

---

## **Determining the Role of Content and Frequency of Advertising SMS in Predicting Attitude of Consumers Toward SMS Advertisement**

**Hafiz Muhammad Ishaq**

*Assistant Professor, Department of Business Administration,  
FUUAS&T, Islamabad, Pakistan*

**Ayesha Javed**

*MS Scholar, Department of Business Administration,  
FUUAS&T, Islamabad, Pakistan*

**Yasir Karim**

*MS Scholar, Shaheed Zuilfqar Ali Bhutto Institute of Science  
and Technology, Islamabad, Pakistan*

### **Abstract**

*This research focuses on determining the attitude of the Pakistani consumer towards SMS advertisements because this medium is only effective when it is widely acknowledged by consumers. Therefore, it is necessary to conduct research on the attitude of consumers toward SMS advertisement. A Total 384 questionnaire were distributed and out of 384 questionnaires 289 questionnaires were valid. This Study uses descriptive analysis, correlation analysis and hierarchal regression analysis, to study the moderating effect of frequency of contact between entertainment, infotainment, irritation, credibility and the attitude of consumers toward SMS advertisement. Also studied the mediating role of advertising value. This Study finds that the majority of the factor that affect consumer attitude is the content and frequency of advertising SMS. The demographic variable has a very less or no impact on the attitude.. This study has numerous limitations that provide opportunities for future research. First, this study has a small sample size; secondly, it was using convenience sampling also last that this study didn't include the problem of permission based SMS advertisement.*

**Keywords:** Entertainment, Infotainment, Irritation, Credibility, Advertising, Value, Frequency of Contact, Attitude of Consumers toward SMS Advertisement, Islamabad.

In recent years the mobile phone technology and portable devices have developed very rapidly. This new medium of technology has provided various opportunities for marketing this advancement in technology make possible the communication effectively between marketers, target markets and customers (Javid, Namin, & Noorai, 2012).

Mobile phones become very popular and an effective medium for communication, but using this technology to deliver SMS advertisement is just a beginning. These kinds of issues, develop prospects for new researchers. For example, what are the customer's thoughts about mobile advertising? What are the aspects that affect consumer attitude toward mobile advertising? The usage and growth of

---

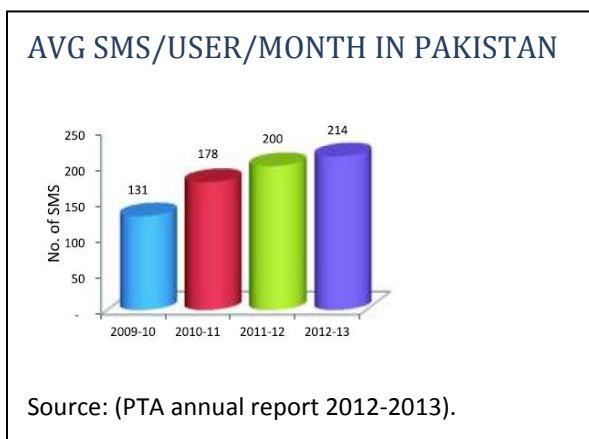
mobile technology are rapidly increasing day by day. According to the annual report of Pakistan Telecommunication Authority 90% of the world population is using mobile services, which was 61% in 2003 (PTA Annual Report, 2011-2012). Mobile phones are completely changing the ways of how people communicate (Grone, Friedrich, Hölbling, & Peterson, 2009). With the help of mobile based technologies everybody is reachable (De Marez, Vyncke, Berte, Schuurman, & De Moor, 2007).

In various countries the mobile base technology is rapidly accepted due to the increasing acceptance process of mobile phones. Customer and advertiser communication is increasing and easy as the mobile communication totally changes the marketer's world (Pavlou & Stewart, 2000). Mobile based technologies enables marketers to create relationships with customers in a new dimension as the information can be provided to customers whom they are interested. As an outcome of this contemporary advertiser are progressively advertising their product and services through numerous approaches of interactive technology (Pavlou & Stewart, 2000).

The rapidly growing and developing technologies and yearly vast number of innovations are introduced (Easingwood & Koustelos, 2000) which have altered the advertising viewpoints (Barwise & Farley, 2005), that helps companies to penetrate their advertising message through the masses by adopting the mobile marketing strategy. (Zhang & Mao, 2008). Organizations now assign larger budgets for the advertising department than in the past because they view advertising as an investment and tend to value over interacting with customers (Van der Waldt, Rebello, & Brown, 2009). A consumer might become resistant to advertising due to the continuous exposure. To gain the interest of consumers the advertisers' needs to be more innovative in the creation of advertisements and selection of advertising methods (Cappo, 2003). SMS is so successful because of its easiness, scope, cost and reliability. SMS advertising can be categorized as traditional advertising, direct marketing or an interactive medium which permits two way interaction between consumers and companies (Van der Waldt, Rebello, & Brown, 2009). The method of sending coupons to customer's mobile phones through SMS has been an effective way for sales promotions because customers carry their mobile phones with them all the time. When needed, they will have their coupon with them in their mobile phones (Dickinger, Haghirian, Murphy, & Scharl, 2004).

The 92% land area of Pakistan has network coverage of cellular services due to which every Pakistani is using mobile phones irrespective of their social status and income level (PTA Annual Report, 2012-2013). Through a variety of mobile applications and value added services provided by telecom companies is not only serving the basic need of communication but also serve the business purposes and economic welfare (PTA annual report 2012-2013).

