



## Public Attitudes toward Mobile Advertising in Botswana: An Empirical Study

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### Abstract

This study surveyed the opinions of 334 randomly selected cell-phone users in Gaborone, the capital city of Botswana, to ascertain their attitudes towards the advertising messages they received through SMS. The results show that the predominant types of messages they received were on the availability of products and services (64.7%), entertainment messages (61.9%) and sports (45.6%). Majority of the respondents (63%) described the SMS-advertising messages received as informative and 59% described the messages as rather irritating. A multivariate logistic regression model reveals that employment status is the only attribute that significantly influences the odds in favour of positive attitude towards mobile advertising messages via SMS.

The study recommends that marketers should therefore design (MAMs) that will respond to the broadest number of consumers through reduction or elimination of irritations inherent in SMS-based advertising so as to increase their acceptance.

**Key words:** attitude, SMS, mobile advertising messages

### Introduction

The rapid proliferation of mobile phones has resulted in the increasing use of handheld devices to deliver advertisements for products and services. The wireless Advertising Association (WAA) defines wireless or mobile marketing as sending advertising messages to mobile devices such as mobile phones or PDA (personal digital assistants) through the wireless network. Advertising via mobile devices are referred to as wireless advertising (Barnes, 2002; Krishnamarthy, 2003). It can also be referred to as wireless messaging (Petty, 2003). However, mobile advertising messages are usually transmitted via short message service (SMS) [De Reyck and Degraeve, 2003]. Tsang et al. (2004) confirmed the above statement when he noted that the rising popularity of Short Message Service (SMS) has created a new channel for advertising called mobile advertising. Adverts are reduced to short textual messages and sent to mobile phones.

It is clear that mobile advertising is going to be the future trend in advertising, for example, the response rate of consumers to these mobile campaigns can be almost 20 times higher than other media (Quios/Engage 2000; Windwire, 2000). Nevertheless, seven experts identified two SMS technical barriers. First, a text message may never arrive. Being a "best effort" service, there is no mechanism to ensure successful data transmission. Still, six experts estimated the probability of a text message arriving to be almost 99%. Second, there are no guarantees that messages will arrive within a few minutes; delays up to six hours are possible (Arno, S. et al. 2005). This is a critical problem for time-sensitive content such as account changes, last-minute tickets, product availability notifications, and weather reports. Instantaneous broadcasts with guaranteed real-time transmission will offer additional opportunities-e.g., notifying travelers of flight status via SMS should increase mobile marketing success (Newell, et al. 2001).

Furthermore, the high penetration rate of mobile phones has led to the growth of mobile market which in turn, has provided a direct net benefit to local and national economies through increased employment, employment wages, tax revenues and Gross Domestic Product (GDP) [GSM World 2006]. It is estimated that for ten percent of mobile penetration growth, GDP will grow on average of 0.6% per annum (GSM World 2006). In addition, telecommunications can be seen a social and economic enabler. The advantages of improved communications extends beyond financial gains to include improved family and community fellowship and health services, In many developing countries, fixed landline penetration falls below 1% of the total population for reasons such as the prohibitive costs of usage and costs of building infrastructure (GSM Association 2006). Mobile telecommunication networks provide an alternative to fixed landline networks for many developing countries.

The population of Botswana covered by mobile cellular network in 2008 was 99% according to the World Bank. This coverage represents the percentage of people that live in areas served by the mobile cellular signals regardless of whether they use it (<http://www.tradingeconomics.com/botswana/indicators>). The report shows that ICT service exports in Botswana amounted to USD 21,661,602.08 in 2010 with the mobile cellular subscriptions (per 100 people) standing at 117.8. Telephone main lines in use amounted to 160,500lines in 2012 while the mobile cellular lines stood at 3.1 million and 129<sup>th</sup> in the world in 2012 ([http://en.wikipedia.org/wiki/Telecommunications\\_in\\_Botswana](http://en.wikipedia.org/wiki/Telecommunications_in_Botswana)).

With increased use of mobile phone and its major contributions to the growth of mobile market, this paper explores public attitudes about receiving SMS –based mobile advertisements in the hopes of utilizing mobile advertising campaigns to supplement traditional advertisements that are generally expensive. Furthermore, the study will examine the usage behaviour in respect to mobile advertising and how consumers feel about advertising messages received via their mobile phones.

