

# INVESTIGATING MOBILE MARKETING ACCEPTANCE OF URBAN SOUTH AFRICANS RESIDING IN GAUTENG

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The extent to which mobile phone ownership has penetrated the South African market in urban areas provides marketers with attractive opportunities to utilise mobile marketing to communicate and engage with these markets. Before mobile marketing opportunities can be successfully pursued, it is necessary to determine if urban South Africans will accept such practices. The study therefore aimed to determine the extent to which urban South Africans engage in marketing-related mobile activities and their subsequent willingness to accept mobile marketing messages from marketers. The target population for the study included mobile phone owners residing in the Gauteng Province of South Africa. A total of 267 useable responses were collected through a self-administered questionnaire. The results confirmed that as respondents' extent to which they engage in marketing-related mobile activities increase, so does their willingness to accept mobile marketing information. With regard to the constructs of the study, significant differences exist in terms of respondents' age, customer type and the length of relationship with mobile phone network service provider. The results indicate that marketers should focus on young consumers, and those consumers who have been with a mobile phone network service provider for more than five years seems to be most willing to accept mobile marketing messages.

**Keywords:** *marketing, mobile phone, marketing-related mobile activity, mobile marketing acceptance, South Africa*

## 1 INTRODUCTION

South Africa, like many other emerging markets, is characterised by rapid urbanisation of its population, with a large percentage of its population already living in urban areas (Setswe 2010:Internet). A large section of the South African population's media exposure has traditionally been limited to radio and billboards, and many do not have regular access to newspapers, magazines and television sets, making mobile marketing campaigns all the more promising (South African Advertising Research Foundation 2011:Internet).

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Since the introduction of mobile networks and cellular technology to South Africa during the early 1990s, the adoption of mobile phones has taken off with 80% of the population in possession of mobile phones in 2008 (Itnewsafrika 2008:Internet). It is furthermore estimated that the number of active mobile phones in Africa, including South Africa has surpassed the number of fixed lines available (Africa Business Pages 2011:Internet). Curwen and Whalley (2011:54-56) profess that the growth in communication networks and mobile phone ownership in Africa has opened up attractive opportunities for businesses and governments to provide African consumers with services through mobile phones (Curwen & Whalley 2011:53). In addition, this growth has also created attractive opportunities for marketers to market their products and services in an innovative way to consumers (De Kerckhove 2002:37). It also enables marketers to build relationships with consumers through mobile marketing (Lee & Jun 2007:798).

Despite the penetration of mobile phones into the South African market, there are, however, some constraints related to industry self-regulation and government legislation that impact on marketers' ability to reach consumers through mobile marketing (Advertising Standards Authority of South Africa 2011:Internet; Bizcommunity 2011:Internet; The Independent Communications Authority of South Africa 2011:Internet; Wireless Application Service Providers Association 2011:Internet).

## **2 PROBLEM STATEMENT, PURPOSE AND OBJECTIVES**

The fact that most South Africans, especially in urban areas, own mobile phones provides attractive opportunities for marketers to target these consumers with mobile marketing messages (Itnewsafrika 2008:Internet). Mobile marketing practices are furthermore regulated by industry bodies and government legislation which require marketers to provide an opt-out option to consumers when mobile marketing messages are sent (Advertising Standards Authority of South Africa 2011:Internet; Bizcommunity 2011:Internet; The Independent Communications Authority of South Africa 2011:Internet; Wireless Application Service Providers Association 2011:Internet). Before mobile marketing opportunities can be successfully pursued by marketers it is, however, necessary to determine the extent to which urban South

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Africans engage in marketing-related mobile activities, and also to determine their willingness to accept mobile marketing information. It will furthermore be of value to the marketer to determine if and where significant differences exist between urban South Africans - based upon differing demographic profiles and patronage habits - in terms of the two constructs of the study. This information will assist marketers in suitably segmenting urban South Africans and targeting them with purposed mobile marketing campaigns.