Short message service (SMS) is day by day increasing as useful and low cost mobile communication service. 65% of all mobile phone users in Australia, Hong Kong, Malaysia, Singapore, Korea, and Taiwan are interacting through SMS (Rondon, 2005). The cellular companies have access to almost every sector and location of Pakistan. In Pakistan, the mobile operators offer attractive packages of voice and SMS tariffs, which include free calls and unlimited SMS. Due to these packages, there is a huge increase in voice and SMS traffic. In Pakistan, a single mobile phone user is making voice calls of 203 minutes per month and sending 214 SMS. An increase of 7% in SMS use has been noted (PTA annual report 2012-2013).



*Figure.* AVG SMS User per Month in Pakistan

This increasing number attracts many marketers and business man to such an entirely fresh medium (O'lmaie, 2007). For this purpose the marketers and businessmen are using short message services (SMS) for the advertisement. This fresh opportunity implies the marketers to gain insight of consumer attitude toward SMS advertisement. Thus, mobile advertising will become more common in the near future.

This research focuses on determining the attitude of the Pakistani consumer towards SMS advertisements because this medium is only effective when it is widely acknowledged by consumers. Therefore, it is necessary to conduct research on the attitude of consumers toward SMS advertisement also SMS advertising is the cheapest way to convey messages, promotion or advertisement toward the masses and in this field a very little research has been done particularly in Pakistan. The majority of the research has been conducted in foreign countries where there is a difference in culture and acclimatization in telecommunication technology, therefore, may not be applied to Pakistani consumers.

## **Problem Statement**

Some brands recognize the SMS advertising prospective but these brands do not know that how to integrate SMS advertisements into their marketing activities (Bouhlel, Mzoughi, Hadiji, & Slimane, 2009). This prospect entails the marketers to understand the consumer attitude toward SMS advertisement. A very less research has been conducted on consumer opinion of SMS advertisement and also the effect of sending SMS advertisement to customers (Haghirian & Madlberger, 2005). The most of the previous research has been conducted in foreign countries where there is a difference in culture and adaptation of telecommunication technology, therefore, may not be applied to Pakistani consumers.

This study is conducted to comprehend the attitude of consumers towards the SMS advertising. This research will describe the way of executing the SMS advertising in the Pakistan. This is especially significant in Pakistani setting. Due the success of SMS, advertisement medium depend on the recognition of the medium by customers (Bauer, Barnes, Reichardt, & Neumann, 2005). The majority of the previous research has studied SMS advertising medium in context like Jordan, Austria and less consideration has been given to such studies in South East Asia particularly in Pakistan. Very scant research has been conducted in Pakistan regarding impact of Entertainment, Irritation, credibility, and consumers' attitudes on SMS advertisement.

## **Research Questions**

The detailed research questions in this Study are as follows:

1. Do the Entertainment, Infotainment, Irritation and credibility of the SMS advertising have impact on consumer attitudes toward SMS advertising?
2. Does Advertising value of SMS affect the consumer attitudes toward SMS advertising?
3. Does Frequency of exposure of SMS advertising affect the consumer attitudes toward SMS advertising?
4. Does Frequency of exposure of SMS advertising have an impact on the advertising value?

## **Research Objectives**

Through the research questions the researcher developed following research objectives for this study:

1. To examine the relationship between Entertainment, Infotainment, Irritation and Credibility of the SMS advertising, and consumer attitudes toward SMS advertising.
2. To explore the relationship between advertising value and the attitude toward advertising via mobile devices.
3. To analyze the impact of Frequency of exposure of SMS ads on advertising value via mobile devices

4. To examine the impact of Frequency of exposure of SMS ads on attitude toward advertising via mobile devices

### **Significance of the Study**

The significance of this study is that the researcher studies the effect of SMS advertisement on the attitude of consumer in Pakistan. This research also examines what are the most important aspects of SMS advertisement which affect the consumer attitude toward SMS advertisement, hence the outcomes of this study may help the marketers to enhance earnings from their advertising via SMS by finding the most important aspects SMS advertisement.

This research will examine the effects of the SMS advertising on the consumer's attitude in the Pakistan. Furthermore, find other aspects of SMS advertisement that may influence on consumer attitude in the Pakistan.

### **Literature Review**

This portion describes a review of the literature that is closely related to the study. It includes reviews on numerous researchers that are provided by numerous authors, researchers and the scholars.

### **Attitude towards SMS Advertisement**

Short message services have become very popular in sending messages from business to customers on mobile devices. To enable customers who are interested to obtain more information, many companies and businesses include their text message numbers. This medium enhances the customer relationships by using wireless communications and perform promotinal activities and direct marketing (Frolick & Chen, 2004).

Mobile Marketing definition which clarifies the concept of SMS advertising is "the use of wireless medium to give mobile users with time, location sensitive, personalized information that encourage products, services and ideas, and generates value for all stakeholders" (Dickinger, Haghirian, Murphy, & Scharl, 2004). Okazakietal define mobile advertising as "Short messages are those that are used to send business to customer messages to cell phones" (Okazaki & Taylor, 2008).

According to Kotler 2003 advertising is defined as "any paid form of non-personal communication and promotion of ideas, goods or services by an identified sponsor" (Kotler, 2003). Customer's purchase intention can also be generated through brand recall and association which are enhanced by SMS and MMS advertisement (Li & Stoller, 2007). Mackenzie and Lutz define Consumers' attitudes toward advertisements are their tendency to reply to a specific message in a desirable or undesirable way (MacKenzie & Lutz, 1989). Purchase Intention of customer who have received a SMS advertisement and

accomplishment of SMS advertising will both be affected by consumer attitude toward SMS advertisement. Andersson and Nilsson have shown that In the general accomplishment of the aims of the advertising campaign will be affected by SMS advertisement and SMS advertising medium (Andersson & Nilsson, 2000).

