

# Mobile Phone and Its Use as Online Shopping Mall Advertisement in Nigeria

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## Abstract

This study was about online shopping mall advertisement through the use of mobile phone. The study analysed mobile phone penetration rate among respondents as well as the use of mobile phone in online shopping mall. The result revealed that mobile phone penetration rate in the Nigeria was more than 95% and that age remains the primary constraint to absolute use of mobile phone. The study also found out that a great improvement has been achieved in the use of mobile for advertisement. This is because mobile phone is currently being used to advertise complex and expensive products. Inclusive in this category of complex and expensive products are automobiles, houses, and land and estate properties. Likewise, the problem of visual disconnects between prospective customers and products has been eradicated. The study concluded that marketers should intensify efforts in reaching audience about products offering through online shopping mall in order to have the greatest coverage.

**Keywords:** SMS, Online Shopping Mall, Penetration, Inexpensive, Household head

## 1: Introduction

Enhanced technological development has led to the digitalization of media of advertising. This digitalization has resulted in new types of media such as the mobile phone, which offers better interactivity with customers. However, in order to fully exploit the potential of mobile phone as an advertising channel, marketers must understand the unique characteristics related to it and the ways that customers interact with it. This is by way of evaluation of a variety of information through the mobile phone for the customer from which his purchase decision is the final. This is based on clear edge in series of pre-purchase actions taken by customers such as; identify products, comparison of products offerings, establishment of products locations, and products prices before taking the purchase decisions. In addition, the rapid proliferation of social media and brand competitions in shelf space means that customers can share efficiently their experiences between and within each other. Lawer and Knox (2006) described the contemporary customers as being learned, exposed, connected, and active. These attributes mean that customers' behaviour is increasingly becoming difficult to predict and their needs can be difficult to satisfy (Urban, 2004). Also, since the modern customers expect transparency and unique ways to interact with the company, marketers can no longer rely principally on one-way communication that characterised most previous advertisements that online mobile phone shopping mall advertisement attempts to ameliorate.

The term online has been used in various dimensions where exchanges take place through wireless medium from one end to the other. This can be in the form of information and values from source to destination. Good example is the transfer of email from one account (sender) to another (receiver) detailing the subject and content of discourse. It may even be money transfer from sender account (creditor) to the receiver account (debtor) via the use of internet enabled technological application. One clear line of demarcation in this article is that while many facilities can be technologically enabled for online access, none can be easily qualified when the 'mobile attribute' is considered except the enablement is through mobile phone. Mobile attribute is the tendency that makes the facility to go with the holder wherever he goes such as in mobile phones. In addition, mobile phones typically are not shared among people, which allows for precise targeting of advertising to a single person (Ross, 2003). On this note, this study is limited to the use of mobile phone in its conceptualization of online shopping mall.

Owing to increasing breakthrough in technological developments, mobile phone has come to take the place of any other form of Information and Communication Technology (ICT) facility. A gradual decline in emphasis is being noticed in the mention of the phrase "computer age" which refers to the extent to which computer application has taken over how things are done over the conventional human interface strategy, and it is being suggested at this point that the phrase "mobile phone age" takes over. Mobile phone can be defined as that hand-held device that enables all forms of transactions via electronic medium. According to Agbaje & Osotimehin (2015), mobile phone has become the closest companion to man in the evolution of technology. Its use has spread to almost all spheres of life such as advertising, communication, fund transfer, invitation, and interview scheduling. Its use in advertising has been researched by earlier authors such as Barwise & Strong (2002), to be limited to simple, inexpensive household consumables

Due to higher opportunity cost for time, there is an increase in the rate of outsourcing purchase of self-needs. It is not unexpected to record less satisfaction from outsourced purchases compared to self-purchase. It is

against this backdrop that a more encompassing research of this nature is intended wherein time allotted to shopping by way of visits to physical mall, inspection, and bargaining is erased through the use of online shopping mall. Self assessment and inspection of purchases generate more value than that expected if all the steps in prepurchase evaluation were outsourced. Bell *et al* (1998) in their work found evidence that each customer is more likely to incur the lowest total purchase cost on self purchase than in any outsource purchase. As highlighted by Agbaje & Osotimehin (2015), that mobile phone has strongly stood by man despite increasing competition with time necessitates the acceptance of facilities and features on the mobile phone that can enhance self assessment at the comfort of individual customer in terms of timing and location. These features however promote time management by online shopping mall assessment of products, products price negotiation, sales location, and products place of delivery for all round purchases of any product of choice by customers.

