

The Influence Of Market Related Mobile Activities On The Acceptance Of Mobile Marketing And Consumer Intention To Purchase Products Promoted By SMS In South Africa

Richard Chinomona, Vaal University of Technology, South Africa
Maxwell Sandada, Vaal University of Technology, South Africa

ABSTRACT

There is an increasing attention being accorded to mobile marketing activities in recent business management literature in the past decade as both academicians and practitioners recognize that mobile activities have potential influence on mobile marketing acceptance and customer purchase intention. Notwithstanding this, there is dearth of research on the same in the African context. In view of this development, the purpose of this research paper is to investigate the extent to which mobile marketing activities influence customers' mobile marketing acceptance and their purchase intention in South Africa. Five research hypotheses are postulated and using data collected from mobile marketing activities partakers, the hypotheses are tested using Structural Equation Modelling (SEM) approach (Smart PLS). Managerial implications of the findings are discussed and limitations and future research directions are indicated.

Keywords: Information Provision; Content Sharing; Content Access; Mobile Marketing Acceptance; Purchase Intention

1. INTRODUCTION

Driven by the fast changing technological developments, today's business environment has witnessed increased mobility and a sharp increase in the use of mobile devices by consumers. In line with these developments, mobile marketing industry has grown significantly and is set to continue growing (Persaud & Azhar, 2012). The growth of mobile marketing benefits both the marketers and consumers because marketers are able to increase their client base as they can access several consumers of different identities and of various geographical locations, while consumers will also have a wide range of product and services choices (Scharl, Dickinger, & Murphy, 2009; Yousif, 2012). According to Persaud and Azhar (2012), mobile marketing is still at its infancy but has a tremendous potential to grow as the environment experiences further technological revolution. Despite these encouraging benefits and growth forecasts, mobile marketing has been received with mixed feelings. Some consumers have slowly adopted mobile marketing due to complexity of transactions, lack of user-friendly mobile devices and consumer privacy concerns (Mallat, Rossi, Tuunainen & Oorni, 2009; Wei, Xiaoming & Pan, 2010). However, other scholars such as Shankar, Venkatesh, Hofacker and Naik (2010) and Leppaniemi and Karjaluoto (2005) argue that there has been a favourable reception to mobile marketing. This shows that there is still no consensus among scholars about the general acceptance of mobile marketing.

In South Africa, little is known about the market related mobile activities and the acceptance of mobile marketing by consumers. Little is also known about the influence of the market related mobile activities on the consumer intention to purchase products being promoted by mobile marketing. A comprehensive study about the

influence of market related mobile activities on mobile acceptance and consumer intention to purchase products promoted by mobile marketing is necessary. Such a study provides insights to marketing managers who are implementing and those who intend to implement mobile marketing about how mobile marketing activities can be marketed more effectively, and hence lead to consumer acceptance and intention to purchase the products which they market using mobile marketing. This is necessary because the number of organisations planning to adopt mobile marketing of those who have already adopted it has increased over the years, therefore guidance is needed on how best may marketers effectively appeal and attract consumers to make use of mobile marketing as an effective alternative to the traditional marketing activities. Given the dearth of previous empirical work on this subject, this study seeks to develop and test a comprehensive model of the influence of market related mobile activities on the acceptance of mobile marketing and consumer intention to purchase products promoted by SMS in South Africa.

The rest of the paper is presented as follows: The next section presents a literature review section. This will be followed by a section presenting research methodology which consists of data collection procedure, construct operationalization and measurement. The subsequent section provides data analysis and results, and discussion and implications of the study findings. The final section concludes the study, provides the limitations of the study along with suggestions for future research are highlighted.