The purpose of this study is therefore primarily to determine the extent to which urban South Africans engage in marketing-related mobile activities and their subsequent willingness to accept mobile marketing messages from marketers. The purpose of this study is achieved by the formulation of the following objectives:

- Develop a demographic profile of respondents and investigate their mobile phone network service provider patronage habits.
- Investigate the extent to which urban South Africans engage in marketing-related mobile activities (providing personal information, accessing and sharing web content by means of a mobile phone).
- Determine the willingness of urban South Africans to accept mobile marketing messages from marketers.
- Determine the extent to which consumers engage in marketing-related mobile activities influence their willingness to accept mobile marketing messages.
- Determine whether urban South Africans differ in terms of the extent to which they engage in marketing-related mobile activities based on different demographic characteristics and mobile phone network service provider patronage.
- Determine whether urban South Africans differ in terms of their willingness to accept mobile marketing messages based on different demographic characteristics and mobile phone network service provider patronage.

### **3 LITERATURE BACKGROUND**

This section provides an overview of the regulatory landscape that regulates the industry, mobile marketing as promotional tool and the two constructs of the study

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namely, marketing-related mobile activities of consumers and their willingness to accept mobile marketing messages. Finally, the impact of demographic and behavioural differences between consumers on mobile marketing activities and mobile marketing acceptance is addressed.

### **3.1 THE REGULATION OF MOBILE MARKETING IN SOUTH AFRICA**

The self-regulatory body, Wireless Application Service Providers Association (WASPA) aims at ensuring that South African consumers know in advance what services and products are offered to them through mobile marketing campaign, and also what the cost involved will be. WASPA also makes provision in its code of conduct that all businesses using mobile marketing should allow for an opt-out option for those consumers they target (Wireless Application Service Providers Association 2011:Internet).

The Advertising Standards Authority of South Africa (ASA) is an independent regulatory body regulating members in the marketing communications industry of South Africa and its code of conduct stipulates that all communications with consumers should be *'legal, decent, honest and truthful, and be prepared with a sense of responsibility to the consumer'* (Advertising Standards Authority of South Africa 2011:Internet).

The Independent Communications Authority of South Africa (ICASA) is a result of legislation that required the creation of an authority to regulate the South African Telecommunications Industry, amongst others. ICASA also handles complaints about transgressions in the telecommunications industry through a Complaint and Compliance Committee (CCC) (The Independent Communications Authority of South Africa 2011:Internet).

### **3.2 MOBILE MARKETING AS A PROMOTIONAL TOOL**

Mobile marketing is defined as *'a set of practices that enables organizations to communicate and engage with their audience in an interactive and relevant manner through any mobile device or network'* (Mobile Marketing Association 2009:Internet). According to Bamba and Barnes (2007:817), a mobile marketing campaign may follow a push approach where text messages for example, are sent to consumers,

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whereas a pull approach requires consumers to request information first before it is sent by the marketer.

Mobile communication is measurable, allows for easy interaction, has the ability to be personalised, and can also be accurately targeted towards particular consumers (Jenkins 2006:60). Roach (2009:126,134) professes that consumers view mobile marketing communication in comparison to other promotional tools as timely, interactive, useful and convenient. Consumers also prefer mobile marketing over other direct mail practices, including e-mail. In general, however, Bamba and Barnes (2007:827) caution that consumers are generally not very positive about receiving unsolicited messages from marketers. A successful mobile marketing campaign is dependent on consumers not opting out of receiving mobile marketing messages from the particular marketer (Roach 2009:136). Many consumers have serious privacy concerns about mobile marketing (Zhou 2011:221).

According to Kautonen, Karjaluoto, Jayawardhena and Kuckertz (2007:116) a key factor to keep consumers from not opting out is to build a sense of trust in the marketer. This is echoed by Kowalik (2011:226) who identified both trust and relationship building as key components in obtaining consumer engagement. For a mobile marketing campaign to be successful, it is important to adapt it with the particular target market in mind (Spiekerman, Rothensee & Klafft 2011:287). De Kerckhove (2002:39), however, cautions marketers to not only focus on mobile marketing on its own, but rather to include it as one of the tools as part of an integrated marketing communication campaign designed to reach particular consumers.

### **3.3 MARKETING-RELATED MOBILE ACTIVITIES OF CONSUMERS**

A study conducted by Haste (2005:58) found that mobile phones were initially used by consumers to engage in activities such as sending text messages, communicating verbally and listening to voice mail messages. The subsequent development of new mobile phone technology has brought about a virtually unlimited choice of activities ranging from multimedia capabilities, scheduling, socialising (Facebook and Twitter), education and business-related purposes (Bamba & Barnes 2007:815-816; Karim, Oyebisi & Mahmud 2010:267; Kowalik 2011:217).