The major emphasis of most previous authors about researches relating to mobile phone advertisement was in the area of SMS advertisement with the issue permission; Tsang *et al.* (2004), and attitude variables of respondents (Wong and Tang, 2008). These constructs became worrisome due to the fact that most of the sources of such advertisement messages were difficult to contact by recipients even in the face of positive interest in the products advertised. Likewise, informing senders of advertisement messages on the need to discontinue sending such messages into their mobile phone in the event of irritation was worrisome. Online shopping mall is a two-way mechanism, receivers initiate reception of advertisement messages, and they also have the control power to discontinue such interaction. This is the bane of this study; to establish the supremacy of online shopping mall as source of advertisement over previously established findings using mobile phone.

Online shopping mall in this study means any facility that can go with the user wherever he goes, enhance consumers' assessment of products through visual enablement at anytime of choice. Various online shopping mall for advertising on which products and services have been displayed in Nigeria include; Konga, Jiji, OLX, Efritin, and Jumai. All of these platforms have interactive interface between marketers and customers. This study attempts to determine mobile phone penetration rate and also assess the benefits of its use in online shopping mall among households in Nigeria

## 2: Literature Review

Early conception of mobile phone as a medium of advertisement was on its use for the distribution of 160 character information to receivers (SMS). This approach limited any detailed information that marketers intended. Infact it can be concluded that the major deficiency of SMS advertising was that its puts the customer in the place of a blind person who cannot visually imagine or assess what he wants. This attribute limited the prospects of marketers given that customers will seek more information about high value items than is possible in a text message (Barwise, 2001). This suggests that the likelihood of unplanned purchases is impacted more by display of products than by functional purpose (Yeung & Wyer, 2004). Because most functional products fail to trigger an affective reaction, the likelihood of their being purchased as a result of in-store decision making requires that a need be recalled. Recall is likely to be boosted by additional exposure that comes from being on display.

According to Davis and Rigaux (1974), purchase of products and services by customers has been classified into four decision influence categories: husband dominant; wife dominant; autonomic (separate) and syncretism (joint). Three major theoretical beliefs; resource theory, sex role orientation (SRO) theory, and involvement theory have been developed to explain relative influence in decision-making (Webster, 1995). The resource theory focuses on the influence of the partner according to the percentage of household resource that he/she contributes (Blood and Wolfe, 1960). Various authors have conceptualised resources from different dimensions such as education (Rosen and Donald, 1983), job status (Rosen and Donald, 1983; Wolgast, 1958), social class (Rigaux-Briemont 1978), and income (Davis, 1976; Green and Cunningham, 1975; Wolgast, 1958). The second belief, SRO, says that sex role preferences are indicative of culturally determined attitudes (traditionalism/modernity) toward the role of wife/husband in the household (Qualls, 1987). Various household decision practices have been shown to be affected by sex roles such as the buying process (Green & Cunningham 1975, Qualls 1987), household task allocation (Eriksen, Yancy, and Eriksen, 1979), and marital behaviour (Scanzoni, 1975). The studies have also found a significant relationship between SRO and relative influence in decision-making (Green and Cunningham, 1975; Rosen and Granbois, 1983; Qualls, 1987). The third concept, the concept of involvement suggests that the relative influence in a purchase decision is higher for the spouse who is more involved in the purchase and desires than the partner (Corfman and Lehmann 1987; Qualls 1987). This concept explains the relative influence across product classes and explains the husband's domination for such product categories as homes or housing (Cunningham and Green, 1974; Davis and Rigaux, 1974) insurance (Davis and Rigaux, 1974; Green et al., 1983), and automobiles (Burns and Granbois, 1977; Green et al., 1983; Wolgast, 1958). At the same time, the wives have a dominant position in the purchase decisions for products associated with their homemaker role, such as appliances (Green et al., 1983; Wolgast, 1958), groceries (Davis and Rigaux 1974; Green et al., 1983) clothing, children's toys and cosmetics (Ganes,

1997).

