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Investigating Digital Marketing Technologies usage Extent in the Nigerian Telecommunications Industry: A Study from the Consumers Perspective

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Keywords: digital marketing; technologies, consumers, internet access, service providers, usage.

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Investigating Digital Marketing Technologies usage Extent in the Nigerian Telecommunications Industry: A Study from the **Consumers** Perspective

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Abstract- Digital communication technologies have become an important part of our daily lives with billions of users on the Internet and social media. This study examined the types of technologies marketing available in the diaital telecommunications industry in Nigeria, and determined the extent of usage of the technologies. The study employed a survey method. The Cochran formula was used to calculate an ideal sample size since the total population size of online consumers is infinite. Based on this calculation 500 respondents were surveyed due to the researcher convenience, cost and accessibility to the respondents. Data were collected using both primary and secondary sources. An online well-structured designed questionnaire (Google survey) was attached via online platforms. The questionnaire elicited information on telecommunications service consumers' characteristics, consumers' knowledge on different digital marketing tools, and the extent of use of the digital marketing technologies among telecommunications consumers in Nigeria. The results showed that social media marketing 142 (29.3%) was the most commonly used digital marketing technology by telecommunications service consumers. From a general standpoint, with an average weighted mean of 2.69 and maximum rating of 5 shows that Nigerian telecommunications service consumers use digital marketing technologies moderately, with social media networking sites being the most prevalent digital marketing platform used by the consumers with the highest mean value (Mean=3.16, SD=1.37).

Keywords: digital marketing; technologies, consumers, internet access, service providers, usage.

I. INTRODUCTION

he Nigerian telecommunications service has brought historic and economic growth which cannot be undermined as well as other positive development to the nation. The Nigerian Communications Commission (NCC) emphasized on enactment of the "National the growth the Telecommunication Policy" in September, 2000 has brought to the industry. The formulation of national telecommunication policy produced great changes in

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the Nigerian telecommunications services with the arrival of several telecommunications servicing firms such as visafone, 9mobile, MTN, M-Tel, Glocom, Airtel, Starcomms and Multi-links (Oghojafor et al., 2014). According to the Nigerian Communication Commission (2006) report on strategic management plan, the report states that the fastest growing industry in the world Nigerian Global System Mobile remains for Communication (GSM) although the industry is still far behind among other industries as regards to "customer satisfaction" and "loyalty".

The advent of the Internet has brought revolutionary development in conducting businesses and transactions; digital marketing involves application the Internet and other digital technologies to carry out advertising processes (Bolaji, 2018). Technological advancement has no doubt recently brought about flexibility, speed and cost-effectiveness in executing marketing activities with the emergence of modern synchronous internet-based communication technologies via the Internet. Introduction of digital devices and technologies such as cell phones and mobile applications, email facilities, world-wide-web (www), social media sites, database systems to mention but a few focused on delivering integrated targeted communications, achieving profitable marketing services and building effective customer relationship that match their individual needs (Amruta, 2014). Digital marketing is the major innovative applications of the Internet with other digital infrastructures for marketing activities, and have indeed transformed the different sectors of the society, including marketing telecommunications products and services. Digital marketing includes a widespread variety of products, brands or services advertising strategies which primarily utilize the Internet as a main promotional means in addition to traditional TV, radio or mobile advertisement.

П. Background

modern telecommunications The service industry in Nigeria started in the 1990s and this was characterized by the tremendous entrants of new investors into the market. Fransman (2001) notes that as Year 2021

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more entrants enter into the market, it presents threat and competition among the telecommunications service providers. The 1990s breeds of entrants were far more belligerent in their competition due to technology advancements, change in income and increase in economic activities. This has made the industry to be highly competitive as telecommunication service providers build strategies to retain their old subscribers and attract new consumers on their network. These competitions have driven the current global improvement in telecommunications service. In Nigeria, there are four major telecommunications service providers which include MTN Nigeria, Globacom Nigeria, 9mobile and Airtel Nigeria competing for survival. The numbers of subscribers have been the major key to assess Nigeria telecommunications service providers' success and performance. According to the Nigerian Communication Commission (NCC) industry statistics report published on the Internet for the month of April 2019 indicates that, MTN remains the telecommunications service firm with the highest number of subscribers both for call and Internet services with 64,732,167 subscribers, followed by Globacom Limited in the second largest consumer based with approximately 46,380,756 subscribers, Airtel Limited in the third place with 45,433,300 subscribers and 9mobile with 16,720,146 consumers on the network (Table 2.1).

