Jordan has reached around 30% in 2009 and it is expected to exceed 50% by 2010 (The Jordan Times, 2009).

However, although the mobile marketing has matured rapidly in many European and Western countries, it is still infant in many Asian and Middle Eastern Countries. Furthermore, most of the previous studies have examined mobile marketing in western context, and little attention has been paid to the investigation of such strategy in the Arab world. As far as the current researchers' knowledge is concerned, no previous studies were found that focus on mobile marketing in eastern countries particularly in Jordan. More specifically, this is the first empirical research of it's kind in the region that tackles in a specific way the impact of trust, privacy concern and consumers' attitudes on purchase intentions. Another contribution is that the current research draws and systematically synthesizes literature from disparate marketing disciplines, and borrows theories from the social and psychological setting to develop a model which could be used in future studies to measure the influence of mobile marketing on consumers' purchase intention. Based on that, the primary purpose of this paper is to investigate the influence of mobile marketing as a communication tool on generating consumers' purchase intentions and to measure consumers' attitudes toward such strategy.

2. Literature Review

Mobile Marketing Association (MMA, 2006), defines mobile marketing as "the use of wireless media as an integrated content delivery and direct response vehicle within a cross media or standalone marketing communications program". Scharl et al. (2005) define mobile marketing as the use of a wireless medium to provide customers with individualized information about products, services, and ideas at any time and locations, which benefit all stakeholders. In the same vein, Wireless Advertising Association (WAA) defines mobile marketing as releasing advertising messages to mobile phones or PDAs through the wireless network (Xu, 2007). According to Advertising age (2006, p. 20) mobile marketing is defined as "the use of wireless media as an integrated content delivery and direct-response vehicle within a cross-media marketing communications program".

Leppäniemi et al. (2006) carried a comprehensive review about mobile marketing research and found 21 different definitions. The authors found that academicians have used different terms interchangeably such as mobile advertising, wireless marketing and wireless advertising which all refer to mobile marketing. The critique which was made by Leppäniemi et al. (2006) and Balasubramanian et al. (2002) is that there is no conceptual agreement about the definition of mobile marketing, besides most of the proposed definitions mainly focused on the technology itself rather than trying to go beyond that to clearly relate such technology into marketing field.

However, what tends to be unique about mobile marketing strategy is that the mobile device is exceptionally personal (Tahtinen & Salo, 2003) thus enabling marketers and advertisers to interact directly and get customers engaged in a direct dialogue by replying to the message content (Bauer et al, 2005), unlike the traditional advertising media which is regarded as a non-personal means of sending a message where customers are passive (Ayanwale et al. 2005). It has been suggested that in the mobile marketing network, firms can get customers engaged through a call-to-action which is not possible via other media channels and make customers respond via text messaging, multimedia messaging, picture messaging, Bluetooth alerts, or voice channels on their mobile(Carter, 2008). It is quite clear that mobile marketing is considered as a viable means of marketing communication because of the inherent attributes and characteristics in such strategy which include personalization, localization, uniqueness, ubiquity and interactivity (Bauer et al. 2005). To support this line of thought, WWA carried a survey in mobile marketing industry and found that more than 90% of mobile advertising practitioners, agencies and professionals agreed about the necessity of the medium to be personalized in order to succeed. Besides, there is a wide recognition that such a strategy is embraced by different firms because of its high retention rate, high reach, high response rate and low cost (Pearse, 2005). This is evident in the findings of Forrester research where 47% of companies have set plans for boosting their mobile marketing expenditures next year(2010), third of interactive marketers now utilize mobile marketing, and another one-third plan to do so ( Magill, 2009).