## Literature Review

### Attitude

In general, attitudes are “mental states used by individuals to structure the way they perceive their environment and guide the way they respond to it” (Aaker et al. 1992). Fishbein (1967) defined attitude as “a learned predisposition of human beings.” On the basis of this predisposition, an individual would respond to an object (or an idea) or a number of things (or opinion). Kotler (2000) said that “an attitude is a person’s enduring favourable or unfavourable evaluations, emotional feelings, and action tendencies toward some objects or idea.” There is a large body of literature dealing with consumer attitude toward advertising in general, but only a few are available in area of mobile advertisement (Tsang, et al. 2004; and Kabiret, et al. 2006).

### General Attitudes toward Advertising

Early surveys of consumer attitudes toward advertising revealed positive results (Gallup, 1959; Bauer and Greyser, 1997). However, this positive trend changed after 1970. Harris and Associates, for example, found that a majority of respondents considered TV advertising to be seriously misleading (Schlosser, et al.). Later studies have provided more evidence of the unfavourable public attitude toward advertising (Alwitt, et al. 1994; Schlosser, et al. 1999). More recent studies have focused on attitude structures. Elliot and Speck (1998) investigated six major media (TV, broadcasting, magazines, newspapers, Yellow Pages, and direct mail) and found that television and magazines exhibited the highest level of ad-related communication problems (hindered research and disruptions). Perceived clutter, hindered search, and disruption were related to less favourable attitudes and greater ad avoidance. These effects varied in different media (Elliot and Speck 1998). The differences in the way different media affects consumer attitude were also reported by Bogart (Bogart, 1990). TV ads often have a high degree of irritation than radio ads which are less irritating because radio programs usually serve as background music.

### Mobile and Internet Advertising

Mobile advertising and internet advertising have many features in common – both are emerging media used to deliver digital texts, images, and voices with interactive, immediate, personalized and responsive capabilities (Yoon, and Kim, 2001). Internet advertising allows individual customers to be identified and their behaviour to be analysed. Mobile advertising relaxes the mobility constraint associated with fixed-line internet access. One may expect mobile advertising to be more favourable to consumers for location- sensitive and time-critical events (Barwise, and Strong 2002; Zoller et al. 2001). Since the mobile phone is a very personal device that allows an individual to be accessed virtually any time and any- where, mobile advertising must be more personalized and may take different forms. Based on strategic applications, wireless marketing can either be permission- based, incentive- based, or location- based (Zoller, et al. 2001). The use of Short Message Service (SMS) to access customers through their handheld devices is gaining popularity, thus, making the mobile phone the ultimate medium for one-to-one marketing (Tsang, et al. 2004). SMS is the most popular mobile application referred to as text messaging in the UK attracted 580 million users who sent 431 billion messages in 2002 (TTI 2003). Short Message Service (SMS), in particular, has been very successful, surveys conducted by A.T. Kearney indicates that the use of mobile information services and SMS has increased tremendously since 2001 (Kearney, 2002). More than 100 billion SMS messages were sent worldwide in one year.

The high penetration rate of mobile phones has resulted in the increasing use of mobile advertisements to market products and services worldwide. Mobile advertising differs markedly from traditional media advertising in many ways. The most salient differentiating characteristics being that mobile advertising is (i) interactive and (ii) can be used to target an individual (Bauer, et al. 2005). Mobile advertising is interactive in the sense that it can be used to provide the mobile audience with the ability to choose and respond to a particular advertisement of their liking (Stewart and Pavlou, 20002). Advertising communication goals can be parsimoniously stated as reaching a target audience, increasing brand recall, and increasing sales (Hanley et al. 2006; Fortunato and Windels 2005; Lee 2006). Developing advertising strategies to achieve these goals centres around two critical factors: (i) understanding the communication channels to reach the audience and (ii) understanding the use behaviour of these mass media channels by the audience (Dholakia and Dholakia (2004); Heller 2006). Consequently, advertisers need to choose the right medium for advertising so that they will be noticed by their desired target audience and illicit the desired response to the promoted call-to-action (Haghirian et al. 2005).