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This particular study focuses on the marketing-related activities consumers typically engage in. Mobile-related marketing activity refers to the extent to which consumers engage in activities such as the imparting of personal information to third parties on the web via a mobile phone, the extent to which consumers access web content via their mobile phones, and the extent to which the web content obtained is shared with other consumers (Gao, Sultan & Rohm 2010:577).

### **3.4 WILLINGNESS TO ACCEPT MOBILE MARKETING MESSAGES**

The acceptance of new technologies is typically driven by the consumers' knowledge of how the technology functions, their perceptions of the usefulness of the technology, their attitudes towards the technology, and finally their intentions to behave in a certain way towards the technology (Peres, Correia & Moital 2011:15). Gao *et al.* (2010:576,579) operationalise mobile marketing acceptance in terms of a consumer's willingness to engage mobile marketing activities, which includes the willingness to receive information, offers and solicitations from businesses on their mobile phones.

In their study of Chinese youth, Gao *et al.* (2010:580) determined that the extent to which a consumer engages in marketing-related mobile activities have a direct influence on the willingness of consumers to accept mobile marketing messages. In order to determine whether a similar relationship exists in the South African context, the following alternative hypothesis has been formulated:

*Hypotheses 1: There is a linear correlation between the extent to which urban South Africans engage in marketing-related mobile activities and their willingness to accept mobile marketing information.*

### **3.5 THE IMPACT OF DEMOGRAPHIC AND BEHAVIOURAL DIFFERENCES BETWEEN CONSUMERS ON MOBILE MARKETING ACTIVITIES AND MOBILE MARKETING ACCEPTANCE**

The discipline of consumer behaviour is underpinned by the notion that demographic, geographic and psychographic differences between consumers influence their consumer behaviour (Hawkins & Mothersbaugh 2010:7). Many researchers in the field of mobile marketing have acknowledged the fact that this is indeed the case in this particular field of research. Jayawardhena, Kuckertz, Karjaluoto and Kautonen

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(2009:491) discovered differences between national cultures in terms of their willingness to accept mobile marketing messages. McCasland (2005:11) and Jenkins (2006:60) amongst others, acknowledge the differences between generations or age cohorts in terms of mobile marketing activities and acceptance, focussing their research primarily on young consumers. In addition, Rahman and Azhar (2011:104) discovered that young consumers differ in terms of their level of loyalty to mobile phone network service providers. Based upon this, the following alternative hypotheses have been formulated for the study:

*Hypothesis 2: Urban South Africans differ in terms of the extent to which they engage in the marketing-related mobile activities.*

This hypothesis is furthermore refined as follows:

H2a: Urban South Africans differ in terms of their *age* regarding the extent to which they engage in marketing-related mobile activities.

H2b: Urban South Africans differ in terms of their *level of education* regarding the extent to which they engage in marketing-related mobile activities.

H2c: Urban South Africans differ in terms of their *gender* regarding the extent to which they engage in marketing-related mobile activities.

H2d: Urban South Africans differ in terms of their *home language* regarding the extent to which they engage in marketing-related mobile activities.

H2e: Urban South Africans differ in terms of their *current mobile phone network service provider* regarding the extent to which they engage in marketing-related mobile activities.

H2f: Urban South Africans differ in terms of the *type of customer* they are regarding the extent to which they engage in marketing-related mobile activities.

H2g: Urban South Africans differ in terms of the *length of the relationship* they have had with a mobile phone network service provider regarding the extent to which they engage in marketing-related mobile activities.

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*Hypothesis 3: Urban South Africans differ in terms of their willingness to accept mobile marketing messages.*

This hypothesis is furthermore refined as follows:

H3a: Urban South Africans differ in terms of their *age* regarding their willingness to accept mobile marketing messages.

H3b: Urban South Africans differ in terms of their *level of education* regarding their willingness to accept mobile marketing messages.

H3c: Urban South Africans differ in terms of their *gender* regarding their willingness to accept mobile marketing messages.

H3d: Urban South Africans differ in terms of their *home language* regarding their willingness to accept mobile marketing messages.