It is significant in mobile advertising perspective to understand that attitude toward mobile advertising is similar to the consumer's attitude to this advertising medium in general and not to focus to one particular advertisement (Haghirian & Inoue, 2007).

Certain studies have shown that SMS advertising has significant benefits, and this medium allows businesses to communicate with consumers in real time environment. (Tsang, Ho, & Liang, 2004). Consumers carry mobile devices with them everywhere and every time, which increase the possibility that the target market will receive the advertisement message. (Kavassalis P., 2003)

The traditional advertising medium cannot attract younger consumers who have very active lifestyles as they are not exposed to it, therefore, SMS advertising is the only medium to capture young consumers and also for the persons on the move (Tsang, Ho, & Liang, 2004). Younger consumers are interested in more frequent advertisement (Barwise, et al., 2002). It was shown by (Andersson & Nilsson, 2000) that achievement of goals of the advertising campaign can be facilitated by that SMS advertisement and the SMS advertising medium, in general.

(Kavassalis P., 2003) defined that major advantage of SMS advertisement is that if efficiently planned and managed it is economical and low cost. The capacity of the wireless mediums to provide relevant information to targeted customer and attain a high response rate among recipients of the advertising which in turn further decreases the cost of SMS advertising is much more effective from traditional mediums of advertising, but it is should not be used alone (Kavassalis P., 2003)

The consent based advertising is much more unique than traditional irritative advertising; these messages are only sent to those persons who have willingly requested to receive the message about a specific product, service, or content. (Tsang, Ho, & Liang, 2004). Barwise studies show that average three advertising texts per day are acceptable. (Barwise & Farley, 2005)

According to Fishbein Attitude Theory (Andersson & Nilsson, 2000)SMS advertisement of a particular brand is a stimulus that changes consumer value and belief system, which develops a particular consumer attitude toward the advertised brand and influences the consumer opinion to purchase the brand's offerings.

## **Entertainment**

In the development of the overall attitude of consumers, sentiment of enjoyment connected with advertisements plays a vital role (Stewart & Pavlou, 2002). Entertainment is the ability that satisfy the

consumer desires for pastime, deviation, appealing enjoyment, or emotive enjoyment (Ducoffe, 1996). The mobile phone entertainment platform has many entertainment services, for example gaming, listening songs, watching videos and sports etc. which have boomed the industry mobile phone entertainment. Entertainment is also an important feature for mobile marketing. It is important that SMS advertising should be Amusing and brief, which in turn instantly captures attention of consumers (Katterbach, 2002).

Entertainment services can add value for the customers and enhances the customer loyalty. Providing prizes and games through SMS produces high involvement as most people have a usual liveliness. Using these features customers can be highly involved and aware about advertising service or product (Lehmkuhl, 2003). It is examined in a study that tested the relationship between consumers' perceived entertainment utility of mobile marketing and consumer attitudes towards mobile marketing which shows that consumers' perceived entertainment utility of mobile marketing has a positive effect on consumer attitudes towards mobile marketing (Zabadi, Shura, & Elsayed, 2012).. Based on the literature and previous study, the following hypothesis are postulated.

H1 Entertainment of advertising message has a positive effect on consumer's attitude toward SMS advertisement.

### **Infotainment**

Consumer thinking of the organization and its product are directly influenced if the company's website has a quality of information. Similarly qualitative aspects such as precision, rightness, and efficacy must be in information and entertainment that is sent to consumers via SMS advertisement (Siau & Shen, 2003)

Usually the consumer purchasing intentions toward the advertised products is influenced by the brief, amazing, relevant to target group and enjoyable short advertising SMS and information regarding rewards and promotions. (Scharl, Dickinger, & Murphy, 2005)

When the content is related to the customers, they accept the message more likely (Carroll, Barnes, & Scornavacca, 2005), (Pagani, 2004) (Nasco & Bruner, 2008) Customers respond to advertisement that sends benefits positively thus the information is considered as a very valuable benefit in mobile marketing (Varshney, 2003). Liu & Shrum found out that SMS advertisement is a two way interaction between consumers. Then this sort of interaction can encourage a greater level of communication between users and advertised SMS (Liu & Shrum, 2002).

H2: Infotainment of advertising message has a positive effect on consumer's attitude toward SMS advertisement.

### **Credibility**

Credibility plays a very vital role in developing Mackenzie and Lutz define advertisement credibility as the level to which the consumer

believes the promises made in the advertisement about a brand to be trustworthy and authentic. (MacKenzie & Lutz, 1989).

Credibility is the consumer's assurance in the trustworthiness and the possibility of the advertisement (Chowdhury, Parvin, Weitenberner, & Becker, 2010). On the other hand Stewart defines credibility as obviousness and fulfillment of implicit and explicit necessities of an agreement. (Stewart & Pavlou, 2002). Different aspects affect the credibility of the advertisement mainly company's credibility and the deliverer of the message (Goldsmith, Lafferty, & Newell, 2000).

In literature no empirical evidence has been found on the credibility of messages delivered to mobile phones. The researcher keeping in mind the findings cited above concluded that the credibility of SMS advertising has a positive effect on the advertising value of the consumer and on consumer's attitude towards SMS advertisement.

H3: Credibility of advertising message has a positive effect on consumer's attitude toward SMS advertisement.

### **Irritation**

When consumer feels Dishonor due to advertisements their attitude toward the advertisement greatly changed (Shavitt, Lowrey, & Haefner, 1998). Consumer found it as unsolicited and irritating when companies use methods that annoy, irritate, insult, or are excessively controlling (Ducoffe, 1996).