## Objectives of the Study

**Objective 1:** To identify the socio-demographic characteristics of the respondents.

**Objective 2:** To determine the types of mobile advertising messages (MAMs) that the public usually get.

**Objective 3:** To determine the attitude of the public towards receiving MAMs via short message service (SMS).

**Objective 4:** To determine the level of importance which consumers attach to mobile advertising messages (MAMs) that the public usually get.

**Objective 5:** To determine the relationship between perceived entertainment, in-formativeness, irritation and credibility of notice adverts and attitude towards MA (mobile advertising).

## Methodology

The study purposively targeted all the mobile phone users in Gaborone, the capital city of Botswana who are 18 years and over. This was to avoid having to ask for parental consent before the interview as required by international ethical standards. The Creative Research Systems (2012), a sample size calculator gave an acceptable statistical sample size for a population of adults 18 years and over in Gaborone, with 95% confidence interval and allowing an error of 5%, as 362. The simple random sampling method was used in identifying individual respondents (18 years and over) to answer the questions administered by trained research assistants.

### The instrument for the study

The questionnaire was divided into two parts. The first part contained questions on the demographic characteristics of the respondents while the second part contained questions on 5-point Likert scale. The questions were adapted from those used by Chowdhury et al. (2006) and Tsang et al. (2004). The questionnaire was pre-tested on a group of students from the University of Botswana and revised on the basis of the feedback obtained.

### Data Collection

A total of 334 responses were collected giving a response rate of 92.3%. The remaining percentage represent those who were reluctant to participate in the study or were checked out of the study sample because they had no mobile phones or were not receiving or sending SMS of any kind.

### Data analysis

Table 1 shows the demographic and socio-economic characteristics of the respondents. The table shows that about 52% of the respondents were females while 48% were males. Almost 72% were between 18 and 24 years followed by those between 25 and 34 years (14.2%). Majority of the respondents (61.2%) had higher education while 33% have just completed secondary school education. An overwhelming majority (86%) were single. Only 11% were married. While 58.5% were unemployed, 12.7% were unemployed but seeking employment and about 24% were employed. Eighty percent of the respondents were earning below P5, 000.00 (USD 576.00) per month while 13% earned P10, 000.00 (USD 1,152.00) and above.

Table 1: Demographic characteristics of the respondents

Characteristics	Response	Frequency	Percent
Sex	Male	157	47.6
	Female	173	52.4
Age (years)	15-24	237	71.8
	25-34	47	14.2
	35-44	25	7.6
	45-54	14	4.2
	55-64	5	1.5
	65-74	2	0.6
Marital status	Single	283	85.8
	Married	36	10.9
	living together	9	2.7
	Widowed	2	0.6
Highest educational qualification	No education	2	0.6
	Primary completed	2	0.6
	Secondary attempted	7	2.1
	Secondary completed	109	33.0
	Higher education	202	61.2
	Diploma	2	0.6
	PhD	6	1.8
Employment Status	Unemployed	193	58.5
	Unemployed but seeking employment	42	12.7
	Unemployed but not seeking employment	17	5.2
	Employed	78	23.6
Income status(average monthly earning (Pula)	Less than 1000	116	35.2
	1000-4999	148	44.8
	5000-9999	23	7.0
	10000 and above	43	13.0
	Total	330	100

The respondents were asked to classify the SMS advertising messages they received and the responses are shown in Figure 1. The figure shows that majority received messages which were dealing on the availability of products and services (64.7%), followed by entertainment messages (61.9%) and sports (45.6%).