Soyebo (2012) Obasan and identified competition as a key that forces organizational changes, especially among telecommunications service providers. The simplicity and similarity rate of telecommunications products and services is the major fuel to the intense competition within the telecommunications industry. Therefore, the telecommunications service rendering firms need to develop new strategies to differentiate their products and services among their peers. Mendzela (1999) supports that, the incessant struggle for consumers share made telecommunications service providing firms to develop online strategies for consumers' loyalty, satisfaction and retention of potential consumers using the newly emerging digital marketing strategies. Karjaluoto et al. (2005) stated that mobile communication markets are one of the fiercest markets today because of its high expanded challenge and change. As a result, it is of growing concern to see customer purchasing choice procedure and illuminate the components that finally determine consumer choices among the various mobile communications networks. The sustainability of today's modern telecommunications firms depends on how they handle and treat their consumers.

Digital communication technologies have become an important part of our daily lives with billions of users on the Internet, social media, and other mobile apps (Stephen, 2015). The biggest market share of Internet users in the mobile telecommunication industry are subscribers on 1G, 2G, 3G and 4G mobile technologies. The number of people accessing the Internet has increased tremendously over the years in Nigeria according to statistics. For instance, Internet World Stats (2019); reported that Internet users as at March 2019 have increased to 111,632,510 on global system for mobile communications (GSM) and code division multiple access (CDMA) networks. Today's market witnessed an extreme competition in the Nigerian telecommunications industry and telecommunications service providers are moving extensively to catch the attention of consumers by investing in digital marketing. Modern technology emergence has made Nigerian telecommunications service providers to appreciate more the importance of digital marketing especially in tracking the need, want, suggestions, trends, and behaviors of their consumers. Consumers have become more sensitive to the characteristics and attribute of telecommunications products and services rendered (Rahman et al., 2010). On the other hand, consumers' behavior in response to telecommunications service offerings remains a point of attention to the telecommunication service providers. Hence, digital marketing in the telecommunications industry is of great concern to the telecommunications service consumers and the telecommunications service providers.

Globally, marketing is defined as set of actions employed by companies to fuel claim and acquire consumers. Popoola (2013) emphasized that some business firms match marketing with selling, while others see marketing as those processes carried out when the products or services are created and rendered to consumers (Nwokoye, 2004). Therefore, it is important to describe what marketing is from a comprehensive point of view. Popoola (2013) relates marketing to a society from the macro-economic perceptive where marketing is said to be business process of a company to replace economic goods and service from the micro-economic view (Nwokoye, 2004). As technological know-how advances, consumers need and wants also change. The widespread uses of Internet technologies have changed how firms communicate its products or services to consumers. To publicize products and services, firms employ marketing activities that inform distinct features and benefits, build understanding as well as facilitate the formation of positive brand images (Shimp, 2007). Digital marketing has revolutionized the conventional ways of marketing products and services to modern technological, which may pose many threats and challenges to the telecommunications service providers in this highly competitive market.

The purchasing behavior of consumers in the telecommunications service industry is largely influenced by numerous factors, and these factors often affect the firms to match the needs of the consumers.

Telecommunication service firms is not new to changes in technological development and rising globalization; availability of advanced technologies as well as wide accessibility of digitally sourced information has driven many industries to digital change (Stephen, 2015) and the Nigerian telecommunications service industry is not excluded. These technological advancements have made outstanding influences on marketing theories and practices which include; emergence of capturing improved quality customer data, enhanced providersconsumers relationship, promote consumers insight and customer resource management (CRM) in the Nigerian telecommunication industry. Hence, with numerous digital marketing advantages has presented telecommunications service providers now have all that is required at their disposal to merge data from numerous sources for better understanding of the telecommunications networks, consumers and how consumers behave towards the different telecommunications products and services (Chen, 2016). Furthermore, the importance of improved digital experiences continues with the emergence of Internet marketing, enhanced online experiences have promoted customers' journeys to be more engaging.