2. LITERATURE REVIEW

2.1 Mobile Marketing Activities

Mobile marketing is an innovation that creates marketing opportunities because of its ability to create frequent, fast and direct communication with millions of consumers at any time (Scharl *et al.*, 2005). Although it is still in its infancy, Persaud and Azhar (2012) predict that mobile marketing will grow as technology continues to evolve. This has led other scholars such as Yang (2005) and Shankar *et al.* (2010) to assert that over the years, there has been a global explosion of the use of mobile devices such as mobile phones for short message systems (SMS), personal digital assistants (PDAs), internet-enabled laptop computers with wireless access capacity, digital music players, hand-held internet access devices and other mobile devices in order to market products and services (Yang 2005; Shankar *et al.*, 2010).

Even though mobile marketing is growing rapidly in popularity, no universal accepted definition so far exists. Scharl *et al.* (2005) define mobile marketing as the use of wireless media to provide potential consumers with information that is personalised, time and location sensitive. Tsang, Ho and Liang (2004) view mobile marketing as wireless marketing and it can either be permission, incentive or location-based. Mobile marketing is permission-based as messages about products are sent to those consumers who are willing to receive them. It is incentive-based because the consumers who are willing to receive messages are rewarded. In addition to this, it is location based because marketers target consumers in specific locations (Tsang *et al.*, 2004). While on the one hand mobile marketing activities include mobile website creation and maintenance, mobile emailing and messaging, mobile advertising, mobile couponing, mobile customer services and mobile social network management, on the other hand consumer mobile activities are creating a shopping list, searching for right products and prices, comparing and purchasing different products (Shankar *et al.* 2010). According to Leppaniemi and Karjaluoto (2005), if mobile media is integrated into the marketing mix of organisations, it becomes more attractive to consumers as personalised messages are provided. The benefits of mobile marketing are that marketers are able to directly send pictures or videos of products and to answer customer questions and queries, marketers are able to access several consumers at anytime, marketers are able to establish close relations with consumers and this helps to influence purchase (Shankar *et al.*, 2010). Similarly, Yousif (2012) assert that while on the one hand mobile marketing assists marketers to access consumers of various identities, locations, behavioural and social patterns, it also helps consumers to access a wide range of diverse information about varied products and services.

2.2 Acceptance of Mobile Marketing Activities

Sultan, Rohm and Gao (2009) conceptualised consumer acceptance of mobile marketing as the degree to which consumers engage in mobile marketing activities. No concrete data exists as to what extend has mobile marketing has been adopted. While Yang (2005) and Shankar *et al.* (2010) have expressed confidence about the

widespread of mobile marketing, Mallat, Rossi, Tuunainen and Oorni (2009) as well as Wei, Xiaoming and Pan (2010) stated that the acceptance of mobile marketing has been slower than expected due to lack of user-friendly mobile devices, slow connectivity, complexity of transactions and privacy concerns. However Leppaniemi and Karjaluoto (2005) argue that even though there is still a debate on whether or not there is a general acceptance of mobile marketing, by consumers, studies generally demonstrate positive attitude. The authors continue to state that mobile marketing has been successfully accepted because of short down load time, accuracy in locating consumers, connection speed, ease and privacy guarantee and the ability to provide relevant information.

A number of factors explain the acceptance of mobile marketing by consumers. According to Schierz, Schilke and Wirtz's (2010) study of consumer acceptance of mobile payment services, factors such as perceived compatibility with consumer values, behavioural patterns and experiences, consumers' mobile lifestyle and the social environment desirability of mobile payments, were found to be key drivers of mobile payment acceptance. Focusing on United States of America (USA) and Pakistan youth consumers, Sultan *et al* (2009) found that the level of consumers' risk and their level of personal attachment to mobile phones were the main antecedents while the likelihood of providing information and the chances of accessing content were mediating factors. In the context of mobile banking, Laforet and Li's (2005) study of Chinese market revealed that security was the most important factor motivating consumer acceptance of mobile banking while the main barriers were risks perception, poor computer and technological skills and the Chinese tradition of cash and carry banking. Yang (2005) found that perceived usefulness, perceived ease of use and consumers' characteristics e.g innovativeness, past adoption behaviour, knowledge, age and gender, affect consumer acceptance of mobile marketing.