Mobile marketing formats encompass short message service (SMS), multi media service (MMS) and WAP pushes messages which all aim to provide all players in the mobile marketing environment with a clear measures against which to judge the medium(Kimberley, 2007). Such formats are regarded as valuable and helpful channels to direct marketing and promotional activities. Therefore it is expected to achieve higher response rate compared to e-mail marketing since such formats are sent more personally (Frolick and Chen, 2004). Furthermore, SMS ads messages are more likely to be viewed (70%) than email marketing messages (30%) (Timpson and Troutman, 2009). Another advantage is that SMS and MMS may increase brand recall and association leading to generate customers purchase intentions (Li and Stoller, 2007). The inexpensive cost of using SMS and MMS to deliver message contents compared to traditional media, and the interactivity (customers could receive a free gift with their meal using an e-coupon downloaded to their mobile
phone) has made such formats the backbone for mobile marketing (Xinzed, 2008). Therefore, it is expected that around 3 billion SMS ads will be sent by 2011 compared to 41 millions ads sent in 2007 (Timpson and Troutman, 2009). It is also suggested that SMS and MMS can form a strong tie of communication just like face to face communication leading to generate positive word of mouth (Okazai, 2009). Nonetheless, other argue that short length of SMS as it contains few words or numbers will limit the potential use of such strategy in the future (Sinisalo and Karjaluoto, 2009).

2.1 Previous research

Graham, 2001 studied the future of wireless advertisings and found that 60% of respondents showed interest in receiving text advertising through mobile phones and Black (2001) reported that brand awareness for the advertised brand increased more than 80% among respondents who received on average six SMS advertising. Barwise and Strong (2002) studied SMS as a potential advertising means for young people, and found that 51% were very satisfied with a service that was customized and tailored to only receive messages relevant to interests. 84% stated they would recommend such a service to a friend, and 63% said that they had either replied or taken action as a result of receiving the SMS ad. The authors, however, stressed the importance of the relevancy of the SMS contents as prerequisite to motivate young people to take an action. In addition, the authors showed that mobile advertising were more favorable to consumers for location-sensitive and time critical events. Enpocket (2002) reported that 94% of respondents had read the SMS advertising messages, and 23% of them forwarded the marketing messages to friends.

Rettie et al. (2005) analyzed the acceptance of 26 different SMS ads. The result of the study showed that the acceptance of SMS ads was 44 percent. The authors concluded that interest, relevance and monetary incentives were the main reasons that encouraged consumer acceptance. Doherty (2007) concluded that consumers will accept SMS ads only if it is relevant and entailed quality advertising. Carroll et al. (2005) and Carroll et al. (2007) find that permission, control, content, delivery and wireless service provider control are the main determinants behind consumer acceptance of SMS advertising. Haghirian & Madlberger (2005) found that advertising value and content are the main factors that influence the acceptance of SMS ads. Anderson and Nilsson (2000) showed that SMS advertising had a positive impact on increasing brand awareness and purchase intention.

Tsang et al. (2004) found that respondents had a negative attitude toward receiving SMS ads without permission, since they regarded that as an irritating behavior. However, respondents claimed that their behavior would be positive if the ads were sent by permission. Rettie and Burm (2001) reported that 90% of respondents found it unacceptable to receive SMS ads from unknown businesses, while 49% of respondents found it acceptable to receive SMS ads from Internet service providers they had subscribed to, and 44% found it acceptable as well if they could have discount call in return. Okazaki and Taylor (2007) found that the single factor that mainly correlated with intention to adopt SMS ads by multinational companies was the perceived ability to build the brand. Other factors such as the ability to use location-based advertising and the perceptions of how well consumers accept SMS advertising were found to have potential influence on firms' decisions to adopt SMS ads. Bauer et al (2005) found that consumers who were more familiar with mobile communications perceived the use of mobile marketing services less difficult compared to consumers who were unfamiliar. Dickinger et al (2004) concluded that the fear of spam had a strong negative influence on customers' attitudes to accept SMS advertising.