a) Digital marketing technologies

Mobile marketing: It includes set of practices that allows firms or brands to interact and engage their customers in a more innovative, interactive and significant manner via any mobile device or network. These include the use of mobile devices such as mobile phones, personal digital assistant, media devices, moveable gaming consoles and tablet computers for marketing activities. The interactive and mobility nature of mobile marketing differentiates it from other marketing mediums like TV, radio and newspapers (Mobile Marketing Association, 2009). In addition, its continuous access to users whenever and anyplace set it apart from web (Lamarre et al., 2012). The types of marketing techniques accessible on cell phones are; short message service (SMS), multimedia message service (MMS), guick response (QR) codes, location-based services (LBS), brand's mobile applications, and push notifications (Onobrakpeya and Mac-Attama, 2017). SMS has been identified as the most widely used messaging vehicle for mobile marketing. The unique features of mobile marketing are ubiquity, personalization, localization and two-way communication (Clark, 2001). Furthermore, the use mobile marketing seems to be increasing in the telecommunications service industry with the advent of mobile applications (such as brand's apps downloadable on play store; MTN app) for marketing brand's mobile activities. With application, telecommunications service providers can manage their consumers better no matter how diverse and far they may be.

E-Mail marketing: It involves sending electronic mail to promote products or seeking for consumers (Techopedia, 2016). Additionally, it is utilized for drawing in new customers and encouraging the current ones to make instant purchase by sending promotional e-mails; upgrading customers' relationships by adding notice to other company's e-mail to pick up introduction in another market (Georgiva, 2010). Typically, this form of marketing strategies is not commonly used in Nigeria settings to communicate to brand's consumers. Telecommunications service provider's employing the use of e-mail marketing must compile the email address list of all its subscribers and prospective consumers which seems difficult due to service or network marketing switching. E-mail involves sending commercial e-mails to a group of people that have subscribed to a mailing list but can also be directed to an individual. Often, a company employing e-mail marketing develops an email list to reach or inform established and prospective consumers, which is almost an unlike practice among the Nigeria service providers. Forootan (2008) identified in his study that any email message that aids building of customer loyalty, trust in a product or service, brand recognition can be regarded as e-mail marketing (Onobrakpeya and Mac-Attama, 2017). E-mail is effective as a marketing tool when consumers out of their own volition sign up to receive e-mails from companies. It means e-mail marketing is permission based or dependent. Currently, in Nigeria, mobile technology has made email marketing to be a lot easier and better because products or services are promoted directly to a particular target group through the use of an email.

Search engine marketing (SEM): Commonly used form of marketing in many industries of the world. This deals with consumers' probing, investigating, formulating, submitting and positioning of search queries on web pages within search engines to increase traffic referrals from search engines to gather adequate information on the subject matter (Beal, 2013). Onobrakpeva and Mac-Attama (2017) identified Google, Bing and Yahoo search engines as the most commonly used search engine. Often, SEM and search engine optimization (SEO) are used interchangeably, SEO is about optimizing your website to get better improved rankings in the search list results while SEM goes beyond SEO. SEM employs search engines tools like Google Adwords or BingAds to advertise and send more targeted traffic to the website (for instance, advert on vahoo mail platform). Search marketing in general thrives on the platform of content marketing strategies, which are marketing technique that attract and acquire defined consumers by creating and distributing valuable, significant and consistent contents (Steimle, 2014).

Social media marketing: It includes actions, processes, practices, and conducts among networks of individuals

who meet online to exchange opinions, ideas, information, and knowledge via conversational media which can be web based or mobile applications (Heinonen, 2011). The advent of social media based advertising was due to the widespread social media sites and applications usage. Recently, Internet and social media usage has become an element in business and industries strategies to attract potential consumers (Yannopoulos, 2011). Social media marketing involves the use of social network sites (such as Facebook and LinkedIn), blogs, social news and bookmarking (Digg, Reddit), micro-blog (such as Twitter), forums and virtual worlds (Second Life), media sharing (such as YouTube, Flickr), and rating and reviews pages (Yelp) for advertising activities. However of this legion listed above, four major social media networking sites have been identified for their global popularity and availability in the Nigerian telecommunications service industry; these include LinkedIn, Twitter, Facebook and Instagram. Nyekwere et al. (2014) asserts that social media sites Facebook and Twitter are most popular platform among users and advertisers. The advent of advanced mobile phones and personal computers enables buyers to remain associated on long range interpersonal communication via social networking sites (such as Facebook, Twitter, LinkedIn) on daily basis (Raad et al., 2010). Otugo et al. (2015) noted that the emergence of social media sites has introduced "paradigmatic move in the manner advertisers/ marketers promote their goods and services". Usersgenerated content such as product or service reviews and consumers suggestions are created, which help firms or brands understand their consumers needs adequately (Mathwick et al., 2008) and also, gives consumers the chance to interact with firms or brands directly and instantly (Christodoulides, 2009) to express their perceptions on services, brands or products. Furthermore, using social media platforms for advertising activities help saves consumers' time, provide more trustworthy information, improved cost of informing, and facilitate better communication with telecommunications service providers. Social media marketing has bring about consumers' engagement and also provides avenue for brands and firms to stay with their consumers rather than just creating products or services awareness.