H3e: Urban South Africans differ in terms of their *current mobile phone network service provider* regarding their willingness to accept mobile marketing messages.

H3f: Urban South Africans differ in terms of the *type of customer* they are regarding their willingness to accept mobile marketing messages.

H3g: Urban South Africans differ in terms of the *length of relationship* they have had with a mobile phone network service provider regarding their willingness to accept mobile marketing messages.

#### **4 RESEARCH METHODOLOGY**

The empirical part of the study included a quantitative and a descriptive research design.

##### **4.1 THE POPULATION OF THE STUDY**

The target population for the study included mobile phone users in the Gauteng Province of South Africa. A total of 267 completed questionnaires were suitable for further analysis. The sample size of this study is comparable to similar studies conducted by Gao *et al.* (2010:578) where 250 responses were realised, and Roach's (2009:129) study where 271 responses were realised.

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## 4.2 SAMPLING PROCEDURE

The sampling procedure for this study involved two-stage non-probability sampling. The fieldworkers firstly selected respondents based upon race and age quotas to improve the representativeness of the sample so that it adequately reflects the target population under study. Respondents who qualify included all those who have been residing in the Gauteng Province of South Africa and who also used or owned a cellphone at the time of the study. A screening question was included in the questionnaire to establish a prospective respondent's eligibility to take part in the study.

## 4.3 QUESTIONNAIRE DESIGN

A self-administered questionnaire was designed for the purposes of collecting the data from respondents. The questionnaire contains structured questions to elicit responses from respondents. The questionnaire includes a preamble explaining the aim of the questionnaire and it furthermore informs respondents about their rights. The questionnaire also includes a screening question which ensured that respondents who took part in the survey were eligible to do so. The other sections of the questionnaire are structured as follows:

- A demographic section enquires about the demographic characteristics of the respondent. It includes questions regarding the age, educational level, gender, and home language of the respondent.
- The next section of the questionnaire focuses on the mobile phone patronage habits of respondents. In particular, the section determines the respondent's current mobile network service provider, whether the respondent is a prepaid or contract customer, and the length of the relationship between the respondent and the current mobile network service provider.
- The last section of the questionnaire includes multi-item Likert-type unlabelled five-point scales measuring the respondent's level of agreement (where 1 represents 'strongly disagree' and 5 represents 'strongly agree') with individual items forming part of two measurement sets measuring the constructs of interest in this study. This section firstly measures the *extent to which respondents engage in mobile-related activities* and secondly, their *willingness*

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*to accept mobile marketing messages.* The items used in the questionnaire were taken from a study by Gao *et al.* (2010:579) who focused on isolating the factors that influence mobile marketing amongst Chinese consumers.

#### **4.4 DATA COLLECTION**

The fieldworkers comprised of BCom Honours students specialising in Marketing Management and who have completed a Marketing Research module. Fieldworkers were trained and supervised by the researcher. It was expected of fieldworkers to approach respondents, based upon convenience, with the aim of filling race and age quotas in order to represent all races and generational groupings. Fieldworkers had to approach prospective respondents who seem to comply with the race and age requirements and had to obtain their agreement to take part in the study. Respondents were given time to complete the questionnaire before it was collected again by fieldworkers.

#### **4.5 DATA ANALYSIS**

Predictive Analytics Software (PASW) Statistics, Version 18 was used for data capturing and analysis. Once the data had been captured, it was cleaned and all data capturing errors were rectified. It was decided to remove all respondents older than 66 years of age from the data set, since only four respondents ended up participating in the study. This resulted in this age cohort representing less than 1.5 per cent of the sample. Including such a small group of respondents would have skewed results when multi-group comparisons were undertaken.

Subsequently, descriptive statistics for demographic, patronage habit variables (frequencies) and individual items contained in the multi-item scale (means and standard deviations) were calculated. Independent samples t-tests were used to determine whether significant differences exist between the means of two groups of respondents based upon their level of education (those with a high school qualification completed or less, and those with a post-school qualification), gender, home language (English, and those speaking all other languages), type of customer (contract and prepaid), and length of relationship (for less than 5 years, and those who have been with the mobile phone network service provider for more than five years), respectively.

