

e-Marketing and Firm's Profitability in the Nigerian Paints Industry: The Analysis of Before and After Adoption

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Abstract

Manufacturing firms continuously engage in deploying ICT for marketing to promote sales and find new ways to create and deliver value to customers. This study assessed the profitability performance of the Nigerian paints industry vis-à-vis before and after e-Marketing adoption. The study was carried using 240 questionnaire administered on paints manufacturing and marketing firms with a response rate of 84.5% in year 2014. The statistical analysis employed was Ordinary Least Squares technique and the performance measures considered were market share, sales growth and customer retention. The outcome revealed that before the adoption of e-Marketing, market share has more impact on profitability of the firms, while after the adoption of e-Marketing, the sales growth has more influence on the profitability performance of the firms. The study concluded that the deployment of appropriate ICT infrastructures in the companies would enhance the production and sales growth of the paints industry in Nigeria.

Keywords

ICT, e-Marketing, Paints Industry, Market Share, Sales Growth, Customer Retention, Nigeria

1. Introduction

The current trends in the business environments which permit shrinkage of markets, technology turbulence and diffusion of the Information and Communications Technology (ICT) call for structural changes in the organisations and their marketing channels. However, the today's business environment are forced to necessitate for increased effectual collaborations among marketing tools that will lead to improved outsourcing activities, transformation in the value chains and distribution channels which require enhanced communication capabilities and increased information exchanges.

For much of this time, organisations and marketing practitioners have endeavoured to find the best ways to introduce the knowledge of ICT successfully into their domain, while the comprehensive study of this development has been enabled [1]. Also, [2] added that ICT provides marketing with an extraordinary ability to target specific groups of individuals with precision for allowing mass

customisation as well as one-to-one strategies by adapting communications and other elements of the marketing mix to consumer segments. The pace of technological change could be attached to the fact that ICT is advancing faster than physical or traditional methods of doing things.

However, incorporating ICT effectively into marketing field requires organisations to take active managerial role far beyond traditional areas of competence and authority. Deployment of ICT requires integration of not just technologies but also the technologists and other organisational functions into coherent and concerted strategic and operational approaches to offering and delivering on value propositions for customers [3]. ICT provides ready access to a vast array of global information resources and facilitate the gathering of valuable competitive knowledge and consumer-related information that simplify the decision process. Information management therefore necessitates a diverse set of technological tools and resources to create, disseminate, store and bring value-addition into knowledge. This makes information a fundamental resource for all economic and developmental activities in the society.

Marketing as an innovative activity plays a crucial role in orchestrating factors that are necessary for achieving the most of firms' capacity and technology. The practise and evolvement of innovative marketing activities in the Nigerian manufacturing sector are subjected to interest in business and policy world. Businesses are liable to have positive and evident returns with higher profitability levels, price premium and growth in turnovers as a result of their effectual adoption of electronic marketing (e-Marketing) which may have explicit benefits over existing products in established markets.

e-Marketing (eM) involves the application of internet and other related interactive technologies to generate and mediate dialogue between organisation and identified customers [4], which surpasses one-to-one marketing and allows for mass customisation. It is regarded as a philosophy practised in modern day business for marketing of goods, services, information and ideas through internet and other electronic means. Likewise, [5] explained e-Marketing as the means of deploying internet and related technologies along with other marketing tools in order to carry out the traditional marketing operations and activities, finding customer, communicating with them and delivering value to them.

More importantly, the findings of [4, 6] noted to have added an e-Marketing component and framework to ICT application and since then, various researchers have used the [4] and [6] discoveries and other related frameworks to study the operationalisation of ICT in marketing practice. Also, [7] opined that the substantial investments in terms of money and effort into ICT initiatives within the marketing arena have resulted in many major failures or at a minimum, in significant technical, human and organisational challenges.

In the 1990s, several studies have shown a low incidence of eM adoption, while more recent investigations have found that not only has there been an increase in the diffusion of eM in firms, but that firms embracing eM are also likely to show an improvement in sales performance [8]. More so, [1] asserted that the benefits of eM to firms surpasses those related to communication alone and investigations have revealed that the eM has overall impact on enhancing the firm's ability to manage customer relationships while relationship benefits such as encouraged customer feedback were seen as equally important in determining firm's performance.