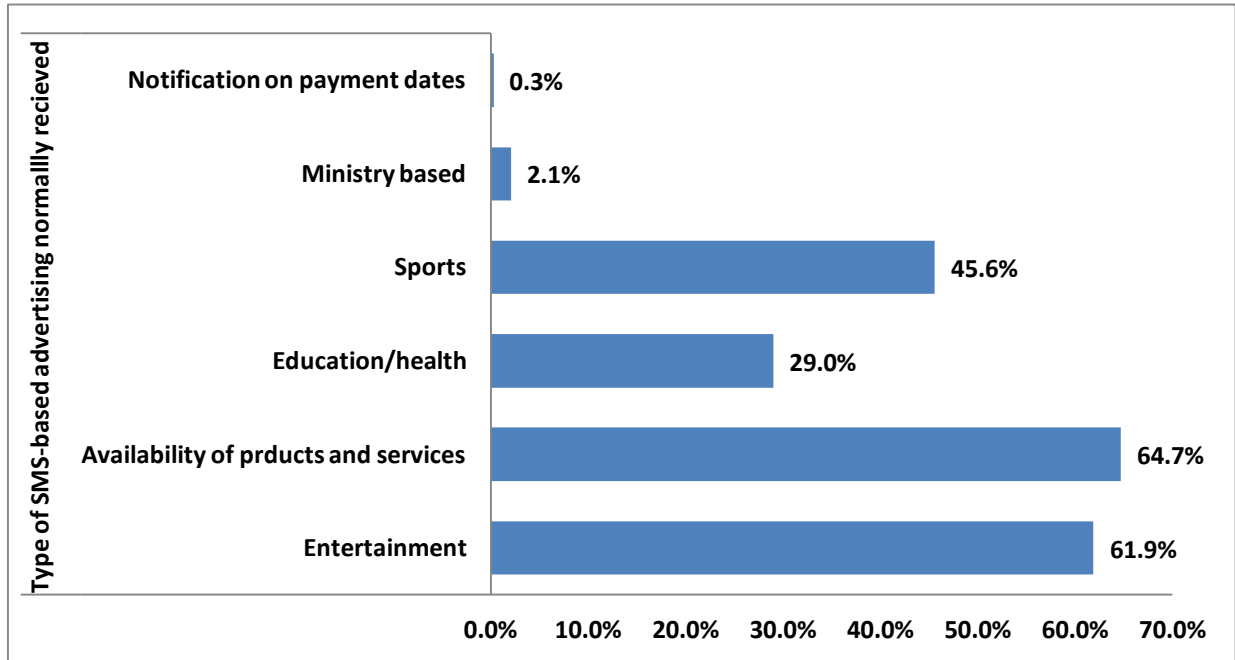


Figure 1: The types of SMS-based advertising normally received by the respondents

The respondents were asked to describe the SMS-based advertising messages they received and the responses were shown in figure 2. Majority of the respondents (63%) described the SMS –advertising messages received as informative while 59% of them described the messages as rather irritating, entertaining (26%), and credible (12%). To about 11% of the respondents, the SMS messages provide an incentive for them to advertise their businesses.