In deviance to Blood & Wolfe (1960) that conceptualised resource based model according to the percentage of resources each person contributes (earned), Agbaje & Osotimehin (2015) concluded that resource control may not be conceptualised as the amount of income earned, rather by way of trickle down income from man to the woman where the woman is a full time housewife. This confers the power of control of income on the woman to embark on purchases for the household. This ascension possibly leads to embracing the concept of involvement. Irrespective of who earns the money, if the need of the home in a male headed household is automobile, housing, or insurance, purchase decision is vested in the hand of the man whether he earns the income or otherwise.

### **3: Methodology**

This study was carried out in Lagos State, Nigeria. The justification for this research in industrial and business location like Lagos, Nigeria cannot be underestimated because of its commercial, economic, and industrial concentration. The location is also adjudged adequate for this study because of its heterogeneous nature. This heterogeneity in terms of culture, language, attitude, perception, taste, economic class, education, cosmopolitanism, political orientation, and religion affiliation about Nigeria are all well represented in Lagos State. This study location actually captured the earlier description of modern customers that are adjudged to be informed. Primary data was used for this study and this was generated from a cross sectional administration of copies of questionnaire to respondents.

The survey intended to estimate the rate of penetration of mobile phone in terms of usage among respondents and the extent to which they have adopted online shopping mall advertisement. The population for this study consists of all mobile phone users that are resident in Lagos, Nigeria. Convenience sampling technique was used to gather data from 2,348 respondents for this study. Both open-ended and close-ended questions were provided that incited responses for the study.

### **4: Results and Discussion**

This section presents the results of the analyses on the basis of the objectives indicated in the study in chronological order

#### **4.1: Mobile Phone Ownership Status**

This section presents the result of mobile phone ownership status of respondents as indicated in Table 1. All the respondents indicated that they own at least a mobile phone for their personal use for all forms of interaction. However, about 15.46% respondents have one or more dependants who do not have a mobile phone to themselves as indicated in Table 1. Since mobile phone has been conceptualised as a personalised handheld electronic device, it was considered appropriate in this study to examine the mobile phone penetration in terms of individuals rather than by households or household heads. This was achieved by calculating the number of family members without mobile phone against the overall population to arrive at mobile phone penetration rate. The descriptive analysis puts the average family size of respondents from the entire sample at 5.5 persons; this resulted in the overall persons of 12,914 for this study. The source of this figure was the product of study sample size of 2,348 and the average family size of 5.5; labelled  $N_1$  in Table 1. Likewise, members of the 15.46% respondents' household without mobile phone (have-not) statistics had their average as 1.7 persons. This gave the population of have-not from the study to be 617 persons ( $1.7 \times 363$ ), labelled  $N_3$  in Table 1. The result of the overall population of have-not is approximately 4.78%. Further examination on the reasons applicable for the have-not by the 4.78% of respondents indicated that age is the principal factor limiting absolute use of mobile phone among respondents. This can be seen as the distribution of respondents into have-not category tapers to the two tails of age distribution of; too little age group, and too old age group as shown in Table 1

Conventional telephone was solely used for communication by way of exchange of voice message. This was the preliminary believe about mobile phone, but this handheld electronic device climbed the ladder of advancement in technology to become useful in so many areas of life such as advertisement. This attribute however is made possible according to the level of sophistication of the phone. Mobile phone sophistication is measured by the ability of the mobile phone to support the use for various applications on the phone

The result from this study indicates that various combinations of high grade phones such as android (48.30%), windows phone (36.07%) being used by respondents. This summary can be seen in Table 1