2.3 Consumer Intention to Purchase

The consumer intention to purchase shows the consumer's plan to buy the product or service (Weisberg, Te'eni & Arman, 2011). According to Gao *et al.* (2010), the intention by consumers to purchase reflects their interest in the product and hence is willing to buy the product or service. For Noor, Screenivasan and Ismail (2013), the purchase intention of consumers indicates what consumers think they would buy in future in order to satisfy their needs. The authors suggest that marketers need to find effective ways to appeal to potential consumers in order to develop positive perception about the products or services. This study adopts Gao *et al.* (2010) definition stipulating that the consumer intention to purchase shows how consumers are receptive and want to buy, use and repurchase products promoted by mobile marketing. To measure the consumer intention to purchase construct, Kim, Gupta and Koh (2011) used the items such as the probability of a consumer considering buying the product, the consumer's willingness to and the likelihood of consumer's purchase behaviour. Similarly, Kin and Kang (2011) measured the consumer intention to purchase by using the following items: the chances that consumers would definitely purchase, the likelihood that consumers would definitely consider to buy, the probability that consumers would definitely accept to buy and the possibility that consumers would definitely plan to buy. This shows that the consumers' purchase intention reflects their interest and hence they plan to buy or are willing to accept to buy the products or services.

3. CONCEPTUAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT

Drawing from the extant literature from mobile marketing and customer intention to purchase aforementioned, a conceptual model is developed in Figure 1. The model consists of three constructs, that is, market related mobile activities, acceptance of mobile marketing and customer intention to purchase. The market related mobile activities influence consumers' acceptance of mobile marketing and their intention to purchase products promoted by mobile marketing. Detailed explanations of the associations between these constructs are provided in the hypotheses developed hereafter.