Whitaker (2001) reports that respondents who considered their mobile phones as a very private and personal item were more reluctant to share information with unknown companies and the author also find that when data is controlled by unknown persons has led to annoyance among receivers. Jong and Sangmi (2007) found that mobility, convenience and multimedia service were positively related to attitudes toward mobile advertising, which in turn lead to favorable behavioral intentions. Skog (2002) reports that teenagers are not homogeneous audiences for mobile phones as their usage patterns and attitudes varied widely depending on their social background, technological literacy and urban/rural lifestyles. Chowdhury et al (2006) found that when mobile advertisers presented mobile ads pleasingly, with appropriate information, consumers would not be annoyed and there was a high possibility that they would like the ads. Haghirian and Dickinger (2004) reported that sending games and prizes to the target group’s mobile phones was a successful way to attract and keep customers. Li et al. (2002) and Krishnamurthy (2001) reported that the perception which consumers hold about SMS advertising messages is related to the granted permission to marketers confirming by that their willingness to receive SMS advertising messages. Godin (1999) pointed out that consumers who subscribed to a particular company were usually interested in that company's services and products, and hence, when consumers received SMS advertising messages, they were more likely to pay more attention and read the message compared to consumers who receive messages from companies which they are not subscribed with. Heun, (2005) found only 12% of consumers were willing to receive any forms of wireless advertisements, even if they could control what to receive.
3. Methodology

3.1 Data source and scale

The primary data was collected through a self-administered questionnaire which was originally developed for this purpose. One hundred questionnaires were distributed for the purpose of pre-testing the questionnaire's contents. A complete questionnaire was developed based on the comments collected during the pre-testing period. A random sample of 10 public and private Jordanian universities namely; Jordanian University, Yarmok University, Al-albayet University, Alhussien Bin Talal University, Moa’tah University, Al-esra'a University, Al-zaytoonah University, Petra University, Jerash University, and Philadelphia University was used. The sample contained 2500 respondents. Approximately, 200 questionnaires were distributed to each university. Out of the 2500 distributed questionnaires a total of 2233 or a response rate of 89% was returned. After removing the invalid questionnaires, 2108 questionnaires were used in the analytical stage. The 125 questionnaires were considered invalid because respondents skipped many items. The period of distributing the questionnaire lasted from 5th of March 2009 until the 1st of October 2009. The process of distributing the questionnaire was drop-off approach (Aaker et al. 2004). Based on the logic of this method, the authors of this paper hand delivered the questionnaire in classes to undergraduate and graduate students in the above mentioned universities after explaining to them the purpose of the study, the required procedure to fill out the questionnaire and answering any question with regard to any of the questionnaire’s statements. The concept of mobile marketing was also explained to the students to ensure a complete understanding of the purpose of the study.

Questions asked respondents to rate their degree of agreement using a 7-point Likert scale. All elements had been measured with single items to maximize completion. Questions were set based on previous literature with regard to direct marketing, mobile marketing, permission, personal use and privacy concern (Tripp et al. 1993; Schlosser, Shavitt, & Kanfer (1999); Akaah, Korgaonkar and Lund, 1995; Ducoffe, 1996; Mehta and Sivadas, 1995; Shavitt, Lowrey, & Haefner, 1998; Akhter and Durvasula, 1991; Krishnamurthy, 2001; Barwise and Strong, 2002; Heinonen and Strandvik, 2003; Milne and Boza, 1999; Phelps et al. 2000; Sheehan, 1999). In the analytical stage confirmatory factor analysis and structural equation modeling were used. Testing reliability and validity for single items was difficult, as Anderson and Gerbing, (1988) indicated.