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One-way ANOVAs were furthermore used to determine whether significant differences exist between the means scores of more than two groups. Scheffe's post hoc test was used to determine the groups between which significant differences exist when equal variances can be assumed (Eiselen, Uys & Potgieter 2007:124). The tests were subsequently used for comparing different age groups and mobile phone network service providers used. A Pearson product moment correlation was furthermore conducted to test hypothesis 3. With regard to hypotheses testing, a 95 per cent confidence level was used, and subsequently a p-value of 0.05 or less is significant. A correlation coefficient of 0.1 to 0.3 indicates a weak correlation, 0.3 to 0.5 a moderate correlation, and a correlation coefficient of greater than 0.5 a strong correlation (Eiselen *et al.* 2007:87; Pallant 2007:132).

## **5. FINDINGS OF THE RESEARCH**

This section reports on the distribution of results, the reliability and construct validity of the measurement sets measuring the main constructs of the study. The respondent profile and mobile phone patronage habits are also presented. This section also deals with the empirical findings in terms of the constructs measured. The results of hypotheses formulated for the study are finally presented.

### **5.1 DISTRIBUTION OF RESULTS**

All items included in the measurement sets measuring the constructs of interest in the study were found to fall within in the limits of normality as professed by West, Finch and Curran (1995:79). The authors state that the distribution of an item can be considered normal if the kurtosis of the distribution is less than an absolute 7.00 and the skewness of the distribution is less than an absolute value of 2.00.

### **5.2 RELIABILITY**

Although the measurement sets measuring the different constructs were found reliable by Gao *et al.* (2010:578) in their study, it is important to report on the reliability of the measures within the South African context. A Cronbach's alpha value of 1.00 indicates perfect reliability and a cut-off point of 0.7 is generally accepted (Hair, Anderson, Tatham & Black 1998:118). Table 1 contains the results of the reliability testing.

**Table 1: Cronbach's alpha values for the measurement sets**

Measurement set	Cronbach's alpha value
Extent of marketing-related mobile activities (8 items)	0.906
Willingness to accept mobile marketing messages (3 items)	0.808

It is evident from Table 1 that both measurement sets measuring the two constructs may be considered reliable since both Cronbach's alpha values are above 0.7.

### 5.3 CONSTRUCT VALIDITY

Gao *et al.* (2010:579) illustrates both discriminant and convergent validity for the measurement sets measuring the constructs as used in their work.

### 5.4 RESPONDENT PROFILE

The respondent profile is presented in Table 2 below.

**Table 2: Respondent profile**

Age	Percentage
25 years and younger	41.9
26 to 34 years	25.7
35 to 46 years	14.3
47 to 65 years	18.1
Highest level of education	Percentage
Primary school completed	0.8
Some high school	6.4
Completed high school	36.2
Tech diploma/degree	21.9
University degree or postgraduate degree	34.7

Gender	Percentage
Male	41.1
Female	58.9
Home language	Percentage
Afrikaans	17.7
English	58.8
Nguni (Zulu, Xhosa, Swati, Ndebele)	8.6
Sotho (Sepedi, SeSotho, Tswana)	6.0
Venda/Tsonga	6.0
Other languages	2.3

It is evident from Table 2 that the majority of respondents are 25 years and younger (41.9 per cent) followed by those who are between the ages of 26 and 34 (25.7 per cent). The majority of respondents taking part in this study are fairly well-educated with most having completed high school (36.2 per cent) or a technical qualification (21.9 per cent) or university degree (34.7 per cent). Most respondents are female (58.9 per cent) and the majority indicated their home language as English (58.8 per cent).

### 5.5 PATRONAGE HABITS OF RESPONDENTS

Table 3 provides an overview of the mobile phone and network patronage habits of respondents

**Table 3: Mobile phone and network patronage habits of respondents**

Mobile phone network service provider	Percentage
Vodacom	62.6
MTN	29.1
Mobile C	7.5
8Ta	0.8

Type of customer	Percentage
Contract customer	67.0
Prepaid customer	33.0
Time with current mobile phone network service provider	Percentage
Less than 6 months	3.8
6 months or longer but less than 1 year	2.6
1 year or longer but less than 3 years	10.6
3 years or longer but less than 5 years	15.8
5 years or longer but less than 10 years	37.0
Longer than 10 years	30.2

Table 3 indicates that the majority of respondents have Vodacom as current mobile phone service provider (62.6 per cent) and can be classified as contract customer (67 per cent). Two thirds of the respondents have been with their current mobile phone network service provider for more than five years (67.2%).