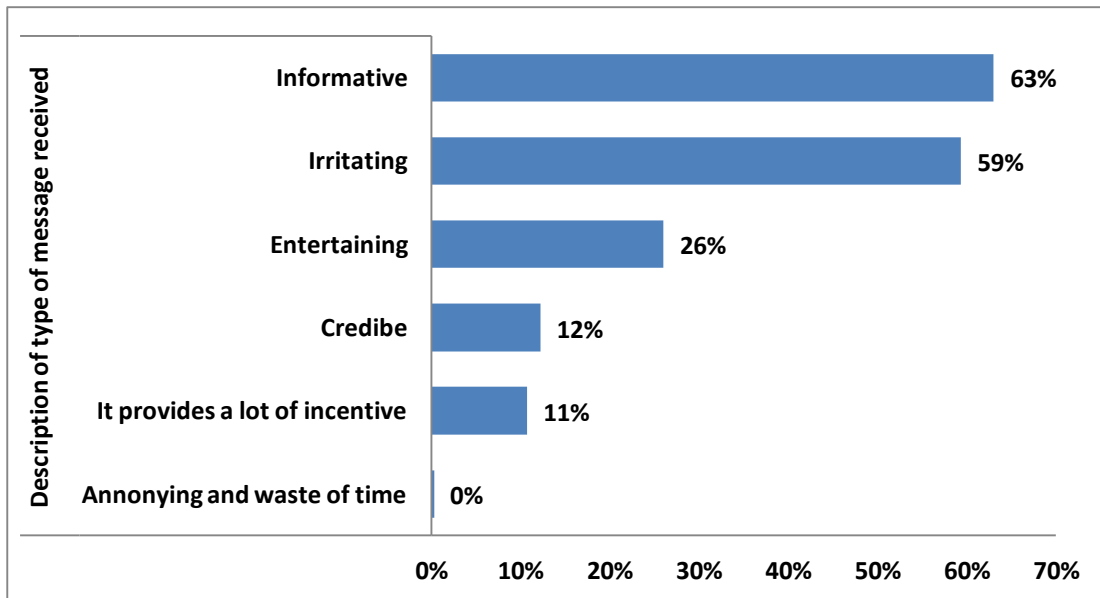


Figure 2: How the respondents described the SMS-based advertising messages

The respondents were asked to rate some of the attributes of the SMS-based advertising messages using a 4-point scale of 1= Not important, 2= Important, 3 = Very important and 4 = Excellent. The majority of the respondents (53%) rated the entertainment messages as important, very important or excellent. The information obtained from the SMS messages were rated as excellent by 44% of the respondents while about one in every three respondents expressed the sales promotion messages as excellent (Table 2)

Table 2: Attributes of SMS-based advertisements

Attributes of SMS-based advertisement	Not important		Important		Very important		Excellent	
	Count	%	Count	%	Count	%	Count	%
Entertainment	154	47%	80	24%	38	12%	56	17%
Information	15	5%	57	17%	112	34%	146	44%
Incentive	107	33%	119	36%	77	24%	24	7%
Sales promotion	55	17%	82	25%	91	28%	100	31%
Ministry	1	50%	0	0%	0	0%	1	50%

On the respondents' attitudes towards the messages they received, 37.6% read it immediately while 22.75% delete the messages at sight and 18.2% postpone reading till later times. Almost 8% of the respondents ignore the messages they receive completely (Figure 3)