III. Research Methodology

The study was restricted to only consumers with online presences (Internet users) who are consumers of Nigerian telecommunications products or services. This was because only consumers with online presences can largely access these digital marketing technologies.

Research Questions

The study research questions are has follows;

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- 1. What are the types of digital marketing technologies available in the Nigerian telecommunications industry?
- 2. To what extent are these digital marketing technologies being used in the study area?

Research Hypothesis

Ho₁: There is no significant difference between the usages of digital marketing tools available to consumers Sampling Technique

The study adopted the qualitative and quantitative methods of a research, with the aid of an online questionnaire (Google form) for adequate understanding of the phenomenon under study. The convenience sampling technique was employed because of the complexity of the population under study. The Cochran formula was used to calculate an ideal sample since the total population size of consumers with an online presence in the Nigerian telecommunications industry is infinite.

The Cochran formula is:

$$n_{0} = \frac{Z^2 p q}{e^2}$$

Where:

e is the desired level of precision (i.e. the margin of error) of 1%,

p is the (estimated) proportion of the population which has the attribute in question,

q is 1 – p.

From the calculation determined at 99% confidence level, assuming half (50%) of the telecommunication consumers are online (this will commute the maximum variability), therefore, p = 0.5 and keeping error margin as 1%, the needed respondents was 557 based on precision and estimation. Due to researcher convenience, cost and accessibility to the respondents only 500 responses were collected. The sample size was draw from all users of telecommunications service in Nigeria (Mtn, Glo, Airtel, 9mobile and others).

Copies of the questionnaire were administered with the aid social media shared across four major social media networking sites namely; Facebook, Twitter, WhatsApp and Instagram via the form (https://docs.google.com/forms/d/1lbGWtNHt4IYZ link CNQY). The questionnaire elicited information on telecommunications consumers' characteristics. consumers' knowledge on different digital marketing tools and rating the consumers extent of usage of the various digital marketing technologies available to them. A six point extent-Likert scale was used to elicit information from the consumers on rating their usage extent of the different types of digital marketing technologies, various factors affecting the usage of digital marketing technologies, problems encountered, as well as suggestions on how these technologies can

be improved. Secondary data were collected from online publications, journals and website contents. The data obtained was subjected to descriptive and inferential statistics using IBM statistical package for social science (SPSS) tool.

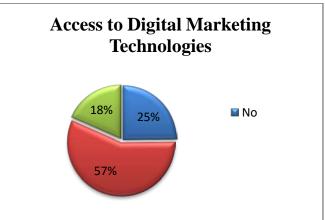
To ensure the validity of the instruments used for this study, the questionnaire was given to experts in the field of Global innovation and marketing whose research interest includes Consumers behavior, digital marketing and E-business. The comment and suggestion of the experts lead to the re-modification of the instrument, helped authenticate the content validity of the instrument, and logical linking of all items on the research instrument used was achieved in line with the objectives of the study. Also, a pilot study was done before the main data collection. This was done to orientate the researcher's on the research project and provide insight into the phenomenon. This also ensures that errors can be rectified at little cost.

IV. Results and Discussion

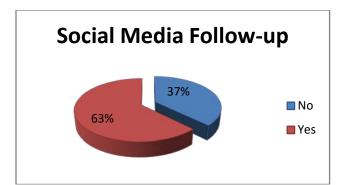
The analysis of the results obtained based on the questionnaire filled by the respondents is presented in this section. A targeted total of five-hundred (500) responses were obtained, although four-hundred and eighty four (484) (96.8%) the respondents' responded adequately and were the valid ones used for the analysis. The percentage of valid respondent is 96.8%, and it fair representation of the total number of the copies of questionnaire administered. Findings and analysis provides a comprehensive analysis from the data obtained via Google forms and a well detailed discussion on the analysis. Also a hypothesis test is set about as part of study.