## 5.6 FINDINGS IN TERMS OF THE TWO CONSTRUCTS MEASURED

Tables 4 and 5 provide an exposition of the mean scores and standard deviations realised for each item contained in the measurement sets measuring 'the extent of marketing-related mobile activities' and 'the willingness to accept mobile marketing messages' on a five-point scale.

**Table 4: The extent of marketing-related mobile activities that respondents engage in**

Items measuring marketing-related mobile activities	Standard deviation	Mean
Provide your e-mail address to a website using your mobile phone.	1.350	2.80
Register with a website using your mobile phone.	1.402	2.93
Register for a contest or promotion using your mobile phone.	1.335	2.78

Items measuring marketing-related mobile activities	Standard deviation	Mean
Download content (wallpapers, ringtones, others) using your mobile phone.	1.523	3.03
Access fun and entertaining content such as ringtones or games using your mobile phone.	1.503	2.96
Pay for content such as games or ringtones for your mobile phone.	1.388	2.24
Friends often send me cool downloads such as ringtones or screen graphics on my mobile phone.	1.467	2.84
I often send my friends new screen graphics or ringtones on their mobile phones.	1.504	2.57
<b>Overall mean score</b>		<b>2.77</b>

It is evident from Table 4 that respondents do not strongly agree with statements regarding the extent to which they are active in marketing-related mobile activities. Respondents agree the least with the item ‘*Pay for content such as games or ringtones for your mobile phone*’ (mean = 2.24) and ‘*I often send my friends new screen graphics or ringtones on their mobile phones*’ (mean = 2.57). Respondents agree the most with ‘*Download content (wallpapers, ringtones, others) using your mobile phone*’ (mean = 3.03) and ‘*Access fun and entertaining content such as ringtones or games using your mobile phone*’ (mean =2.96).

**Table 5: The willingness of respondents to accept mobile marketing-related messages**

Items measuring the willingness to accept mobile marketing messages	Standard deviation	Mean
I would be willing to receive information on where to buy certain products or services on my mobile phone.	1.317	2.92
I would be willing to receive offers on my mobile phone from companies selling products related to an event I am attending (for instance, a sporting event).	1.326	3.02
Overall, I would be willing to receive solicitations from companies to whom I gave my permission.	1.358	3.06
<b>Overall mean score</b>		<b>3.00</b>

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It is evident from Table 5 that respondents do not strongly agree with statements regarding their willingness to accept mobile marketing-related messages. The items '*Overall, I would be willing to receive solicitations from companies to whom I gave my permission*' and '*I would be willing to receive offers on my mobile phone from companies selling products related to an event I am attending (for instance, a sporting event)*' obtained the highest mean scores of 3.06 and 3.02 respectively. Respondents therefore agreed the most with these two statements.

## 5.7 HYPOTHESIS TESTING

Based on the three main hypotheses formulated for this study, the following findings are reported:

### 5.7.1 Hypothesis 1

With regard to hypothesis 1 that there is a linear correlation between the extent to which consumers engage in marketing-related mobile activities and their willingness to accept mobile marketing information, the following finding was made:

- There is a strong positive linear correlation (p-value = 0.000; correlation coefficient = 0.577) between the two variables.

Hypothesis 1 can therefore be supported, as respondents' extent to which they engage in marketing-related mobile activities increase, so does their willingness to accept mobile marketing information.

### 5.7.2 Hypothesis 2

With regard to hypothesis 2 that urban South Africans differ in terms of the extent to which they engage in marketing-related mobile activities, the following findings were made:

- There are significant differences between respondents in terms of their age regarding the extent to which they engage in marketing-related mobile activities. A p-value of 0.000 is evident of a significant difference between at least two means since the p-value is below the cut-off point of 0.05. According to Scheffe's post hoc test, respondents indicated on a scale of 1 to 5, where 1 is 'strongly disagree' and 5 is 'strongly disagree' that those who are 25 and

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younger (mean = 3.17) engage significantly more in marketing-related mobile activities than those who are between the ages of 35 to 46 (mean = 2.42) and 47 to 65 (mean = 2.01). This post hoc test indicates furthermore that those who are 26 to 34 years of age (mean = 2.88) also engage significantly more in marketing-related mobile activities than those who are between the ages of 47 to 65 (mean = 2.01). H<sub>2a</sub> can therefore be supported.