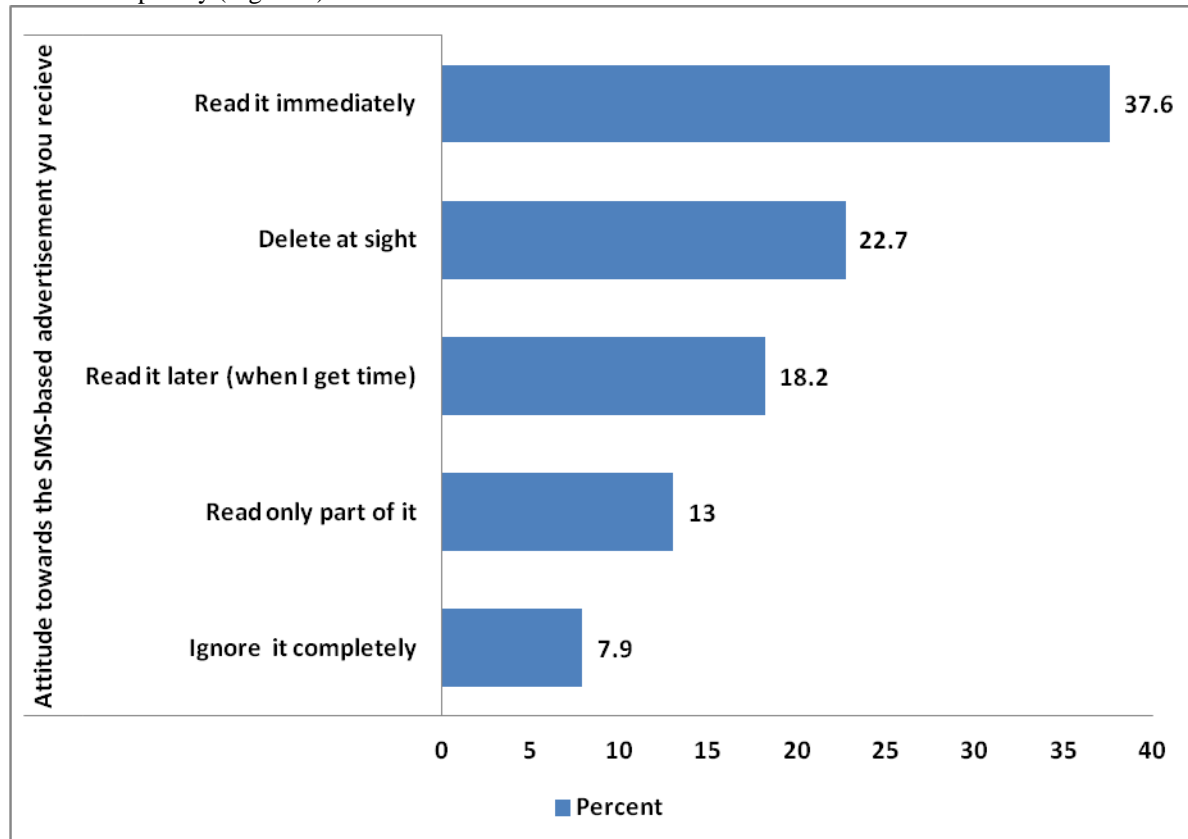


Figure 3: Attitudes of respondents towards SMS-based advertisements

#### Relationship between attitude to SMS-based mobile advertising messages and some socio-demographic variables

The respondents were asked what their attitudes to SMS-based mobile advertising messages were. The responses were: 1=Yes, I like mobile advertising messages via SMS or 2= No, I do not like mobile advertising messages via SMS. A multivariate logistic regression model was fitted to the data with highest educational level, employment status, marital status, and income status and entertainment, incentive, information and ministry as independent variables. If  $\pi$  is the probability of a cell phone user having a positive attitude (I like it) towards mobile advertising message via SMS, then  $(1 - \pi)$  is the probability of having a negative attitude (I don't like it). The ratio,  $\pi / (1 - \pi)$  defines the odd in favour of positive attitude to mobile advertising message via SMS. The logarithm of the odd ratio (dependent variable) was modelled in terms of the specified independent variables and results shown in Table 3.

The results of the analyses show that only employment status significantly ( $p$ -value  $< 0.05$ ) predicts the odds of having positive attitude to mobile advertising messages via SMS. Furthermore, respondents who have higher education, Diploma and PhD are respectively 1.05, 1.2 and 1.5 times more likely to have positive attitudes to mobile advertising messages via SMS than those who have no education. Similarly, married respondents, those living together and widowed are respectively, 3.5, 3.04 and 9 times more likely to have positive attitudes than the single respondents. The unemployed but seeking employment, unemployed but not seeking employment and the employed are 4.8, 4.9, and 14.8 times more likely to have positive attitude than the unemployed. Respondents who earn P1000.00 (equivalent USD 111.00) and more (monthly) are less likely to have positive attitudes to mobile advertising messages than those earning less than USD 111.00.

Respondents who feel that entertainment messages sent to their phones are important, very important and excellent are respectively 3.7, 1.8 and 1.8 times more likely to have positive attitudes than those who feel their entertainment messages are not important. Similar trends are observed in the responses to incentive, information messages received by the respondents. Additionally, there is a positive correlation between higher level of education, marital status and employment status and attitude towards mobile advertising messages via SMS ( $B > 0$ ) and negative correlation between attitude and income status of the respondents ( $B < 0$ )

Table 3: Multivariate logistic regression of attitude to SMS –ads with

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
Reference								Lower	Upper
	Age groups			3.055	5	0.691			
Male	Female	-0.418	0.257	2.657	1	0.103	0.658	0.398	1.088
	Highest educational qualification			2.968	6	0.813			
No schooling	Primary completed	-21.37	26755.51	0	1	0.999	0	0	.
	Secondary attempted	-20.666	28420.72	0	1	0.999	0	0	.
	Secondary completed	-1.869	1.669	1.254	1	0.263	0.154	0.006	4.064
	Higher education	0.046	1.287	0.001	1	0.972	1.047	0.084	13.052
	Diploma	0.189	1.25	0.023	1	0.88	1.208	0.104	14
	PhD	0.426	2.052	0.043	1	0.836	1.53	0.027	85.483
	Marital Status			1.65	3	0.648			
Single	Married	1.241	2.395	0.268	1	0.604	3.459	0.032	378.181
	Living together	1.111	2.309	0.231	1	0.63	3.037	0.033	280.505
	Widowed	2.196	2.528	0.754	1	0.385	8.985	0.063	1273.86
	Employment status			11.939	3	0.008			
Unemployed	Unemployed but seeking employment	1.572	0.587	7.179	1	0.007	4.818	1.525	15.221
	Unemployed but not seeking employment	1.585	0.598	7.014	1	0.008	4.878	1.51	15.762
	Employed	2.698	0.82	10.82	1	0.001	14.848	2.975	74.095
	Income status			1.529	3	0.676			
Less than 1000	1000-4999	-0.157	0.685	0.053	1	0.818	0.854	0.223	3.272
	5000-9999	-0.089	0.638	0.019	1	0.889	0.915	0.262	3.195
	10000 and above	-0.746	0.702	1.13	1	0.288	0.474	0.120	1.877
	Entertainment			3.057	3	0.383			
Not important	Important	1.319	0.786	2.814	1	0.093	3.739	0.801	17.459