4. Hypothesis Developments and Proposed Model

4.1 Formation of attitude: Theory of a reasoned behavior (TRA) and The Theory of Planned Behavior (TPB).

Theory of a reasoned behavior (TRA) was originally proposed by Fishbein & Ajzen 1975 to understand behavior and predict outcomes. The main assumption of TRA is that a person takes into consideration the implications of his/her action before s/he decides to actually engage or not in certain behavior. It also posits that the main determinant of a person's behavior is behavior intent. A person's intention to behave in a certain way is contingent upon the attitude toward performing the behavior in question and the social pressure on him/her to behave in that way (subjective norm). This suggests that attitudes and subjective norms differ according to the person involved and behavioral context. Ajzen & Fishbein (1980) pointed out that a person's attitude is determined by his/her perception about the expected consequences of performing the behavior and the assessment of those consequences. Fishbein & Manfredo (1992) state that if a person's intent is strong, then it is expected that the behavior will be actually performed. Therefore, the primary concern is to identify the underlying factors of the formation and change of behavioral intent. Adding on that, the Theory of Planned Behavior (TPB), which is an extension of TRA, has introduced another factor that affects behavioral intention, which is the perceived behavioral control. Control beliefs and perceived power are the main construct of perceive behavioral control. Therefore, it is expected that if people have strong control beliefs about "the existence of factors that might facilitate a behavior, then they will have high perceived control over that behavior". (Mackenzie & Jurs, 1993).

Figure 1 summarizes the relationship between the variables that construct TRA and TPB.

(Insert Figure 1 here)

As one of the main purpose of this study is to examine the influence of mobile marketing on consumer purchase intention, and the attitudes of consumers toward such strategy, connecting attitudes, beliefs and purchasing intentions is a core issue and central part for purpose of the study. Early research has been carried out in direct marketing to widen our understanding about consumers' attitudes and beliefs toward different forms of direct marketing (e.g. Sackmary, 1987). Building upon such research, scholars have examined the constructs of purchase intentions and elements that influence consumers' attitude, to measure such effect on consumers behavior within direct marketing milieu (e.g. Andrews et al. 1990; Metha and Sivadas, 1995; Griffin et al. 2000; Page and Luding, 2003; Kolsaker, 2004; DuFrene et al. 2005; Taylor et al. 2005).

Andrews et al. (1990) examined consumers' attitudes toward direct marketing and purchase intentions and concluded that attitudes were not only used for processing the received information but they were also used as a basis for specific actions. Therefore, attitudes did not only influence the interpretation of promotional messages of direct marketers, but
they also influenced the way consumers respond to such promotional messages. In the same vein, Metha and Sivadas (1995) assessed consumers' attitudes toward direct marketing on the internet. The authors pointed out that respondents reacted negatively toward untargeted "cyber junk" advertisements and more positively toward targeted and more personalized marketing communication efforts. However, overall favorability towards internet advertisings was perceived negatively because of its irrelevancy and extensiveness. Taylor (2009) demonstrated that advertising agencies which bombard the consumer with extensive and unwanted messages are more likely to influence consumers' attitude negatively. Previous studies have shown that consumers in general tend to have a negative attitude toward advertisements because of intrusive tactics that advertisers use (Zanot, 1984; Mittal, 1994; Zhang, 2000). Kavassalis et al. (2003), pointed out that the low cost of SMS advertising messages might provoke firms and advertising agencies to send excessive spam messages, which leads to unfavorable beliefs and negatives attitudes towards SMS marketing-related advertising. Lee et al. (2006) state that consumers' unfavorable attitudes toward such advertisements are formed because of the negative belief such as excessive, offensive and annoyance advertising. Moreover, consumers' shopping orientation plays a major role in influencing consumers' preferences and attitudes to respond to different type of media (Korgaonkar, 1984). Based on the idea of shopping orientation which is well documented in previous literature, Akaah et al. (1995), established a group of variables (i.e. too much direct mail and past direct marketing experience) with regard to consumers' shopping orientation to examine consumers' attitudes toward direct marketing. The study examined particularly the relationship between "consumers' attitudes and intentions to patronize direct marketing offerings". The result of the study showed a negative relationship between too much direct mail and consumers attitudes. In the same vein, it is expected that consumers who have a negative attitude toward extensive direct mail solicitation will lead to form a negative attitude towards direct marketing. Therefore, the following hypotheses are formulated:

H1: consumers who are subjected to extensive advertising are more likely to react in a negative way towards any forms of direct advertising.

H2: Consumers who are subjected to extensive advertising are less likely to have intention to participate in permission based advertising programs.