On the other hand, the Nigerian paints industry which is a sub-sector of the manufacturing sector has been in existence for a quite number of years and has undergone various levels of development from the manual based methods to more technologically advanced production processes. The Nigerian paints industry comprises of over a thousand operating firms where the big players are less than 10% of the total numbers of firms producing paints and controls about 50% of the total market share while the remaining market are shared among the rest. The industry is highly competitive but not adequately regulated where there is free entry and exit due to rather 'friendly capital required' to set up the business as operating costs are relatively low, thereby increasing the

number and longevity of players that exist in the industry [9]. Over 40 million litres of paints are manufactured and used in the country annually, which include the decorative/architectural paints constituting 71% of the market share, Industrial have 19%, Automotive 6% and others have 4% of the market share [10]. Many new entrants get attracted to paints making business due primarily to inefficient regulatory practices as well as the affordable capital requirement to start the business on small scale.

The implementation of ICT in Nigerian paints industry has received significant impetus in recent time as paints companies are now multiplying online with tools such as e-mail, web presence, direct to consumer links (DTC) etc., but there is dearth of information regarding the impact of e-Marketing adoption on the profitability performance of the firms in the Nigerian paints industry. This paper is aimed at evaluating the role of e-Marketing on the profitability performance of the paints companies' in Nigeria by measuring and comparing the effects before and after e-Marketing adoption.

Nevertheless, studies in the past advocated that manufacturing company's still fall short of their sales target, despite the growing awareness of the use of ICT in marketing. Also, expenditure on ICT is usually looked upon as an unproductive overhead cost and it is difficult to directly measure ICT contributions as a result of its various hidden and intangible benefits [11]. Therefore, the need to empirically and systematically examine the influence of e-Marketing adoption on the profitability performance of the Nigerian paints manufacturing industry.

The study will be of great significance and serve as guide for investors and actors in the Nigerian manufacturing industry on how to successfully integrate marketing strategies with information and communications technology, thereby contributing immensely towards realisation of an improved sales performance and customer's satisfaction. It will also serve as a blue print for policy makers and stake holders to chart the right course of action for the development of ICT facilities and infrastructure for marketing in Nigeria.

2. Literature Review

This section discusses issues relating to the development of ICT in Africa and how it affects the Nigerian paints industry.

2.1. ICT Development in Africa

The overall ICT sector in Africa is experiencing a remarkable progress which has transformed peoples' lives and the way they contribute in developmental processes. Demonstrably, some Africa countries with low incomes tend to experience undeveloped infrastructure which poses challenges to accessing ICT but such is not insurmountable. To tackle such menace, ICT infrastructures in Africa are mostly being developed in terms of community shared facilities such as cyber-cafes, community information centre

etc., while strategies for drawing people to use these facilities are essential for developing African countries.

In the broadcasting arena, thousands of new local and community radio stations are now in operations and satellite TV is also widely used. For rural areas development, communication is inevitable as importance is now being attached to grassroots participation and sustainable development [12]. Rural radio is gaining popularity as a result of its inexpensive nature and the socio-culturally commitment as appropriate means of communication and is also known as the most accessible by most of the African populace.

Satellite TV is another renowned means of communication in Africa as satellite-based broadcasting stations have covered major activities on the continent in the last few years. For instance, many African countries are now connected to the popularly known South African based broadcasting company "M-Net" which deploys digital services direct-to-home subscribers' satellite called DSTV. This type of service provides access to several video channels and audio programmes to some part of Africa [12] while the indigenous ones in Nigeria are StarTimes, Daarsat, etc.

StarTimes is arguably the fastest growing pay TV in Nigeria. Being established in 2010, the licenced Digital Terrestrial Television (DTT) operator has really revolutionised the service of digital pay TV in Nigeria through its accessible business model. To an extent, StarTimes has proved its excellence and originality in the pay TV industry in Nigeria and was adjudged as the best pay digital channel provider in Nigeria in the year 2013.

Reports revealed that over 60 percent of the population of the sub-continent is reached by existing radio transmitter networks while national television coverage is largely confined to major towns and increasing number of commercial stations are being established following liberalisation of the sector in many African countries. Due to the convergence of technologies, some community radios are broadcasting on the internet which enables them to even reach wider audiences.

More so, the widespread use of the internet technology has grown rapidly in most urban areas in Africa as more mobile cell phones are now deployed on the continent than the number of fixed lines laid in the last century. Among African countries, South Africa, Nigeria, Egypt and Morocco still continue to be the leaders in terms of the region's number of subscribers. Internet World Statistics in 2007 revealed that there are about 778 million people in Sub-Sahara Africa with whom 152 million are mobile phone users and 20 million are Internet users.