	Very important	0.584	0.739	0.625	1	0.429	1.793	0.422	7.623
	Excellent	0.574	0.884	0.421	1	0.517	1.775	0.314	10.045
	Incentive			3.094	3	0.377			
Not important	Important	1.709	0.995	2.951	1	0.086	5.526	0.786	38.853
	Very important	0.54	0.746	0.525	1	0.469	1.716	0.398	7.404
	Excellent	0.263	0.798	0.109	1	0.742	1.301	0.272	6.221
	Information			1.009	3	0.799			
Not important	Important	0.596	0.909	0.43	1	0.512	1.815	0.306	10.783
	Very important	0.45	0.816	0.304	1	0.581	1.568	0.317	7.765
	Excellent	-0.113	0.917	0.015	1	0.902	0.893	0.148	5.392
	Ministry			0.28	3	0.964			
Not important	Important	0.17	0.795	0.046	1	0.831	1.185	0.25	5.624
	Very important	0.352	0.699	0.253	1	0.615	1.422	0.361	5.6
	Excellent	0.225	0.821	0.075	1	0.784	1.252	0.25	6.263
	Constant	-24.693	26435.08	0	1	0.999	0		

## Discussion of the Results

First, the study was executed to determine public attitudes about receiving SMS-based advertisements in the hope of utilising mobile advertising campaigns to supplement traditional advertisements that are generally expensive. Second, how consumers feel about advertising messages received via their mobile phones was also explored. Third, the study explored the relationship between attitude towards SMS-based advertising messages and some demographic characteristics of the respondents and type of messages received

A multivariate logistic regression model was deployed, and the analysis that followed subsequently indicated that only “employment status” of the respondents significantly predicts the odds of having positive attitudes to mobile advertising via SMS. Specifically, the respondents who are employed are 14.8 times more likely to have positive attitudes than the un-employed. The finding is interesting and tends to support an earlier finding of Quios/Engage (2000), and Windwire, (2000), that mobile advertising is going to be the future trend in advertising although the latter finding was based on a different, but more critical dimension of “employment status”.

Effective use of mobile advertising depends on a better understanding of the importance attached by consumers to various attributes of SMS-advertising messages they receive. The study showed that the success of mobile advertising messages depends on these attributes. This is consistent with the finding of (Kabbir, et al. 2006).

The majority respondents (53%) rated the entertainment messages they received as important, very important or excellent. The result is consistent with the finding of Tsang et al. (2004) who reported that entertainment was the most significant of the factors affecting respondents’ attitudes followed by credibility and irritation. The information-value obtained from the SMS-based messages was rated as excellent by (44%) of the respondents while about one out of every three respondents expressed that the sales promotion messages were excellent. The implication of the above ratings is that how consumers feel about advertising messages on their mobile phones is made clear. Although the attributes of SMS-based advertising messages rated

are by no means comprehensive, yet it provided a clear focus on what the priorities of consumers are.

Finally, consumers receive mobile advertising messages (MAMs) that are informative (63%) as well as irritating (59%), almost in the same measure, indicating weak acceptance. Marketers therefore may use the findings of the study to design MAMs that will respond to the broadest number of consumers via reduction or elimination of irritations inherent in SMS-based advertising and probably increase acceptance.

## Limitations

The responses are based on the opinions of the consumers and the researcher has no control over it. Furthermore, the findings of this study cannot be generalized because the scope of the study was limited to only the consumers located in Gaborone, the capital of Botswana.

## Area of Future Research

The researcher recommends that the study be expanded to cover the major cities in Botswana.

## Recommendations

The study recommends that marketers should therefore design (MAMs) that will respond to the broadest number of consumers through reduction or elimination of irritations inherent in SMS- based advertising so as to increase their acceptance.

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