SMS advertisement may deliver excessive information which puzzles the consumer and can be misleading and upsetting the consumer with information (Stewart & Pavlou, 2002). And consumers can respond unfavorably. Secondly the unwanted SMS is generally known as spam also irritate consumers (Dickinger, Haghirian, Murphy, & Scharl, 2004).

Hence it concludes that the irritation caused SMS advertisement may affect negatively on the advertising value of mobile marketing and consumer attitude toward SMS advertisement.

H4 Irritation of advertising message has a negative effect on consumer's attitude toward SMS advertisement.

### **Advertising Value**

Advertising effectiveness can be measured by advertising value and "may serve as a directory of customer satisfaction with the communication products of organizations (Zabadi, Shura, & Elsayed, 2012). Ducoffe describe advertising value as "a subjective evaluation of the relative worth or utility of advertising to consumers" (Ducoffe, 1995). Values exist as the foundation of activities, approaches, and decisions in advertising and in other parts of social life (Beatty, Kahle, Homer, & Misra, 1985). Attitude toward web advertising has been affected by the advertising value of web advertisement (Ducoffe, 1996). The researcher concluded that high perceived advertising value positively affects consumer attitude toward SMS advertisement



---

H5: Advertising value is mediating the effect of entertainment, infotainment, irritation, and credibility on the attitude of consumers toward SMS advertisement.

### **Frequency of Exposure**

Advertising Value of the customer is also influenced by the quantity of SMS advertisement (Haghirian & Dickinger, 2004). With recurrence the infotainment and entertainment of material that is being advertised should drop because the consumer will acquire information and therefore reduce its value (Ducoffe, 1995). Based on the previous studies finding cited above, the researcher hypothesized the following hypothesis

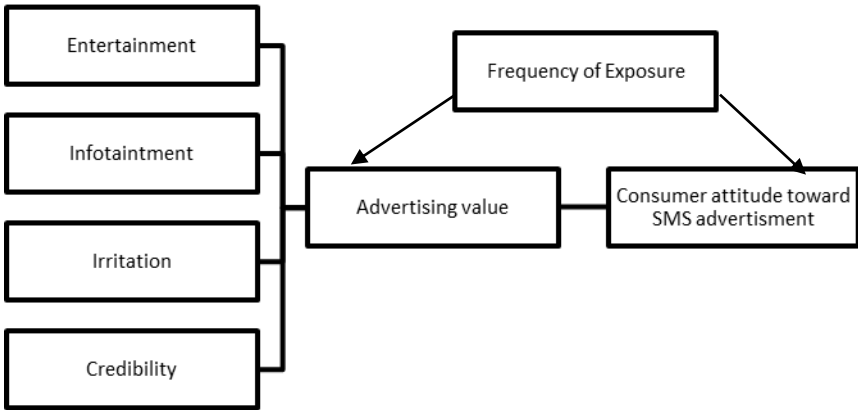
- H6: frequency of contact moderate the relationship between all independent variable, i.e. entertainment, infotainment, irritation, credibility and attitude of consumers toward SMS advertisement.

### **Theoretical Framework**

The framework for the study of attitude of the Pakistani consumer towards SMS advertisements is adopted from a model developed by Brackett and Carr which depend upon the model for the study of consumer attitudes towards internet or web advertising and advertising in general (Brackett & Carr, 2001).

Model by Brackett and Carr determines the consumer attitudes towards web advertising (Brackett & Carr, 2001) is developed on the basis of model of Ducoffe which demonstrates the perceptual predecessors of entertainment and irritation that are used to test consumers' attitudes towards internet advertising (Ducoffe, Advertising value and advertising on the web, 1996)

Entertainment and irritation, shown in Figure 1 are the same two concepts of the model developed by (Ducoffe, Advertising value and advertising on the web, 1996) but one more concepts namely credibility which is an predecessor of consumer attitudes towards an advertisement (MacKenzie & Lutz, 1989).The framework illustrated in Figure 1 has been used in the previous studies to test consumer attitudes towards SMS advertising (Tsang, Ho, & Liang, 2004) and to test hypothesis in this study, these variables entertainment, infotainment, irritation, credibility, advertising value and frequency of exposure will be used



### Research Methodology

This portion defines the methodology that was used to plan for choosing the sources, type of information and answer the research question.

### Research Design

Quantitative Research options have been predetermined and a large number of respondents are involved. By definition, measurement must be objective, quantitative and statistically valid. Simply put, it is about numbers, objective hard data (Explorable.com, 2009). Qualitative Research is collecting, analyzing, and interpreting data by observing what people do and say. However the, qualitative refer to meaning, concepts metaphors, symbols, and descriptions of things while quantitative research refers to measure and count of things. The present study research is hypothesis testing. Thus, the researcher used quantitative method in this study. The researcher is testing the hypothesis of attitudes of consumers toward SMS advertisement and its relationships with SMS advertisement contents (Entertainment, Infotainment, Irritation, and Credibility), Advertising value and Frequency of Contact. Thus the present study research is hypothesis testing. To test the hypothesis a quantitative research method is used. The researchers (Noor, Sreenivasan, & Ismail, 2013) used quantitative method in their study. The study setting of our research is a field study as there is no manipulation in data collection. The data are collected through structured questionnaires which are designed to provide answers to this research.

### Population

The population in research is defined as the compilation of persons or things having similar features. Within a certain population all persons or things have a common feature, or same characteristics (Explorable.com, 2009)

For the purpose of data collection the educated consumer of age 16 and above from Islamabad who have received SMS advertisement from organizations about products and services on their mobile phone in the past are targeted.

### **Sample**

The researchers are unable to test all the persons or things in a given population. This inability of the researcher arises the concept of sample. The sample must be drawn from the population that it represents due to this reason the sample must have a good volume to merit statistical analysis.