Also, computers might have been the most important gateway to the internet in the past but the recent introduction of handheld electronic devices such as smart phones, iPad, etc. are increasingly being used to access internet on a daily basis. According to UNCTAD report in 2006, computer diffusion rates are still at lowest for Africa compared with the North America where it is virtually seen in every home. Ownership of PCs is as high as 74% in the OECD countries

compared with 5.6% among the lowest-income, an evident impact of the nexus of income-digital inequality. Broadband access to the internet has become a regular feature in developed countries' enterprises but the number of broadband subscribers in most African countries is still small and its penetration rates are less than 1 per cent even in countries that are more advanced in ICT, such as South Africa, Mauritius, Egypt and Tunisia.

In terms of ICT infrastructural facilities, the realisation of greater potentials of ICT in most places in Africa is still hindered with inadequate reliable infrastructure coupled with physical and regulatory inadequacies. Vulnerability of access to ICT infrastructure in the rural or remote areas and prevailing illiteracy level mostly among the rural areas dwellers in Africa further aggravate the difficulties.

Moreover, the enviable development in the telecommunications sector have been enormous resulting from the prevalence of wireless over fixed line communication devices in many countries in Africa. The mobile technology now brings communications to communities that formerly had little or no access to fixed line telephones. Mobile telephone services have proven to be easier accessible and more flexible to deploy than fixed line communications.

A major drawback against ICT development is deprived communications infrastructure in most African countries mostly due to the lack of terrestrial backbone facilities which encourages ensuing dependency on satellite communications. To curb this inadequacy, a number of ICT initiatives have taken place in the last two decades that were triggered to bridge the digital divide within Africa and between Africa and the rest of the world [12]. These include: the Africa Information Society Initiative, the Africa Connection and the e-Africa Commission.

In recent time, Africa has taken up the challenge of developing a modern telecommunications sector capable of supporting broad-based national economic and social development. As a result of telecommunication sector reform in many parts of the continent, there has been some viable improvement as this is eventually paying off in many African countries. Although ICT has contributed immensely to the economic development of Africa, some important challenges still remain.

2.2. ICT Diffusion in Nigeria

The adoption and development of ICT to nations of the world can be regarded as an important factor in the economic growth and development and there is a rising indication that Nigeria has realised the crucial roles of technology leading to the formulation of the Telecommunications and ICT policy, as well as the authorisation of an independent regulator for the sector. This improvement has created catch-up opportunities for Nigeria to attain desired levels of development without necessarily 'reinventing the wheels' of economic growth [13], and this new technology has brought about inevitable revolution in societies, which has immensely transformed most business scenes.

The realisation of the importance of ICT in socio-economic development encouraged the Nigerian Government to set in motion strategies that would ensure the effective participation of the country in the new information economy. This development paved the way for liberalisation, deregulation and competition in service delivery. ICT policy formulation and implementation in Nigeria is an assignment undertaken in each of the domains that make up the ICT sector. These are the broadcasting, telecommunications and information technology domains.

At the wake of 2000, the Federal Government of Nigeria embarked on an aggressive drive towards the provision of more efficient services in the nation through its privatisation and deregulation policies. The policy thrives led to the establishment of National Telecommunication Policy in December 2001. The policy, among other things, recognised the need for the establishment of an enabling environment for deregulation and rapid expansion of the telecommunication services in the country. More so, the Nigerian government created the National Information Technology Development Agency (NITDA) in 2001 to handle and implement all policies related to the adoption, development and use of ICTs in the country.

In Nigeria, the existence of Telecommunications Policy along with the ICT Policy is particularly remarkable. The Nigerian ICT policy is a comprehensive document that embraces all the key components of the vertical, infrastructural and horizontal policies as categorized by [14]. The vertical ICT policy addresses sectorial issues and needs such as manufacturing, transportation, agriculture, commerce and oil. Infrastructural policy deals with the development of national infrastructure that supports communications and linkages among the actors in a National Innovation System (NIS), while the horizontal aspect of the policy deals with the broader issues of society such as freedom of information, tariff and pricing, privacy and security.