4.2 Usefulness and Relevance of Information

Ayanwale et al. (2005) state that in traditional media consumers are characterized as passive since they do not have control about the decision whether or not to subscribe. While in mobile commerce, particularly SMS marketing-related messages, consumers have to some extent an active control receiving advertisings. Bauer et al. (2005) found that the acceptance of SMS advertising messages is contingent upon the attained perceived benefits from such messages; they also concluded that perceived utility was the main motive behind consumers' acceptance of mobile marketing. Doherty (2007) concluded that consumers would accept SMS advertising only if it was relevant to consumers' interests and involved quality advertising. Scharl et al. (2005) reported that short, funny and entertaining and compact SMS advertising messages which were relevant to the target group, and informative about prizes and promotions, were more likely to influence consumer purchasing intention toward the advertised products. Carroll et al. (2007), Pagnani (2004) and Nasco and Bruner (2008) found that consumers were more likely to accept the messages when the content was relevant to them. Since SMS advertising message can facilitate two-way communication between users, then such communication can promote a higher level of interactivity between consumers and SMS advertised messages (Liu and Shrum, 2002). Therefore, based on the reviewed literature the following hypotheses are formulated:

H3: There is a positive relationship between perceived usefulness and intention to participate. Consumers who believe that SMS advertising messages are useful and relevant to their interests are more likely to participate in permission-based advertising programs.

H4: There is a positive relationship between perceived usefulness and purchase intention. Consumers who believe that SMS advertising messages are useful are more likely to buy the advertised products.

4.3 Entertainment

Hoffman, and Novak (1996) state that computer-based media can provide marketers with a great opportunity to influence consumers' perception and mode positively due to the high degree of pleasure and involvement during the interaction with them. Shavitt et al. (1998) found that consumers overall attitudes were more favorable when they perceived the advert as an enjoyable. Haghrian & Madlberger (2005) found that advertising value and content are the main factors that influence the acceptance of SMS ads. Anckar and D’Incau (2002) reported that timing, entertainment, and personalized services were treasured highly among consumers. Pollay and Mittal (1993) concluded that "perceived entertainment value" had a positive influence on consumers' attitudes and favorability towards advertising. Therefore, the perceived entertainment value of message contents in mobile marketing will have an effect on consumers' attitudes toward SMS advertising messages, and hence, the following hypotheses are formulated:
H5: There is a positive relationship between perceived entertainment and intention to participate. Consumers who believe that SMS advertising messages are entertaining are more like to participate in permission-based advertising programs.

H6: There is a positive relationship between perceived entertainment and purchase intention. Consumers who believe that SMS advertising messages are entertaining are more likely to buy the advertised products.

4.4 Personal Use

Since mobile advertising is operationalized through the personal mobile device, then the activities in responding to SMS advertising such as sending, receiving or deleting impose on consumers to interact with such messages (Zhang and Mao, 2008). On the other hand, consumers view their mobile phones as part of their own ‘personal space’ (Hart 2008) and this in turn may be regarded as an invasion of consumers’ privacy since the mobile device is so personal in nature (Kim and Jun, 2008), and reflects the use of its primary user (Friedrich et al. 2009). However, if consumers agree to receive SMS messages from advertisers, they tend to react positively to them (Barwise and Strong, 2002). Nonetheless, Previous literature (e.g. Solomon et al. 2006; Kerin et al) has shown that wireless marketing is an intrusive way of communication as there are over 1 billion e-mail messages sent daily in the United States alone (Cudmore and Patton, 2007). Stewart and Pavlou (2002) pointed out that wireless advertising may provide overwhelming information which may result in confusing and distracting consumers, leading them to react negatively since some of them believe that mobiles are for personal use. Previous literature has shown that mobile marketing communication is challenging because of the personal nature that is associated with mobile devices. Therefore, the following hypotheses are formulated:

H7: There is a negative relationship between personal use and past reaction. It is expected that consumers who have negative attitudes towards direct advertising are less like to accept receiving wireless advertisings messages.

H8: There is a negative relationship between consumer intention to participate and personal use. It is expected that consumers are less likely to have intent to participate in a permission-based advertising programs when they believe that mobile is for personal use.