#### **4.1.1: Comparison of mobile phone users through work status of household head**

This study went further to analyse mobile phone ownership through the work status of household heads. Four categories of work status of household heads were identified; corporate, artisan, business, and students. This was because various previous studies such as Agbaje & Osotimehin (2015) have identified the influence of household head characteristics on their acceptance and use of innovation such as mobile phone by the entire household. Two approaches were used to explain the result. The first approach was based on within group classification. The result indicated that mobile phone ownership in each of the classified homes was approximately 95%,

except with a slight dip amidst artisan headed homes with 89% ownership (Table 2). This percentage ownership can be adjudged high enough to conclude that mobile phone ownership in Nigeria has a very wide coverage. The second approach to describing the result was between group classifications. For the four classifications of our data sample 35.90% belong to corporate workers headed home which was the highest in terms of representation. This was closely followed by business managers headed home with 31.15%. Next in proportion was artisans with about 17.90% number of people for the analysis. Finally, the study has 10.27% of students in its analysis. Statistical test of significance was employed using two sample t-test. This was designed in order to establish the difference or otherwise about mobile phone use spread among respondents. The result indicated that there was a significant difference between the number of people with mobile phone (have) and those without mobile phone (have-not) at ( $t=9.202$ ;  $p=0.001$ ) as represented in Table 2. The implication of this result is that mobile phone use coverage is large to the extent that one can conclude that mobile phone use in the study area is almost absolute. It was also tested whether there was a difference in ownership of mobile phones for household members on the basis of the work status of household heads. This was carried out with analysis of variance (ANOVA) test. The result was insignificant, implying that mobile phone penetration rate is independent of work status of respondents; a uniform diffusion of mobile phone use among the respondents.

#### **4.1.2: Modelling awareness and attributes of respondents about mobile phone shopping mall advertising**

This section categorised respondents into three on the basis of the extent of awareness of shopping mall advertisement through mobile phone. Approximately 40% of respondents had full awareness; slightly more than 43% indicated they had a partial level of awareness and lastly around 17% knew nothing about this innovation (Table 3). Summary of frequency dispositions to the indicated attributes is presented in Table 3 as absolute and relative. Each of these was further partitioned into two; left wings of each measured support to summarised attribute. The fully aware category of respondents had three out of the five social attributes; education, formal employment, and income on the high side while the remaining two social attributes; age, and marital status being on the low scale. This result is in line with previous studies such as Plude & Hoyer (1985); Zhu & Wang (2005) about acceptance of innovation that are termed educated, formal employment, and high income earners. This is in addition to being known as young and mostly single or newlyweds. Next in terms of level of awareness is the category that claimed they have partial level of awareness about online shopping mall advertisement through mobile phone. This category indicated diffused alignment on the five social scale variables identified for this study. Although, this category also recorded high level of education (70.51%), but a less than average proportion (41.52%) was recorded for formal employment as can be seen in Table 3. Again, more than average proportion of respondents (67%) in this category was classed high income earners, this fraction cannot be compared with what was obtained by the fully aware category that recorded about 81%. While this category can be said to have a balance of age distribution between young and old having about 50% in each case, it can be concluded that this category is inversely related to the fully aware category according to marital status. This can be deduced in that more than 96% had already established a family of their own. The summary is presented in Table 3. There is none of the attributes indicated that depicted relevance for the unaware category of respondents. A critical look at the summary in Table 3 shows that the highest of all the five social variables had less than 14% on the alignment scale. It can thus be concluded that social attributes highlighted in this study have significant influence on the awareness of online shopping mall advertisement through mobile phone.

#### **4.2: Advantages of Mobile Phone Online Shopping Mall Advertisement according to Level of Awareness**

Various advantages were indicated by respondents for taking delight in online shopping mall advertisement through mobile phone. In order to present a clear picture on how marketers can segregate their market, these advantages were ranked according level of awareness by respondents.