The Nigerian Government mission statement was centered on the need to deploy ICTs for Education, Creation of Wealth, Poverty Eradication, Job Creation, and Global Competitiveness. The policy objective was to develop globally competitive quality manpower in ICTs and other related disciplines. It is also aimed at modernising and rapidly expanding the telecommunication networks and services which is anticipated to improve socio-economic development through internal integration of economic and social actors and thereby integrating Nigeria into the global telecommunications environment. Consequently, the implementation of ICTs policy led to the adoption of Global System for Mobile Communications (GSM) and its related components in Nigeria. After the Telecom policy was successfully initiated, the National Communication Commission (NCC) was subsequently established to implement the policy.

Following the release of an improved telecommunication policy in Nigeria in the year 2001, numerous Private Telephone Operators, Fixed Wireless Access Operators and Internet Service Providers have begun operations in Nigeria

[15]. The activities and interactions in the industry led to an increased competition which resulted into vast growth in the number of telephone lines in the country. Within the first six months after the take-off of the GSM in Nigeria, more than 350,000 mobile lines were activated. The existing operational fixed lines rose from 450,000 in December in year 2000 to 888,854 by March in 2004. At this time, mobile lines increased to 3.8 million [16].

However, as a result of seemingly insatiable appetite of consumers for phone services, and the potentials of the Nigerian market, investors pumped in US\$2.110 billion into the sector by December 2002, US\$2.55 billion by June 2003, and over US\$4.0 billion by March 2004 compare to initial investment which was just US\$50 million as at the end of 1999. [15] pointed out that investment in the telecommunication sector in Nigeria ranks second only to the oil industry. More so, the rate of use of mobile phone is on the increase in most developing countries while internet usage is considered to be rank next to it.

Notably, the vast increase in the capabilities and numbers of personal computers used in Nigeria has brought about rising use of the internet majorly driven by the integration of computing technology and telecommunications while the two areas have developed from analog to digital and then to packet technologies. The internet technology has emerged to become the dominant data communications system in use today, whether as the "public Internet" or "managed Internet."

The awareness about the potentials of using ICT to transform the national economy is already evident among the policy makers and leaders of the organised private sector and Nigerian government has taken several steps to create an enabling environment to attract investment and ventures by entrepreneurs, but a lot still has to be done to ensure their sustenance.

2.3. e-Marketing Innovation

e-Marketing is characterised as being subject to technology by enabling interactivity and thus differs from others in the contemporary marketing practises (CMP) framework. It involves establishing an electronic dialogue that provides individual customers access to information, and in turn, the use of interactive technologies which allows these customers to provide information to the business. Even though eM may be seen as ICT-based advertising and communications [8], the perspective taken is broader and more generic. It entails and being supported by other interactive technologies related to customer relationship management, sales activity, research, analysis and planning [17].

According to [4], eM is related to the marketing practises of database, network and interaction marketing. A theoretically based classification of marketing practises was empirically developed and validated by [6]. It is referred to as the CMP framework, and it characterises marketing as multiple and complex processes. e-Marketing focuses on real-time dialogue that is enabled and mediated by information and communications technology which builds on

and enhances database marketing.

Similarly, eM can build on and enhance network marketing as customers and firms can be electronically networked (in the form of online communities, alliance partners, etc.), and the interactive nature of the technology means customer information can be used to individually customise the product or service offer. e-Marketing can also act as a substitute for traditional interaction/relationship marketing where there is face-to-face interpersonal contact based on social processes. The relationships formed in eM are reliant on technology to enable interactivity and thus have the potential to substitute for face-to-face interpersonal contact. With the CMP framework, an organisation can examine the extent to which an adoption of eM can integrate successfully with other marketing practises, and evolve to a point that it becomes an independent practice.

The interpretation of eM is broader than that of [8] which restricted eM to internet advertising and communications. Embracing broader definition of eM will have immense impact on the generic business processes of communications, internal administration, order taking, and procurement as argued by [18] which in turn is expected to lead to improved firm's performance.

2.4. Empirical Literatures on e-Marketing and Its Performance

Various empirical studies in the past have revealed that marketing activities were slower than other functions in business cycle and that the deployment of ICT in marketing was predominantly for productivity or automation purposes by focusing more on routine or tactical activities [19, 20, 21]. Nevertheless in the last two decades, ICT development and its influence on business activities have been in the forefront of scientific thinking [22].

However, Sandvik in his studies in 2003 established that marketing as an innovation has a positive effect on sales growth and performance of firms. This substantiates that if an organisational marketing prowess and potentials are efficiently and effectively harness with other forms of technologies, such an organisation is bound to be among the top in such industry. Marketing innovation would also boost sales through the increasing demand for products, which in turn yields additional profit to innovative firms [23]. In the same vein, [24] concluded with strong indications that market innovation positively influenced business performance and profitability.