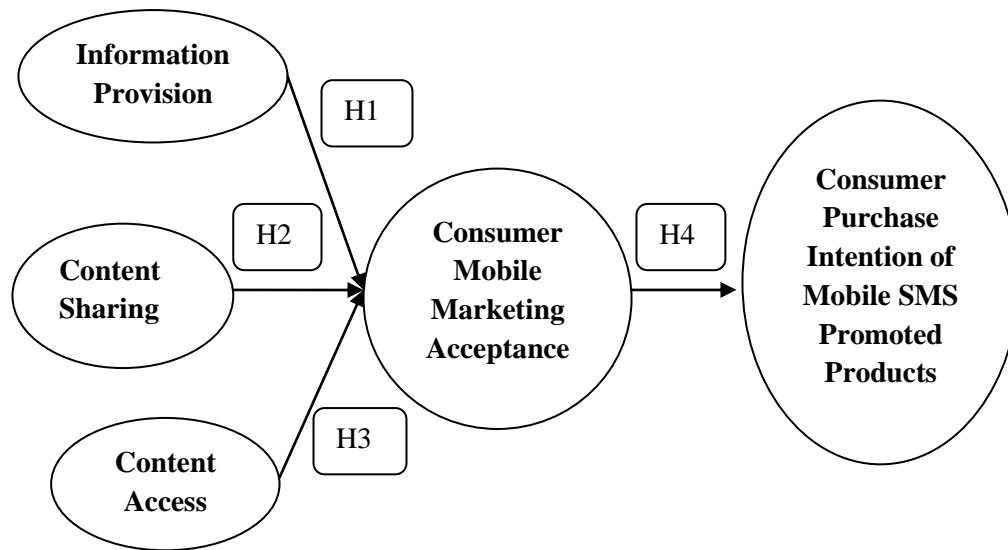


Figure 1: The Conceptual Model

3.1 Mobile Marketing Activities and Consumer Acceptance of Mobile Marketing

Mobile marketing influences consumer acceptance because of its unique features of being permission, incentives and location-based which makes it possible to reduce consumer irritation, to create consumer interest, to identify and satisfy individual consumer needs, and to send messages to specific locations, and this increases the chances of consumer acceptance (Tsang *et al.*, 2004). Wei *et al.*'s (2010) study of SMS advertisements reported that product advertisements by SMS are very effective in satisfying the social and instrumental needs of consumers and because of that, the advertisements do trigger consumer acceptance of mobile marketing messages. Consumers are likely to accept mobile marketing because it is cost effective, is fast, it helps consumers to receive immediate and personalised information from anywhere and at any time (Smutkupt, Krairit & Esichaikul, 2010). Yousi (2012) indicates that consumer are likely to accept mobile marketing activities because it provide information to consumers on a regular basis and help marketers to showcase their products to consumers and this ultimately induces consumer interest. This study incorporates three mobile marketing activities namely, information provision, access to content, and content sharing, as predictors of mobile marketing acceptance. Using the three predictors, the following three hypotheses are proposed:

- H1:** The customers' willingness to provide their mobile information to service providers for marketing-related purposes leads to mobile marketing acceptance.
- H2:** The degree to which customers access content using mobile devices positively influences mobile marketing acceptance.
- H3:** The extent to which customers share content with their mobile devices positively influences mobile marketing acceptance.

3.2 Consumer Acceptance of Mobile Marketing and Consumer Intention to Purchase

If consumers accept mobile marketing, their intention to purchase is likely to be high because mobile marketing has connection speed, is easy to use, and provides personalised information to specific consumers and the receiver has control over the messages (Leppaniemi & Karjaluoto, 2005). Consumers acceptance of mobile marketing leads to their intention to purchase due to the perceived benefits of mobile marketing which include, consumers' ability to search and compare different products, consumers being able to place orders through mobile devices and consumers being able to ask questions and receiving immediate feedback (Shankar *et al.*, 2010). Kleijnen, Lievens, de Ruyter and Wetzels (2009) state that mobile marketing stimulates interest in consumers especially the young consumers because they are able to share information, they can easily download the content/messages and share the content with other customers. The study of intention to purchase by tourists by

Wang, Park and Fesenmaiers (2012) revealed that the acceptance of the smart phones influenced tourists' to purchase because it provided a variety of information that helped tourists to plan and share experiences. The study therefore expects that if consumers accept mobile marketing, they will have an intention to buy products or services promoted by mobile marketing. Therefore the following hypothesis has been formulated.

Therefore the following hypothesis has been proposed:

H4: Higher levels of mobile marketing acceptance will lead to higher chances of consumer intention to purchase.

4. RESEARCH METHODOLOGY

4.1 Sample and Data Collection

The target population for the study was South African mobile service customers or clients in Gauteng who partake in marketing activities using the MTN, Vodacom, Cell C, and Telkom mobile service providers. Students from the Vaal University of Technology were recruited as research assistants to distribute and collect the questionnaires. Of the total of 150 questionnaires distributed, 151 usable questionnaires were retrieved for the final data analysis, representing a response rate of 89 per cent. Respondents were then asked to indicate if they have participated in mobile marketing activities and then complete the entire questionnaire, guided by the research assistants.

4.2 Measurement Instrument and Questionnaire Design

Research scales were operationalised on the basis of previous work. Proper modifications were made in order to fit the current research context and purpose. "Mobile marketing activities" and "Customer acceptance of mobile marketing" scales were all adapted from Sultan, Rohm, and Gao (2009). Finally, "Customer intention to purchase" was measured using a scale adapted from Wu, Yeh & Hsiao (2011). All the measurement items were measured on a five-point Likert-type scales that was anchored by 1 = strongly disagree to 5 = strongly agree to express the degree of agreement. Individual scale items are listed in Appendix 1.