Sample allows the researcher to perform the study of persons from the population so that the findings of their study can be utilized to draw results that will be applied to all population (Explorable.com, 2009)

The sampling technique that is used to collect the data is convenience sampling. The researchers (Zabadi, Shura, & Elsayed, 2012) also used convenience sampling in their study.

With the help of Convenience sampling technique, it is easy to get data from the targeted consumers in a short period of time. The Morgan and Krejcie Table (1970) was used to determine the sample size as the population of Islamabad is more than 100,000 people the sample considered is 384 people ( $n=384$ )

### **Instrument**

The term instrument is a general term that researcher uses for measurement tool (survey, questionnaire, etc.) Participants are asked to rate their degree of agreement from strongly agree to strongly disagree (1 being strongly disagree, 3 is the midpoint of the scale and 5 being strongly agree) about the questions by using a 5 point Likert Scale. These are used to measure customer attitudes towards SMS advertising.

For this study the infotainment scale used in this study was adapted from (Suher & Ispir, 2008) study of Factors Affecting Consumer Attitudes. The entertainment, credibility and irritation and consumer attitude toward SMS advertisement were adapted from (Zabadi, Shura, & Elsayed, 2012) study of Consumer Attitudes toward SMS Advertising among Jordanian Users. The scale used to measure frequency of exposure was adapted from (Haghirian & Madlberger, 2005) study of Consumer attitude toward advertising via mobile devices-An empirical investigation among Austrian users. For the purpose of this study the wording of scale items was slightly adapted to be more in line with consumer attitudes towards SMS advertising.

### **Data Analysis and Results**

The data comprises of 289 participants from Islamabad. The large numbers of the participant ages are in between 23-29 that is 51.6%

of the total 289 respondents. In the final data majority of the respondents are females approximately 54.3 % and the rest are males 45.7%.

### **Cronbach's Alpha**

The data analysis shows that the Cronbach's alpha of all the constructs is well above the minimum value of 0.6. Following Table 1 shows that Cronbach's alpha of all variables.

Table 1. *Cronbach's alpha*

Constructs/Variables	Number of Items	Cronbach's Alpha Coefficient
Entertainment	3	0.75
Infotainment	7	0.89
Irritation	4	0.85
Credibility	4	0.76
Advertising Value	3	0.87
Frequency of contact	2	0.70
<b>Dependent Variable</b>		
Attitude toward SMS advertisement	3	0.78

### **Descriptive Analysis of Variables**

Table 2 shows the descriptive statistics, including values of mean and standard deviations. The value of the mean for the entertainment is 4.06, which shows that most of the respondents have shown strongly agree response for the entertainment. The score of standard deviation for the entertainment is 0.681, which shows that the deviation of data from a mean of entertainment

The value of the mean for the infotainment is 4.04 which shows that the largest number of respondents have shown the agree response for the infotainment. The standard value which is 0.651 for the infotainment shows that how much data is deviated from the mean. The score of the mean for the irritation is very low, that is 2.08 which indicate that people have participants disagree response with the irritation. The value of standard deviation is 0.941 for irritation which indicates deviation of the data from the mean for irritation. The score for mean and standard deviation for credibility are shown in Table 2. The value of the mean for the credibility is 4.20, which basically indicate that most of the respondents have shown agrees response to the credibility. The majority of respondents was considered its relevance, and contributed to its implementation. The score of standard deviation for the credibility is 0.836, which shows that the deviation of data from the mean.

The score for the mean and standard deviation of advertising value are shown in Table 2. The value of the mean for the advertising value is 4.09, which basically indicate that most of the respondents have shown agree response for the advertising value. The score of standard deviation for the advertising value is 0.815, which shows that the deviation of data from the mean. The value of the mean of the frequency

of contact is 4.04 which shows that the largest number of respondents have shown the agree response for the Frequency of Contact. The standard value which is 0.696 for the Frequency of Contact shows that how much data is deviated from the mean.

Table 2. *Descriptive Statistics of all variables (N = 289)*

Determinants	Mean	S.D
Entertainment	4.06	.681
Infotainment	4.04	.651
Irritation	2.08	.941
Credibility	4.20	.625
Advertising Value	4.09	.815
Frequency of Contact	4.06	.696
Dependent Variable		
Attitude toward SMS advertisement	4.19	.745

### Correlational Analysis

Our first hypothesis (H1) studied the impact of entertainment on the attitude of consumers toward SMS advertisement. Table 3 shows the results of hypothesis tests. The resulting Pearson correlation value, is 0.940;  $P < 0.01$  which shows that entertainment is significantly affecting the attitude of consumers toward SMS advertisement positively. Second Hypothesis is also provided as shown in table 3. The value of Pearson correlation is 0.870;  $P < 0.01$  it is concluded that Infotainment has a significant positive relationship with attitude of consumers toward SMS advertisement. Third hypothesis states that credibility of advertising message has a positive effect on consumer's attitude toward SMS advertisement this hypothesis a also proven by the result in table 3 which shows the value of the Pearson correlation is 0.839  $P < 0.01$ . It is concluded that the credibility of advertisement message has a highly positive effect on the attitude of consumers toward SMS advertisement.

This study has also proven the fourth hypothesis that states that irritation of the advertising message impact attitude of consumers towards SMS advertisement negatively. The Pearson correlation coefficient is -0.714,  $P < 0.01$  of the test shows that irritation of advertising message is negatively correlated with the attitude of consumers toward SMS advertisement.