Objective One: What are the types of digital marketing technologies available in the Nigerian telecommunications industry?

From the analysis obtained based on the respondents access to telecommunications service providers' digital marketing platforms presented on figure below (Figure 4.1) The result reveals that the majority of the respondents 272(56.2%) access telecommunication service providers' digital marketing platform to get updates about latest trends on telecommunications products, services/networks and 88 (18.2%) of the respondents are unsure of their access to such platforms while 119 (24.6%) of the respondents don't access telecommunications service providers digital platforms for any form of information at all. Social media follow-up is another way telecommunications products information, trends and reviews.



Social media follow-up present opportunities for establish a closer relationship with brands and feel ownership of products or services purchase via social media platforms since consumers feedbacks and suggestions can be heard. The findings reveals that majority of the respondents 301 (62.2%) follow up their respectively chosen telecommunications service providers on their social networking sites, blogs and brand's website, 180 (37.2%) don't follow any of the telecommunications service providers while 3 (0.6%) never responded to the question. It shows that there is connection between telecommunications service providers and it consumers (subscribers). Similarly, Onobrakpeya and Mac-Attama (2007) emphasized the benefits of social media follow up. Dinner et al. (2014) in their study reveals that digital ads are more effective than offline ads in driving online behavior. How digital ads are presented in terms of its usability and ease of use influence how and who access such marketing platforms. Therefore, digital ads must be presented in the most efficient way for it users.



The study is aimed at ascertaining the types of digital marketing technologies used by telecommunications consumers in Nigeria. Based on the findings (Table 4.1), it was revealed that the Nigerian telecommunications service providers make use of all the popularly digital marketing strategies/platforms to inform and create awareness on telecommunications products and services, as well as understand their consumers (subscribers) better. The result of this study shows that social networking sites is the most commonly used digital marketing platform with 142 (29.3%) respondents using it, followed by search engines marketing as 108 (22.3%) of the respondents ascertained that search engine marketing technologies cannot be underrated when it comes to informing telecommunications consumers on latest trends in the industry. Also, 28 (5.8%) respondents emphasized on the use of blogs such as Nairaland and 59 (12.2%) respondents accessed Mirco-blog websites and mobile application to gather information on telecommunications products and services and communicate with their respective telecommunications service providers.

Table 4.1: Respondents' types of digital media platforms used

Digital Marketing Platforms	Frequency	Percentage (%)	
Blogs/Forums***	28	5.8	
Email/SMS platform***	26	5.4	
Search Engine***	108	22.3	
Micro blogging***	59	12.2	
Photo &Video Sharing sites***	40	8.3	
Social Media sites***	142	29.3	
Others (Jumia, konga etc.) ***	67	13.8	
No Response	14	2.9	
Total	484	100.0	

*** Multiple Responses

Olotewo (2016) credited the explosion of digital marketing to its numerous roles of reaching more consumers and social media fueled the explosion. Employing survey method, Olotewo (2016) revealed that social media activity positively affects brand success and the most commonly used digital marketing technology. Also, the researcher identified Facebook as the prominent social media platform used by many firms and brands. Similarly, Khan and Siddigui (2013) emphasized the role of social media networking sites to communicate telecommunications products and services efficiently. Helm et al. (2013) proved that value created by online marketing tools are more convincing than traditional methods of communication, and thus, controls consumers' decision making unlike the traditional methods of marketing.

Objective Two: To what extent are these digital marketing technologies being used in the study area?

This section is to address the second objective of the study by determining the extent of usage of the various types of available digital marketing technologies used by the telecommunications service consumers' (subscribers), their preference and why they are being used. This section further analyzed the consumers' thoughts, attitude and understanding of digital platforms with their level of versatility, satisfaction, acceptability and awareness.