4.3 Respondent Profile

Table 1 presents the description of the participants. The respondents were asked to report their demographic information, including gender, age, marital status and education. The respondents were predominantly females (57.6%). The median age group of the respondent was that of less than 30 years (54.3%). MTN and Vodacom mobile service occupy more than half of the respondents (62.3%). 57% of the respondents were single. About 71% of the respondents had either high school (43.7%) or university level of education (27.2%) and the remainder had primary school (19.9) or postgraduate level of education (0.09%).

Table 1: Sample Demographic Characteristics

Gender	Frequency	Percentage
Male	64	42.4%
Female	87	57.6%
Total	151	100%
Age	Frequency	Percentage
≤30	82	54.3%
31-60	51	33.8%
≥ 60	18	11.9%
Total	151	100%
Mobile Service Provider	Frequency	Percentage
MTN	53	35.1%
Vodacom	41	27.2%
Cell C	31	20.5%
8ta	26	17.2%
Total	151	100%
Marital status	Frequency	Percentage
Married	65	43.0%
Single	86	57.0%
Total	151	100%
Level of Education	Frequency	Percentage
Primary School	30	19.9%
High School	66	43.7%
University	41	27.2%
Postgraduate	14	0.09%
Total	151	100%

5. DATA ANALYSIS

5.1 Structural Equation Modelling Approach

In order to statistically analyse the measurement and structural models, this study used Smart PLS software for Structural Equation Modeling (SEM) technique (Ringle, Wende & Will 2005). In SEM, the measurement model refers to the linkages between the latent variables and their manifest variables and the structural model captures the hypothesized causal relationships among the research constructs (Chin & Newsted, 1999). Unlike AMOS and LISREL which are covariance-based approaches, Smart PLS is a regression based technique that originates from path analysis. Smart PLS has emerged as a powerful approach to study causal models involving multiple constructs with multiple indicators (Chinomona & Surujal, 2012). Smart PLS - a component-based method, has an ability to model latent constructs that are uncontaminated by measurement error under conditions of non-normality. It has the ability to handle complex predictive models in small-to-medium sample sizes. Since the current study sample size is relatively small (150) Smart PLS was found more appropriate and befitting the purpose of the current study. In this respect, Bootstrapping resampling method was used to test the statistical significance of the relationships. This procedure entailed generating 200 sub-samples of cases randomly selected, with replacement, from the original data. Below is Table 2, presenting evidence on the reliability and validity of the measurement model.

5.2 Measurement Model

To ensure convergent validity, the researcher checked if items loaded on their respective (a priori) constructs with loadings greater than 0.6, while discriminant validity was checked by ensuring that there was no significant inter-research variables cross-loadings (Chin, 1998). As can be seen (Table 2), all items have loadings greater than 0.6 (i.e. ranging from 0.602 to 0.851), with no cross-loadings greater than 0.898, while t-statistics derived from bootstrapping (200 resamples) suggest all loadings are significant at pb0.001. As such, this confirms that all the measurement items converged well on their respective constructs and therefore are acceptable measures.

Table 2: Accuracy Analysis Statistics

Research Construct	LV Index Value	R-Squared Value	Cronbach's α value	C.R. Value	AVE Value	Communality	Factor Loading
IP	IP1	3.811	0.000	0.760	0.789	0.555	0.789
	IP2						0.739
	IP3						0.705
CA	CA1	4.075	0.000	0.570	0.704	0.446	0.602
	CA2						0.783
	CA3						0.603
CS	CS1	3.900	0.000	0.596	0.768	0.623	0.763
	CS2						0.815
MMA	MMC1	4.018	0.385	0.663	0.731	0.476	0.706
	MMC2						0.619
	MMC3						0.739
PI	PI1	4.059	0.297	0.619	0.772	0.630	0.731
	PI2						0.851

Note: IP = Information Provision; CA = Content Access; CS = Content Sharing; MMC = Mobile Marketing Acceptance; PI = Purchase Intention