Table 3. *Correlational analysis*

	1	2	3	4	5
Entertainment	1				
Infotainment	.828**	1			
Irritation	-.677**	-.692**	1		
Credibility	.814**	.759**	-.686**	1	
Attitude toward SMS advertisement	.940**	.870**	-.714**	.839**	1

Significant level  $P < 0.01$  \*\*

### Regression Analysis

The regression analysis shows that there is a positive significant relationship between entertainment and attitude of consumers toward SMS advertisement ( $\beta = 0.608$ ,  $p < .000$ ,  $R^2 = .888$ ), this approve first hypothesis that the entertainment impact the attitude of consumers toward SMS advertisement positively. The infotainment also positively impacts the attitude of consumers toward SMS advertisement. ( $\beta = 0.230$ ,  $p < .000$ ,  $R^2 = .913$ ). The beta of infotainment is low, but it is highly significant and it approves second hypothesis. The credibility of advertisement message impact the attitude of consumers toward SMS advertisement positively ( $\beta = 0.124$ ,  $p < .000$ ,  $R^2 = .919$ ). Beta of credibility is also low, but it is also highly significant and it accepts the third hypothesis. The beta of irritation ( $\beta = -0.57$ ,  $p < .025$ ,  $R^2 = 0.920$ ) accepts this study's fourth hypothesis that there is a negative effect of irritation on the attitude of consumers toward SMS advertisement.

Table 3. *Regression analysis of all independent and dependent variables attitude of consumers toward SMS advertisement*

Predictor's	Beta $\beta$	R2	$\Delta R^2$
Step 1			
Control Variable		0.118	
Step 2			
Entertainment	0.608***	0.888	0.769***
Step 3			
Infotainment	0.230***	0.913	0.025***
Step 4			
Credibility	0.124***	0.919	0.006***
Step 5			
Irritation	-0.57*	0.920	0.001*

N=289: Age, Education is used as control variable \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

### Mediation Analysis

In step one of the mediation model, researcher entered the control variables to control the external factors that affect the dependent variable attitude of consumers toward SMS advertisement.

In the second step the dependent variable attitude of consumers toward SMS advertisement is regressed on the independent variables, i.e. entertainment, infotainment, credibility, and irritation. The  $\beta$  statistics show the significance and direction. Betas of all independent variables are found to be insignificant as shown in following table 4. Therefore it shows full mediation of advertising value between entertainment, infotainment, credibility, irritation and attitude of consumers toward SMS advertisement.

Table 4. *Mediation Analysis by regression*

Step	IV	DV	$\beta$	Sig	R2	$\Delta R2$
1	Control Variables	Attitude toward SMS advertisement	.02	.075	.118***	.118
2	Entertainment	Attitude toward SMS advertisement	.439	.097	.933***	.815
	Infotainment		.23	.28		
	Irritation		-.04	.083		
	Credibility		.045	.147		
	Advertising Value		.276***	.000		

Note. Researcher used Age, Education as control Variable , N=150, P<.05 \*, P<.01 \*\*, P<.001 \*\*\*

### Moderating /Hierarchical Regression Analysis

For the analysis of moderation, sequential regression is used. In the first step, the effect of any external factors is controlled by entering control variables. In step two all independent variable, i.e. entertainment, infotainment, credibility, and irritation are entered along with the moderator advertising value. In the last step the interaction terms of all independent variable, i.e. entertainment, infotainment, credibility, and irritation was entered, which are regressed by the dependent variable attitude of consumers toward SMS advertisement

The table 5 shows the results of hierarchical regression, it shows that the beta value of all independent variable i.e. entertainment, infotainment, irritation, credibility are ( $\beta=.657$ ,  $p<.001$ ), ( $\beta=.365$ ,  $p<.01$ ), ( $\beta=-.125$ ,  $p<.001$ ), ( $\beta=.468$ ,  $p<.05$ ) respectively which are all significant, confirming the moderating effect of frequency of contact on the relationship between all independent variables entertainment, infotainment, irritation, credibility and attitude of consumers toward SMS advertisement. Hence it proved the sixth hypothesis that states that frequency of contact moderate the relationship between all independent variable i.e. entertainment, infotainment, irritation, credibility and attitude of consumers toward SMS advertisement.

Table 5. *Moderation Analysis by Sequential regression*

Predictor's	Beta $\beta$	R2	$\Delta R2$
Step 1			
Control Variable		.118	
Step 2			
Entertainment	.957***	.906	.788
Infotainment	.695***		
Irritation	-.246***		
Credibility	.560***		
Frequency of Contact	-.371***		
Step 3			
Frequency of Contact X	.657***	.938	.032

Entertainment	
Frequency of Contact X	.356**
Infotainment	
Frequency of Contact X	-.125***
Irritation	
Frequency of Contact X	.468*
Credibility	

Note: Researcher used Age, Education as control Variable , N=150, P<.05 \*, P<.01 \*\*, P<.001 \*\*\*

### Limitations

This study has provided a better understanding of attitude of Pakistani consumers toward SMS advertisement and the factors that influence the consumer attitude. While this theory is generalized over whole population these limitations must be considered and which can provide the direction for new researches

The first limitation of this research is a relatively small sample size i-e two hundred and eighty nine were collected using non probability sampling of the city of Islamabad and this limitation create hurdles to generalize and apply the findings of this study on the whole population. Secondly, in this study data were collected by convenience sampling technique from two malls of Islamabad namely Centaurus and Safa gold mall. Most respondents of this study are young. The third and one of the important limitations of this study is that this study didn't include the problem of permission based SMS advertisement.

### Discussion and Conclusions

The aim of this study is to determine the effect of the four factors namely entertainment, infotainment, irritation and credibility, of SMS advertisement that influence consumer's attitude toward SMS advertisement. This study also aims to find out the effect of frequency of exposure and advertising value, on the attitude of SMS advertisement.