Table 4.2 presents the respondents opinions on the extent of usage of the various types of digital marketing technologies provided the by telecommunications when service providers communicating to their consumers. A five-point Likert scale was employed to gather respondents' information ranging from 1-being least used to 5- being most used. Among the 484 respondents valid for this study, 135 (29.9%) moderately use online ads and online media such as blogs (like Nairaland) to gather information before opting for a service or purchase a product within the telecommunications industry. Search engine and social media networking platforms were observed as the most used digital platform by telecommunication service consumers 141 (29.1%) and 127 (25.2%) respectively. The telecommunications service provider website content is as well fairly used by surveyed respondents as 101 (20.9%) agreed to it moderate usage. The use of TV/Radio ads cannot be underrated as 121 (23.6%) of the respondents make use of it moderately and 131 (27.1%) moderately use Email and SMS notification to gather information.

From a general standpoint, the total scale average weighted mean (2.69, SD= 1.64) on Table 4.2 shows that the Nigerian telecommunications service consumers use digital marketing technologies on the average was to a moderately extent. The findings further revealed that that out of the seven available used digital marketing channels in the Nigerian telecommunications industry, social media networking sites seems to be averagely the most used digital marketing platform by the consumers with the highest mean value (Mean=3.16, SD=1.37). In summary, table 4.6 revealed that most of the respondents mostly use the search engine and social media networking sites to connect with their various chosen telecommunications service providers. Similarly, Sebastian et al. (2016) confirmed that social media and search engines is most commonly used digital marketing channels and thus interfere with consumer behavior towards products and services marketed via the channels. This therefore suggests social media and search engine marketing are averagely to moderate extent used а by telecommunications service consumers in the course of purchasing telecommunications products or services.

Table 4.2: Use of the digital marketing tools by the telecommunications service consumers

Marketing tools	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	Mean	SD	Average Mean
Online Ads/Online Media	152 (31.4)	85 (17.6)	135 (29.9)	46 (9.5)	65 (13.4)	2.56	1.37	
Search Engines	83 (17.1)	80 (16.5)	141 (29.1)	68 (14.0)	111 (22.9)	3.09	1.38	
Social Media	80 (11.8)	74 (14.7)	127 (25.2)	95 (18.2)	108 (21.5)	3.16	1.37	2.69 (SD=1.64)
TV/Radio Ads	115 (17.1)	104 (19.8)	121 (23.6)	64 (13.0)	78 (15.5)	2.76	1.37	
Website	178 (36.8)	122 (25.2)	101 (20.9)	50 (10.3)	32 (6.6)	2.25	1.23	
Email/SMS Notification	133 (27.5)	102 (21.1)	131 (27.1)	64 (13.2)	53 (11.0)	2.59	1.31	
E-commerce platform Ads	126 (33.7)	95 (19.6)	125 (25.8)	53 (11.0)	46 (9.5)	2.43	1.31	

KEY: 1 - Least Used, 2 - Rarely Used, 3 - Moderately Used, 4 - More Used, 5 - Most Used.

Test of Hypothesis

Ho: There is no significant difference between the usages of digital marketing tools available to consumers

Table 4.3: ANOVA test of difference between the uses of digital marketing tools

Source of variation	Sum of Squares	Df	Mean Square	F	t-value critical	Sig.	Decision
Between Groups	289.305	6	48.217	27.539		.000	
Within Groups	5249.119	2998	1.751		0.073		REJECT
Total	5538.424	3004					

p<0.05 @ 0.05 alpha level

Table 4.3 shows the result of the ANOVA test has a value of 27.539 with a p-value of 0.000. Since the p-value (0.000) is less than 0.05, the null hypothesis is rejected. The result indicates that there is significant difference between the usages of digital marketing tools available to consumers. Further test revealed that there is significant difference between the usages of social media and other available tools except search engines. There is significant difference between the usages of search engine and other digital marketing tools. There is significant difference between the usages of online ads/online media and website content. There is no significant difference between the usages of other pairs of tools. This hypothesis simply implies that the use of digital marketing technologies differs based on the technology been used, consumers experience with such technology and consumers willingness to explore more on such technology. Therefore, consumers react on digital platforms based on their preferred online platforms

V. Conclusion and Recommendation

Interestingly the emergence of social media, search engines, and other digital marketing platforms has changed the way telecommunications service providers reach out to it consumers. The study identified social media as the main fuel of digital marketing. Furthermore, the increase in Internet penetration has enhanced the use of digital marketing among the various industries in Nigeria. The study also concluded that majority of the respondents feel closer to their chosen telecommunications service providers' via digital platforms. Telecommunications service providers are advised to invest meaningfully on digital marketing as to make their products and services well known to the consumers and as a means of communicating consumers' views and opinions.

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