According to Chin (1998), research variables should have an average variance extracted (AVE) of more than 0.5 and a composite reliability of more than 0.7 (convergent validity), and inter-construct correlations should be less than the square-root of the AVE (discriminant validity). As can be seen (Table 2), all constructs exceed these criteria, with AVE and CR generally equal or greater than 0.5 and 0.8, respectively. Furthermore, as indicated in Table 3, the square-root of the lowest AVE is 0.82 and is greater than the highest inter-construct correlation value (0.0.808). All in all, these results confirm the existence of discriminant validity of the measurement used in this study.

Table 3: Correlations between Constructs

Research Constructs	IP	CA	CS	MMA	PI
Information Provision (IP)	1.000				
Content Access (CA)	0.494	1.000			
Content Sharing (CS)	0.373	0.487	1.000		
Mobile Marketing Acceptance (MMA)	0.495	0.544	0.429	1.000	
Purchase Intention (PI)	0.364	0.4543	0.3342	0.545	1.000

Note: IP = Information Provision; CA = Content Access; CS = Content Sharing; MMC = Mobile Marketing Acceptance; PI = Purchase Intention

5.3 Path Model

PLS also generates the path coefficients for the relationships modelled among the constructs. The significance of these coefficients was assessed using the bootstrap procedure (with 200 sub-samples) that provided the t-values for each path estimate. Figure 2 and Table 4 presents the results of the PLS analysis on the structural model along with the path estimates and t-values. Support for the study hypotheses, which are labelled on their corresponding paths in Figure 2, could be ascertained by examining the directionality (positive or negative) of the path coefficients and the significance of the t-values. The standardized path coefficients are expected to be at least 0.2, and preferably greater than 0.3 (Chin 1998).