H9: There is a negative relationship between personal use and purchase intention. It is expected that consumers who believe that mobiles are for personal use are less likely to purchase the advertised products.

4.5 Permission Marketing

Leppaniemi and Karjaluoto (2005) state that permission marketing is key to mobile marketing. Permission marketing has been regarded as an integral part of relationship marketing to aid developing consumers' loyalty over a long period (DuFrene et al. 2005) According to Godin and Peppers (1999), permission marketing refers to the situation where consumers are asked to grant approval to companies in order to send e-mail promotional communications with regard to products or service. Sheehan and Hoy (2000) reported that consumers were more likely to be concerned about the invasion of their privacy when they knew that companies had obtained their e-mail addresses without their permission to send unsolicited advertising e-mail. Sultan and Rohm (2008) pointed out that granted permission from the recipients before sending messages had resulted in higher acceptance and effectiveness of mobile advertising. Stambler (2002) reported that 58% of e-mail users said that they had opened the e-mail messages which were sent from marketers to whom they had granted marketing permission, and 53% said that their personal buying habits were influenced by those marketers’ e-mail. Hanley and Becker (2008) concluded that when consumers grant their permission in advanced to receive SMS advertising messages they would accept and agree to give up control to the firm, at least on the short run. Milne and Rohm (2004) found that consumers had a little or no control over receiving unwanted commercial information. Phelps et al. (2001) pointed out that the amount of privacy concern is positively related to the amount of information desired to control. Therefore, based on the reviewed literature, the following hypotheses are formulated:

H10: There is a positive relationship between permission (intention to participate) and purchase intention.

H11: Privacy concern is negatively related to intention to participate in permission based advertising programs.

4.6 Trust

McKnight et al. (2002) found in their study about E-Commerce that trust was an important factor which had a significant influence on consumers' intention to make online transactions. Therefore, it is expected that in mobile marketing, where the perceived risk and uncertainty is high, trust will influence consumers' intention to participate in permission based advertising programs, and hence, the following hypotheses are formulated:

H12: There is a negative relationship between past reactions and trust. Consumers who have negative attitudes towards direct advertising are less likely to share their personal information via SMS advertising messages.

H13: There is a negative relationship between extensive advertising and trust. Consumers who are subjected to extensive advertising are less likely to trust firms using SMS advertisings.
Figure (2) summarizes the relationship between a list of variables which help to form consumers' attitudes, and their influence on consumers' intention to participate. Such relation has been mediated by two variables namely; trust and privacy concern. These two variables in return play an influential role on consumers' intention.

(Insert Figure (2) here)

5. Results

The data obtained from the survey were analyzed for frequency analysis. Among respondents, male was 58% (1289) and female was 42% (944). 74% of respondents were between the ages of 19 and 24. Respondents at the age of 25 and above constituted 26% of total respondents. 100% of respondents had mobile devices. On average, respondents sent 10 and received 8 SMS messages daily. 2 SMS advertising messages were received daily. 12 hypotheses have been proposed for testing in the analytical stage. The results indicate that all of the proposed hypotheses are statistically significant in the hypothesized direction, where $p < .05$ and critical ratio values (CR > 1.83). R2 was also computed ($R^2 = 0.158$). Multiple regression was used on the endogenous and exogenous variables ($F(6) = 8.431$, $p < .001$). This finding indicates the model explains %19.1 of the variance in the dependent (purchase intention), which is considered an acceptable result. An adequate degree of model fit was obtained ($\chi^2 = 10.568$ P= 0.212), GFI = 0.98, AGFI = 0.956, CFI (0.973) and RMSEA (.042). Table 1 shows model relationships and parameter estimates.