- There is a significant difference between respondents in terms of their level of education regarding the extent to which they engage in marketing-related mobile activities. A p-value of 0.005 is evident of the significant difference between the two means since the p-value is below the cut-off point of 0.05. Respondents indicated on a scale of 1 to 5, where 1 is 'strongly disagree' and 5 is 'strongly disagree' that those with a high school education completed or less (mean = 3.00), engage significantly more in marketing-related mobile activities than those with a post-school qualification (mean = 2.61). H<sub>2b</sub> can therefore be supported.
- Respondents do not differ significantly in terms of their gender (p-value = 0.81), home language (p-value = 0.165), and their current mobile phone network service provider (p-value = 0.370) regarding the extent to which they engage in marketing-related mobile activities. H<sub>2c</sub>, H<sub>2d</sub> and H<sub>2e</sub> can therefore not be supported.
- There is a significant difference between respondents in terms of the type of customer they are regarding the extent to which they engage in marketing-related mobile activities. A p-value of 0.011 is evident of the significant difference between the two means since the p-value is below the cut-off point of 0.05. Respondents indicated on a scale of 1 to 5, where 1 is 'strongly disagree' and 5 is 'strongly disagree' that those respondents who are prepaid customers engage significantly more in marketing-related mobile activities than those who are contract customers. Respondents who are prepaid customers indicated on a scale of 1 to 5, where 1 is 'strongly disagree' and 5 is 'strongly disagree', a mean of 3.02 compared to contract customers who indicated a mean of 2.66. H<sub>2f</sub> can therefore be supported.

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- There is a significant difference between respondents in terms of the length of the relationship they have had with a mobile phone network service provider regarding the extent to which they engage in marketing-related mobile activities. A p-value of 0.020 is evident of the significant difference between the two means since the p-value is below the cut-off point of 0.05. Respondents indicated on a scale of 1 to 5, where 1 is 'strongly disagree' and 5 is 'strongly disagree' that those who have had a relationship with a mobile phone network service provider for five years and longer (mean = 3.01) engage significantly more in marketing-related mobile activities than those who have had a relationship with a mobile phone network service provider for less than five years (mean = 2.67).  $H_{2g}$  can therefore be supported.

Hypothesis 2 can therefore only be supported in terms customer type and length of relationship with mobile phone network service provider. Young respondents, those who have contracts with service network providers and those who have had a relationship of five years and longer with the network service provider, are significantly more likely to engage in marketing-related mobile activities than other groups of respondents.

### 5.7.3 Hypothesis 3

With regards to hypothesis 3 that urban South Africans differ in terms of their willingness to accept mobile marketing messages, the following findings were made:

- There are significant differences between respondents in terms of their age regarding their willingness to accept mobile marketing messages. A p-value of 0.001 is evident of a significant difference between at least two means since the p-value is below the cut-off point of 0.05. According to Scheffe's post hoc test, respondents indicated on a scale of 1 to 5, where 1 is 'strongly disagree' and 5 is 'strongly disagree' that those who are 25 and younger (mean = 3.13) are significantly more willing to accept mobile marketing messages than those who are between the ages of 47 to 65 (mean = 2.41). This post hoc test indicates furthermore that those who are 26 to 34 years of age (mean = 3.17) also engage significantly more in marketing-related mobile activities than those who are between the ages of 47 to 65 (mean = 2.41).  $H_{3a}$  can therefore be supported.