In the previous researches (Javid, Namin, & Noorai, 2012) (Zabadi, Shura, & Elsayed, 2012) it is shown that entertainment, infotainment, and credibility is highly correlated with the attitude toward SMS advertisement and irritation is negatively correlated. The findings indicate that the attitude of consumers toward SMS advertising through mobile devices and advertising value have a strong relationship to the content of the advertising SMS and also is significantly related to the frequency of advertising SMS. It is also found that the demographic characteristics influence very less on the attitude of consumers toward SMS advertisement and advertising value. Therefore, it is mostly the content of the advertising SMS that impact the consumer's attitude. So, keeping in mind this study suggests marketer to design the mobile advertising campaigns carefully by developing advertising messages wisely.



## Recommendations for Future Research

The current study result proposes that, larger sample of respondents could be used by future researchers by using random sampling techniques to select respondents for the study. It is an astounding fact that the majority of the population is between 16-29 age groups. Therefore, future researchers could use a broad sample of consumers, which is comprised of different age groups. Another factor that must be considered for future researches is permission base marketing such as to send SMS advertisement to only those people who are willing to accept it.

## References

- Annica Andersson, J. N. (2000). *Wireless Advertising Effectiveness Evaluation of an SMS Advertising Trial*. Master's thesis, Stockholm School of Economics.
- Balasubramanian, S., Peterson, R. A., & Jarvenpaa, S. L. (2002). Exploring the implications of m-commerce for markets and marketing. *Journal of the Academy of Marketing Science*, 30(4), 348-361.
- Barwise, P., & Farley, J. U. (2005). The state of interactive marketing in seven countries: interactive marketing comes of age. *Journal of Interactive Marketing*, 19(3), 67-80.
- Barwise, P., & Strong, C. (2002). Permission-based mobile advertising. *Journal of Interactive Marketing*, 16(1), 14-24.
- Bauer, H. H., Barnes, S. J., Reichardt, T., & Neumann, M. M. (2005). Driving consumer acceptance of mobile marketing: a theoretical framework and empirical study. *Journal of electronic commerce research*, 6(3), 181-192.
- Beatty, S. E., Kahle, L. R., Homer, P., & Misra, S. (1985). Alternative measurement approaches to consumer values: the list of values and the Rokeach value survey. *Psychology & Marketing*, 2(3), 181-200.
- Bouhleb, O., Mzoughi, N., Hadiji, D., & Slimane, I. B. (2009). Brand personality and mobile marketing: An empirical investigation. *Proceedings of World Academy of Science, Engineering and Technology*, 41, pp. 703-710.
- Brackett, L. K., & Carr, B. N. (2001). Cyberspace advertising vs. other media: Consumer vs. mature student attitudes. *Journal of advertising research*, 41(5), 23-32.
- Cappo, J. (2003). *The future of advertising: new media, new clients, new consumers in the post-television age*. McGraw Hill Professional.
- Carroll, A., Barnes, S. J., & Scornavacca, E. (2005). Consumers perceptions and attitudes towards SMS mobile marketing in New Zealand. *Mobile Business, 2005. ICMB 2005. International Conference on*, (pp. 434-440).
- Chowdhury, H. K., Parvin, N., Weitenberner, C., & Becker, M. (2010). Consumer attitude toward mobile advertising in an emerging market: An empirical study. *Marketing*, 12(2), 206-216.
- De Marez, L., Vyncke, P., Berte, K., Schuurman, D., & De Moor, K. (2007). Adopter segments, adoption determinants and mobile marketing.

- Dickinger, A., Haghirian, P., Murphy, J., & Scharl, A. (2004). An investigation and conceptual model of SMS marketing. *System Sciences, 2004. Proceedings of the 37th Annual Hawaii International Conference on*, (pp. 10--pp).
- Ducoffe, R. H. (1995). How consumers assess the value of advertising. *Journal of Current Issues & Research in Advertising, 17(1)*, 1-18.
- Ducoffe, R. H. (1996). Advertising value and advertising on the web. *Journal of Advertising research, 36*, 21-36.
- Easingwood, C., & Koustelos, A. (2000). Marketing high technology: preparation, targeting, positioning, execution. *Business Horizons, 43(3)*, 27-34.
- Explorable.com. (2009, November). Research Population. *Research Population*. Retrieved from <https://explorable.com/research-population>
- Frolick, M. N., & Chen, L.-D. (2004). Assessing m-commerce opportunities. *Information Systems Management, 21(2)*, 53-61.
- Goldsmith, R. E., Lafferty, B. A., & Newell, S. J. (2000). The impact of corporate credibility and celebrity credibility on consumer reaction to advertisements and brands. *Journal of Advertising, 43-54*.
- Grone, F., Friedrich, R., Hölbling, K., & Peterson, M. (2009). The march of mobile marketing: new chances for consumer companies, new opportunities for mobile operators. *Journal of advertising research, 49(1)*, 54-61.
- Haghirian, P., & Dickinger, A. (2004). Identifying success factors of mobile marketing. *ACR Asia-Pacific 2004 (Association of Consumer Research)*.
- Haghirian, P., & Inoue, A. (2007). An advanced model of consumer attitudes toward advertising on the mobile internet. *International Journal of Mobile Communications, 5(1)*, 48-67.
- Haghirian, P., & Madlberger, M. (2005). Consumer attitude toward advertising via mobile devices-An empirical investigation among Austrian users.
- Haghirian, P., Madlberger, M., & Tanuskova, A. (2005). Increasing advertising value of mobile marketing-an empirical study of antecedents. *System Sciences, 2005. HICSS'05. Proceedings of the 38th Annual Hawaii International Conference On*, (pp. 32c--32c).
- Javid, M. H., Namin, A. T., & Noorai, M. (2012). Prioritization of Factors Affecting Consumers' Attitudes toward Mobile Advertising. *Journal of Basic and Applied Scientific Research, 2 (9)*, 9293-9300.
- Katterbach, W. (2002). Die SMS-verk{\a}ufer. *Impulse, 1*, 76.
- Kavassalis P., S. N. (2003). Mobile Permission Marketing: framing the market inquiry. *Int. J. Elect. Comer., 8 (1)*, 55 – 79.
- Kotler, P. (2003). *Marketing Management*. Prentice Hall. Retrieved from [http://books.google.com.pk/books?id=BW\\_DQgAACAAJ](http://books.google.com.pk/books?id=BW_DQgAACAAJ)
- Lehmkuhl, F. (2003). K{\u}sse und machotests. *Focus, 6*.
- Li, H., & Stoller, B. (2007). PARAMETERS OF MOBILE ADVERTISING: A FIELD EXPERIMENT. *International Journal of Mobile Marketing, 2(1)*.
- Liu, Y., & Shrum, L. (2002). What is interactivity and is it always such a good thing? Implications of definition, person, and situation for the influence