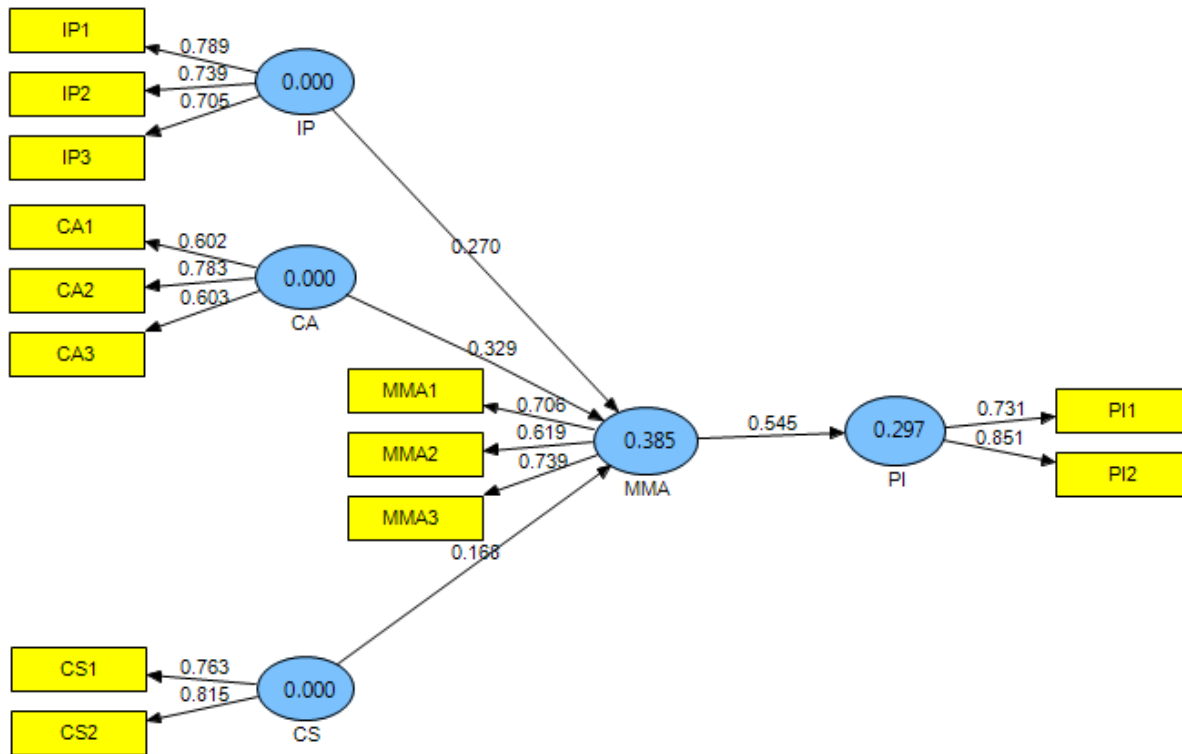


Figure 2: Measurement and Structural Model Results

Note: IP = Information Provision; CA = Content Access; CS = Content Sharing; MMA = Mobile Marketing Acceptance; PI = Purchase Intention

The results provide support for the proposed positive relationships between the four relationships (i.e. H1, H2, H3, and H4). Figure 2 and Table 4 provide the path coefficients for H1, H2, H3, and H4 (i.e. 0.270, 0.329, 0.168, and 0.545 respectively).

Table 4: Results of Structural Equation Model Analysis

Proposed Hypothesis Relationship	Hypothesis	Path Coefficients	T-Statistics	Rejected/Supported
Information Provision (IP) → Mobile Marketing Acceptance (MMA)	H1	0.270	3.165	Supported
Content Access (CA) → Mobile Marketing Acceptance (MMA)	H2	0.329	3.468	Supported
Content Sharing (CS) → Mobile Marketing Acceptance (MMA)	H3	0.168	1.704	Supported
Mobile Marketing Acceptance (MMA) → Customer Purchase Intention (PI)	H5	0.545	7.793	Supported

Note: IP = Information Provision; CA = Content Access; CS = Content Sharing; MMA = Mobile Marketing Acceptance; PI = Purchase Intention

Overall, R² for ERS (0.385 and 0.297) in Figure 2, indicate that the research model explains more than 38.5% and 29.7% respectively of the variance in the endogenous variables. Following formulae provided by Tenenhaus, Vinzi, Chatelin & Lauro, (2005), the global goodness-of-fit (GoF) statistic for the research model was calculated using the equation:

$$GoF = \sqrt{AVE * R^2}$$

The calculated global goodness of fit (GoF) is 0.43, which exceed the threshold of GoF > 0.36 suggested by Wetzels, Odekerken-Schröder & van Oppen (2009). Thus, this study concludes that the research model has a good overall fit.

6. DISCUSSION OF RESULTS

The results in Table 4 and Figure 2 provide support for the four (4) hypotheses (H1, H2, H3, and H4). Hypothesis 1 posited a positive relationship between information provision and mobile marketing provision. Consistent with H1, the result in Table 4 and Figure 2, indicates that there is a significant ($t = 3.165$) positive ($\beta = 0.270$) relationship between information provision and mobile marketing acceptance. Therefore, H1 is supported. Hypothesis 2 posited a positive association between content access and mobile marketing acceptance. Hypothesis 2, results indicated that content access is positively associated with mobile marketing acceptance ($\beta = 0.329$) and the relationship is significant ($t = 3.169$). This is consistent with the prediction of H2 and is therefore supported. The standardized coefficient and significant levels of content sharing and mobile marketing acceptance ($\beta = 0.168$; $t = 1.704$) is positive but insignificant. This is inconsistent with the prediction of H3 and is not supported. Thus, a higher level of content sharing is associated with higher levels of customer acceptance of mobile marketing. Finally, the results in Table 4 and Figure 2, are in line with H4 and support the reasoning that the higher the level of mobile marketing acceptance, the higher the level of customer intention to purchase ($\beta = 0.545$; $t = 7.793$). Therefore, H4 is supported.