For the fully aware category, frequent trip to market by way of uninterrupted access to any product that is advertised was the leading advantage. This attribute recorded more than 97% of support by respondents in its category as can be seen in Table 3. This can be imagined from the comfort with which respondents can access the products in order to assess its features. This is necessitated especially when the product is variety seeking in its buying behaviour where brand switching tendency is high. Closely followed is time management as the basis for embracing online shopping mall advertising. Time remains a resource that cannot be renewed by man; its demand is on the rise by all types of work classification; corporate, artisan, personal business management, and schooling. The rise in the demand time for career leaves little or no time to do the necessary self-shopping for goods and services, hence the need to imbibe online shopping mall advertisement. The third advantage as indicated by respondents about online shopping mall advertisement is product inspection. Product inspection refers to the ability of customers to view all dimensions of the product for effective purchase. Of special relevance in product inspection is the size, colour, and shape of the product. Although these features may have no relationship with the core product, they nonetheless have influence in the purchase of most products. This advantage was recorded by 86.25% of respondents as indicated in Table 3. Other advantages of mobile phone shopping mall advertising by the fully aware respondents are shown in Table 4. The partially aware category of



respondents also has these advantages in the following order; product inspection was the leading, followed by frequent trips to market, and the third was time management as indicated in Table 4.

Spearman rank correlation was calculated to establish if there exists agreement on how respondents from the two categories rank the advantages. The result as depicted in Table 4 was a correlation of 0.83. This figure is high enough to conclude that marketers need not segregate these target audience before launching their marketing information to the customers

#### **4.3: Types of items previously bought through Online Mobile Phone shopping mall by respondents**

Various items are always displayed on the shelf space of marketers awaiting purchase through online shopping mall advertisement. This study established that mobile phone was the most purchased item through online shopping mall advertisement (6.60%). This was closely followed by the purchase of belt materials (5.24%). Other products that respondents had previously purchased are as indicated in Table 5. Although the result indicated that size of products is immaterial in adopting this type of advertisement but the level of patronage by customers by way of the numbers of purchases was on the decrease as the size of the product involved increases (Table 5). Again the analysis went further to examine the state of the product at the time of purchase. From the nine categories of products indicated, it was observed that only one product (belt materials) had more units being bought new.

#### **5: Conclusion**

Online shopping mall advertisement is an emerging advertising platform that brings items on the shelf space close to potential customers at their finger tips. Its awareness is high by mobile phone users in Nigeria (82.83%), while its successful use for purchases is still at very low level. Its level of awareness is still in accordance with previous researches about technological acceptance proposition that stipulated high level of; education, income, formal employment, and low level of; age, and family size. While previous studies about the use of mobile phone for advertisement concluded that it can only be used for simple and inexpensive products, this study has established that there is a change of direction in the use of mobile phones for the advertisement of large sized products such as cars, and houses. This result has proved the relevance of online advertisement in the disposal of fairly used items that can quickly reach potential customers located over great distance. The result also revealed that the problem of visual display of products as indicated in the use of mobile phone for advertisement through SMS has been eradicated.

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**Table 1: Mobile phone ownership status of Respondents**

Attributes	Categories		Frequency	
			Absolute	Relative (%)
Respondents Have/have-not	Have		2,348	100.00
	Have not		0	0.00
			2,348	100.00
Ownership structure of mobile phone of household members	All household members have		1,985	84.54
	Some household members have-not		363	15.46
			2,348	100.00
Reasons advanced for the have-not members in the home (363)	Too little age group		209 (57.57)	8.90
	Too old age group		135 (37.19)	5.75
	Financial constraint		19 (5.23)	0.81
	Category total		363 (100.00)	(15.46)
Types of mobile phones being used by respondents	Android	Multiple response	1,134	48.30
	windows		847	36.07
	Blackberry		299	12.73
	Java		461	19.63
	IOS		502	21.38
	Other types		572	24.36
People in the study ( $N_1 = 2,348 \times 5.5$ ), ( $N_3 = 363 \times 1.7$ ), ( $N_2 = N_1 - N_3$ )	$N_2 = 2,348 \times 5.5$		12,297	95.22
	$N_3 = 363 \times 1.7$		617	4.78
			12,914	100.00