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- Respondents do not differ significantly in terms of their level of education (p-value = 0.362), gender (p-value = 0.98), home language ((p-value = 0.883), and their current mobile phone network service provider (p-value = 0.608) regarding their willingness to accept mobile marketing messages. H<sub>3b</sub>, H<sub>3c</sub>, H<sub>3d</sub> and H<sub>3e</sub> can therefore not be supported.
  - There is a significant difference between respondents in terms of the type of customer they are regarding their willingness to accept mobile marketing messages. A p-value of 0.001 is evident of the significant difference between the two means since the p-value is below the cut-off point of 0.05. Respondents indicated on a scale of 1 to 5, where 1 is 'strongly disagree' and 5 is 'strongly disagree' that those who are prepaid customers (mean = 3.33) are significantly more willing to accept marketing-related mobile activities than those who are contract customers (mean = 2.84). H<sub>3f</sub> can therefore be supported.
  - There is a significant difference between respondents in terms of the length of relationship they have had with a mobile phone network service provider regarding their willingness to accept mobile marketing messages. A p-value of 0.045 is evident of the significant difference between the two means since the p-value is below the cut-off point of 0.05. Respondents indicated on a scale of 1 to 5, where 1 is 'strongly disagree' and 5 is 'strongly disagree' that those who have had a relationship with a mobile phone network service provider for five years and longer (mean = 3.20), are significantly more willing to accept mobile marketing messages than those who have had a relationship with a mobile phone network service provider for less than five years (mean = 2.90). H<sub>3g</sub> can therefore be supported.

Hypothesis 3 can therefore only be partially supported in terms of age, customer type and length of relationship with a mobile phone network service provider. Young respondents, those who have contracts with service network providers and those who have had a relationship of five years and longer with the mobile phone network service provider, are significantly more willing to accept mobile marketing messages than other groups of respondents.

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## 6 DISCUSSION

The study uncovered that the more respondents engage in mobile-related marketing activities; the more willing they are to accept mobile marketing messages. This is supported by similar findings made by Gao *et al.* (2010) in their study on Chinese consumers. It is therefore important for marketers to target those consumers who are engaging in mobile-related marketing activities, since they tend to be more willing to accept mobile marketing messages.

The study indicates that those respondents who are younger; who are contract customers of mobile phone network service providers and those who have had a relationship of five years and longer with the mobile network service provider are significantly more likely to engage in *marketing-related mobile activities* than the other groups of respondents. Young respondents, those who are contract customers of mobile service network providers and those who have had a relationship of five years and longer with the mobile network service provider are also significantly more willing to *accept mobile marketing messages* than other groups of respondents.

It must, however, be noted that although these groups of respondents are significantly more prone to engage in marketing-related mobile activities, and are more willing to accept mobile marketing messages than other groups of respondents, the mean scores realised do not reflect a particularly strong tendency to either engage in marketing-related mobile activities or a willingness to accept mobile marketing messages. Although this is the case, marketers should focus in particular on young consumers and those who have been with a mobile service network service provider for more than five years, since there seems to be a tendency that they are most willing to accept mobile marketing messages.

There is furthermore a tendency amongst older respondents and those who have not been with a mobile phone network service provider for more than five years to be less willing to accept mobile marketing messages. There is also a tendency that this group of respondents are most prone to opt out from receiving mobile marketing messages. The tendency that not all groups of respondents engage in mobile-related marketing activities and are not equally willing to accept mobile marketing messages is indicative

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that a marketer cannot rely on mobile marketing alone. Mobile marketing should perhaps be used to complement other promotional tools to reach consumers.

## **7 LIMITATIONS AND FUTURE RESEARCH**

The study was limited to mobile phone owners in only one urban setting. The sample is also fairly small and selection was based upon convenience. In terms of the descriptive results there is an absence of very strong levels of agreement being expressed by respondents when it comes to statements measuring the extent to which they engage in marketing-related mobile activities and their willingness to accept marketing mobile marketing messages. A large enough group of respondents who were 66 years and older at the time of the study could not be realised.

Future research should be conducted on other urban areas of South Africa and should also include consumers in rural areas. A future study should aim at realising a larger sample size and to include a workable group of respondents who are 66 years and older.

## **8 CONCLUSION**

The high level of ownership of mobile phones, especially in urban areas of South Africa, affords marketers the opportunity to communicate with these consumers. All consumers are, however, not equally willing to accept marketing messages. Industry self-regulation and government legislation furthermore requires that marketers allow consumers to quickly and conveniently opt out from receiving such messages. This study uncovers a number of tendencies related to the extent to which urban consumers in South Africa engage in marketing-related mobile activities and their willingness to receive mobile marketing messages. It establishes the link between the two constructs studied, and identifies those groups of urban South Africans most susceptible to mobile marketing messages. The study also identifies those groups of consumers most receptive to mobile marketing messages.

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