7. CONCLUSION

The purpose of this study was to investigate the influence of mobile marketing activities (information provision, content access and content sharing) on customer's acceptance of mobile marketing and on their intention to purchase. In particular, four hypotheses were postulated. To test the proposed hypotheses, data were collected from Gauteng Province in South Africa. The empirical result supported all the five posited research hypotheses in a significant way.

Important to note about the study findings is the fact that mobile marketing activities have influence on customer intention to purchase through customer acceptance of mobile marketing acceptance. This implies that mobile marketing activities have stronger influence on customer purchase intention when they first trigger the customer's acceptance of mobile marketing.

8. IMPLICATIONS OF THE STUDY

While there is an increased recognition of purchase intention of customers as a critical aspect today's competitive business environment, the extant literature is replete with empirical evidence suggesting that mobile marketing activities and customer's acceptance of mobile marketing acceptance are related constructs of customer intention to purchase. However, the current study was set to depart from this long held conventional wisdom and attempts to investigate the causal relationships between these constructs in service provision in the mobile phone industry. In particular, a successful attempt was made in this study to mobile marketing activities, and customer's acceptance of mobile marketing as the predictors of customer intention to purchase. In addition to that, the current study investigate this contentious issues in an often most neglected research context – the African setting. Therefore, the findings of this empirical study are expected to provide fruitful new insights and implications to both academicians and mobile phone practitioners across the globe.

On the academic side, this study makes a significant contribution to the mobile marketing literature by exploring the impact of information provision, content sharing, content access on mobile marketing acceptance and repurchase intention in the context of South African – one of the newly developed countries on the African continent. In particular, the current study findings provide tentative support to the proposition that marketing activities should be recognized as antecedents and tools that precipitate mobile marketing acceptance and customers' repurchase intention.

On the practitioners' side, important influential role of mobile marketing activities, on the customers' acceptance of mobile marketing and their intention to purchase mobile phone brands in an African context are highlighted. Therefore, this study for instance submits that mobile phone operators seeking to find ways to attract customers should begin to consider this behaviour not only as the interplay of mobile marketing activities and consumer intention to purchase but rather a behaviour that is precipitated by the acceptance of mobile marketing by

consumers. The extent to which mobile marketing activities are exposed to mobile customers develops to mobile marketing acceptance before they manifest themselves in the form of intention to purchase.

9. LIMITATIONS AND FUTURE RESEARCH

Although this study makes significant contributions to both academia and practice, it was limited in some ways, and therefore some future research avenues are suggested. First, the data were gathered from Gauteng Province of South Africa and the sample size of 151 is relatively small. Perhaps, the results would be more informative if the sample size is large and data gathered from the other eight provinces of the country are included. Therefore, future studies may be conducted by using data from other provinces in South Africa. Second, perhaps too, future studies should not be limited to South Africa, but rather consider extending this research to other African countries such as Zimbabwe for results comparison. Future studies can also extend the current study by studying the relationships in the current conceptual model in other sectors of the economy. Above and beyond, this will immensely contribute new knowledge to the existing body of mobile marketing in the mobile phone industry literature in the African setting – a research context which happens to be neglected in academics.

AUTHOR INFORMATION

Dr. Richard Chinomona is a Senior Lecturer and Facilitator of Research Methodology at Vaal University of Technology, Faculty of Management Sciences – Department of Logistics. He is a holder of six degrees and has published extensively in various international peer-reviewed journals. E-mail: rchinos@hotmail.com (Corresponding author)

Doctor Maxwell Sandada is a Lecturer in the Faculty of Management at Vaal University of Technology, in South Africa. He has published several accredited articles in referred journals and has presented papers international conferences all over the world He holds a Doctor of Technology Degree in Business from Vaal University of Technology, South Africa. E-mail: maxwells@vut.ac.za

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