Source: Field survey, 2016

**Table 2: Comparison of mobile phone users through work status of household head**

Work status classification of household heads (respondents)		Mobile phone ownership status of Household members between and within group classifications			
		Frequency (Within group Classification)			
		Have		Have-not	
		Absolute	Relative (%)	Absolute	Relative (%)
Corporate		4,637	99.27	34	0.73
Artisan		2,311	89.22	279	10.77
Business		4,023	94.79	221	5.21
Students		1,326	94.11	83	5.89
Sub total		12,297	95.22	617	4.78
		12,914 (100.00)			
		Between group classifications			
Corporate		4,637	35.90	34	0.26
Artisan		2,311	17.90	279	2.16
Business		4,023	31.15	221	1.71
Students		1,326	10.27	83	0.64
Sub total		12,297	95.22	617	4.78
		12,914 (100.00)			
t-test	(comparison by have and have-not of family members)	9.202 (0.001)			
F-test	(comparison of mobile phone use/ownership structure according to work status of household head)	1.447 (0.230)			

Source: Data analysis, 2016

**Table 3: Level of awareness and attributes of respondents about mobile phone shopping mall advertising**

Level of awareness	Attributes	Frequency			
		Absolute*		Relative (%)	
Full awareness (n = 931)  39.65%	Educated/illiterate	925	6	99.35	0.65
	Formal/informal Employment	899	32	96.56	4.44
	High/low income earners	751	180	80.67	19.33
	Young/adult	816	115	87.65	12.35
	Single/ already established family	702	229	75.40	24.60
Partial awareness (n = 1014)  43.19%	Educated/illiterate	715	299	70.51	29.49
	Formal/informal employment	421	593	41.52	58.48
	High/low income earners	675	339	66.57	33.43
	Young/adult	499	515	49.21	50.79
	Single/already established family	39	975	3.85	96.15
Unaware (n = 403)  17.16%	Educated/illiterates	13	390	3.23	96.77
	Formal/informal employment	29	374	7.20	92.80
	High low income earners	7	396	1.74	98.26
	Young/adult	49	354	12.16	87.84
	Single/already established family	55	348	13.65	86.35

Source: Field survey, 2016

\* = Multiple response

**Table 4: Advantages of mobile phone shopping mall advertising according to level of awareness of respondents over any other media of advertising**

Category of respondents	Advantages	Frequency		Ranking of advantages within category
		Absolute*	Relative (%)	
Full awareness (n = 931)	Price negotiation	404	43.39	4 <sup>th</sup>
	Product inspection	803	86.25	3 <sup>rd</sup>
	Delivery mode	84	9.02	6 <sup>th</sup>
	Time management	857	92.05	2 <sup>nd</sup>
	Product location	113	12.14	5 <sup>th</sup>
	Frequent trip to market	907	97.42	1 <sup>st</sup>
Partial awareness (n = 1014)	Price negotiation	296	29.19	4 <sup>th</sup>
	Product inspection	705	69.53	1 <sup>st</sup>
	Delivery mode	53	5.23	6 <sup>th</sup>
	Time management	301	29.68	3 <sup>rd</sup>
	Product location	105	10.36	5 <sup>th</sup>
	Frequent trip to market	635	62.63	2 <sup>nd</sup>
Spearman rank correlation		0.83		
Unaware (n = 403)	Not applicable			

Sources: Data analysis, 2016

**Table 5: Items previously bought through mobile phone shopping mall advertisement**

Items	Frequency		State at point of purchase			
	Abs*	Rel (%)	New		Used	
			Abs*	Rel (%)	Abs*	Rel (%)
Mobile phone	155	6.60	29	18.71	126	81.29
Belt	123	5.24	44	35.77	79	64.23
Wrist watch	68	2.90	37	54.41	31	45.49
Shoes	47	2.00	19	40.26	28	59.74
Laptop	45	1.92	16	35.56	29	64.44
Generator	43	1.83	11	25.58	32	74.42
Furniture	31	1.32	6	19.35	25	80.65
Car	23	0.97	2	8.70	21	91.30
House	13	0.55	2	15.38	11	84.62

Source: Field survey, 2016

Abs\* = Absolute