- of interactivity on advertising effectiveness. *Journal of advertising*, 31(4), 53-64.
- MacKenzie, S. B., & Lutz, R. J. (1989). An empirical examination of the structural antecedents of attitude toward the ad in an advertising pretesting context. *The Journal of Marketing*, 48-65.
- Nasco, S. A., & Bruner, G. C. (2008). Comparing consumer responses to advertising and non-advertising mobile communications. *Psychology & Marketing*, 25(8), 821-837.
- Noor, M. N., Sreenivasan, J., & Ismail, H. (2013). Malaysian Consumers Attitude Towards Mobile Advertising, the Role of Permission and Its Impact on Purchase Intention: A Structural Equation Modeling Approach. *Asian Social Science*, 9(5), p135.
- Okazaki, S., & Taylor, C. R. (2008). What is SMS advertising and why do multinationals adopt it? Answers from an empirical study in European markets. *Journal of Business Research*, 61(1), 4-12. Retrieved from <http://www.sciencedirect.com/science/article/pii/S0148296307001270>
- O'lmaie, A. (2007). Introducing Conceptual Model of Portable Banking regarding Bank, Users, and Clients Needs. The First International Electronic Conference.
- Pagani, M. (2004). Determinants of adoption of third generation mobile multimedia services. *Journal of interactive marketing*, 18(3), 46-59.
- Pavlou, P. A., & Stewart, D. W. (2000). Measuring the effects and effectiveness of interactive advertising: A research agenda. *Journal of Interactive Advertising*, 1(1), 61-77.
- PTA Annual Report. (2011-2012). *Pakistan Telecommunication Annual Report*. Tech. rep., Pakistan Telecommunication Authority. Retrieved from [http://www.pta.gov.pk/annual-reports/annual\\_report\\_11-12\\_1.zip](http://www.pta.gov.pk/annual-reports/annual_report_11-12_1.zip)
- Report, P. A. (2012-2013). *Pakistan Telecommunication Annual Report*. Tech. rep., Pakistan Telecommunication Authority. Retrieved from [http://www.pta.gov.pk/annual-reports/annreport2013\\_1.pdf](http://www.pta.gov.pk/annual-reports/annreport2013_1.pdf)
- Rondon, K. (2005). Asia/Pacific wireless consumer survey, 2005. *IDC Document AP201340M*.
- Scharl, A., Dickinger, A., & Murphy, J. (2005). Diffusion and success factors of mobile marketing. *Electronic commerce research and applications*, 4(2), 159-173.
- Shavitt, S., Lowrey, P., & Haefner, J. (1998). Public attitudes toward advertising: More favorable than you might think. *Journal of advertising research*, 38(4), 7-22.
- Siau, K., & Shen, Z. (2003). Building customer trust in mobile commerce. *Communications of the ACM*, 46(4), 91-94.
- Stewart, D. W., & Pavlou, P. A. (2002). From consumer response to active consumer: measuring the effectiveness of interactive media. *Journal of the Academy of Marketing Science*, 30(4), 376-396.
- SUHER, H. K., & İSPIR, N. B. (2008). SMS Advertising In Turkey: Factors Affecting Consumer Attitudes. *Selcuk University Social Sciences Institute Journal*(21).
- The, E. (2005, september 1). *Mobile-phone penetration*. Retrieved from <http://www.economist.com/>: <http://www.economist.com/node/4351974>

- Tsang, M. M., Ho, S.-C., & Liang, T.-P. (2004). Consumer attitudes toward mobile advertising: an empirical study. *International Journal of Electronic Commerce*, 8(3), 65-78.
- Van der Walddt, D., Rebello, T., & Brown, W. (2009). Attitudes of young consumers towards SMS advertising. *African Journal of Business Management*, 3(9), 444-452.
- Varshney, U. (2003). Location management for mobile commerce applications in wireless internet environment. *ACM Transactions on Internet Technology (TOIT)*, 3(3), 236-255.
- Zabadi, A. M., Shura, M., & Elsayed, E. (2012). Consumer Attitudes toward SMS Advertising among Jordanian Users. *International Journal of Marketing Studies*, 4(1), p77.
- Zhang, J., & Mao, E. (2008). Understanding the acceptance of mobile SMS advertising among young Chinese consumers. *Psychology & Marketing*, 25(8), 787-805.