(Insert Table 1 here)

5.1 Discussion and Conclusion

The objective of this study was to investigate the influence of mobile marketing as a communication tool on generating consumers' purchase intention and to ensure consumers attitudes toward such strategy. The findings of this empirical study show that all the formulated hypotheses were in the same direction as was hypothesized in the study (see table 1). It seems that consumers who were subjected to extensive advertising reacted negatively towards mobile marketing advertising and consequently had less intention to participate in permission-based advertising programs. It also appears to be a positive relationship between perceived usefulness and intention to participate, as consumers who believed that SMS advertising messages were useful and relevant to their interests expressed more readiness to participate in such programs. Consequently, consumers who were convinced that SMS advertising messages were useful expressed the desire to buy the advertised products. In terms of entertainment, the study shows that consumers who thought that SMS advertising messages were entertaining expressed more readiness to participate in such programs, and that there was a positive relationship between perceived entertainment and purchase intention i.e. consumers who believed that SMS advertising were entertaining were more likely to buy the advertised products. However, there appeared to be a negative relationship between personal use and past reaction i.e. consumers who had negative attitudes towards direct advertisings were less inclined to receive wireless advertising messages. Moreover, consumers who were less likely to have intent to participate in a permission based advertising programs had the belief that mobile was for personal use. As such consumers who had the belief that mobiles were for personal use were reluctant to purchase the advertised products. In terms of permission marketing, it appears to be a positive relationship between permission (intention to participate) and purchase intention in that privacy concern was negatively related to intention to participate in permission-based advertising programs. As far as trust is concerned, there appeared to be a negative relationship between past reactions and trust i.e. consumers who expressed negative attitudes towards direct marketing were less likely to share their personal information via SMS advertising messages. Lastly, there appears to be a negative relationship between extensive advertising and trust i.e. consumers who were subjected to extensive advertising pointed out that they were less likely to trust firms using SMS advertising.

Mobile operators are called upon to organize their SMS flows in such a way as not to give consumers the impressions that this flow as a burden on them. One way to resolve this problem is to personalize such messages in order to encourage consumers to participate in permission-based advertising programs. Provided that relevant information is transmitted in such messages. Needless to say such messages should be perceived by consumers as beneficial and useful and match their interests and desire. The quality of message contents should be taken good care of and that content application firms are called upon to cooperate with mobile providers to enhance the quality of message contents, making it more attractive and entertaining. As there to be negative attitudes towards direct advertising, both mobile operators and advertising agencies are advised to make all efforts possible to rectify such negative attitudes by building close relationship with consumers through the full utilization of the data available about such consumers and embody such knowledge in their target strategies. This will inevitably lead to enhance trust between consumers and mobile operators. As there were some privacy concerns expressed by respondents, service providers should obtain consumers' permission prior to using their mobile numbers and other personal details concerning them. As the majority of our sample were young (between the ages of 19-24), mobile operators are called upon to offer incentives to subscribers to encourage them to receive more SMS advertising messages. Such incentives may come in the form of extra points or minutes or any other form of sales promotion (free mobile devices, discounted mobile device prices, etc.). Mobile
retailers are also encouraged to offer sales promotion to consumers who express the desire to receive their product advertisements through SMS messages.

5.2 Suggestions for future research

As single item measures make reliability and validity test difficult, then future research should develop multiple-item measures of each construct to enhance validity. Furthermore, Pseudo experimental-style research may be able to examine which brands are more appropriate to consumer acceptance of SMS advertising messages. It would be also interesting to see how mature consumers react to SMS advertising messages.

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The Jordan Times, Mobile Phone Penetration, November 22, 2009.


### Table 1. Relationships and Parameter Estimates

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<th>Relationship From</th>
<th>To</th>
<th>Parameter</th>
<th>Standard Error</th>
<th>Critical Ratio</th>
<th>p</th>
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<td>Personal use</td>
<td>Intention to Participate</td>
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<td>0.061</td>
<td>-3.636</td>
<td>0.008</td>
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<tr>
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<td>Purchase Intention</td>
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<td>0.074</td>
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<td>Purchase Intention</td>
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<td>-5.110</td>
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<td>Trust</td>
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<td>-5.883</td>
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<td>Trust</td>
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<td>0.045</td>
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<td>0.001</td>
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Figure 1. TRA and TPB

Figure 2. The Study's Model.