Empirical study revealed that the e-Marketing approach is not widely practised 'at a high level' as most firms concentrate more on traditional marketing practises, and where it is practised, it occurs in support rather than as a separate marketing approach [6]. They suggested that the practical application of communicational or interactive technologies is in its infancy. They were aware of the developmental aspects of ICT and suggested that "decisions as to the implementation of e-Marketing will require a clear understanding of both the firm's capabilities to implement and support 'e' operations and their customer's

preferences/capabilities to participate in electronically-interactive relationships".

Another study on e-Marketing penetration involving 212 US-based firms conducted in 2002 and also in 2005 involving 139 US-based firms by [1] compared the 2002 results with the 2005 and they concur with [8] argument that eM is 'starting to come of age'. They believed that with an increase from 63% to 71% of firms reporting 'medium' or 'high' levels of eM, it is evident that eM is no longer 'new' but rather, is becoming an established marketing practise within the majority of firms. Although this level of penetration is not as high as for the other marketing practises, it is approaching a comparable level [1].

It was also affirmed that eM is evolving as a practise that is highly integrated with and thus enhancing and supporting existing marketing practises rather than becoming an independent practice [1]. They also showed a strong positive relationship between eM penetration and performance, especially 'acquisition' performance (such as sales growth and new customers gained) and customer retention performance revealing that firms adopting eM will perform better". More so, [25] in their studies recognised that the biggest problem that marketing and advertising practitioners are confronted with is their inability to accurately measure the returns on investment eM provided their businesses.

2.5. The Nigerian Paints Industry: An Overview

The Nigerian paints industry has been in existence for a number of years, which is highly competitive in nature and gives room for free entry and exit of investors. According to [10], the Nigerian paints and coatings market grew from an estimated value of \$200 million in 2012 to \$218 million in 2013, but the industry is primarily import dependent with over 70 percent of the raw materials sourced from abroad. Recently, the enactment of the local content law which gives directive to the major international oil companies to support the initiative that at least 60 percent of the materials needed for production should be sourced locally is expected to assist in the development and sustainability of the Nigerian paints industry.

The paints industry is a raw material intensive in nature with about hundreds of inputs going into the manufacturing processes. With raw material prices and tariffs expected to come down in the next few years, the organised sector's operating profits margin should go up substantially. The raw materials for paints maybe classified into five segments namely: pigments, solvents, binders, additives and white cement/urea and they account for about 50% of total production cost. The profitability performance of the industry is sensitive to international prices of petrochemical products as paints firms benefit more when the prices are at minimum and vice versa.

Information gathered has it that many investors get attracted to paints production business primarily as a result of inefficient government regulatory practices and does not require huge technological investment to manage. This has inevitably resulted to increased number of players and the lowering

quality of products in the industry as most of the fraudulent players produce sub-standard paints products at relatively cheaper rate which enables them to sell at a lower price.

However, the demand for paints is relatively price elastic in nature and the industry majors have a vast dealership network across the country, while they also maintain high inventory levels to meet the needs of their customers. Another key feature of the Nigerian paints industry is the existence of various tiers characterised by criteria such as market share, turnover, product quality, reputation, technology and so on. The industry operators in Nigeria can be classified into three broad categories: the first, second and third tiers. The first tier category constitutes the major players which control larger shares of the market and have been in operation for many years. Examples in this category are Berger Paints, Chemical and Allied Products Plc. (CAP Plc.), DN Meyer Plc, International Paints West Africa Plc. (IPWA Plc.) etc.

The second category consist mainly the medium sized operators with less control of market shares. The equities of companies under this category are being controlled by few private individuals while the third tier category comprises of companies with relatively larger customer patronage than their mid-tier peers which are characterised by lower price advantage but are restricted based on quality.

The Standards Organisation of Nigeria (SON) is the major regulatory body for the paints industry. They have been at the forefront of ensuring quality standards in the industry. It has made efforts to maintain minimum standards for paints manufacturing but challenged by large number of players in the industry. Such standardisation has improved the overall quality level of paints produced in recent times and bestows a responsibility on the lower tier companies to improve on their quality levels in order to compete more efficiently in the industry.

The industry has progressed well and moving ahead is likely to be influenced by several factors including new technologies, new innovative products, new associations, consolidation of industry and performance in the international market. The Nigerian paints and coatings industry is riding high in terms of growth noticeably in the automobile industry, new constructions in the housing sector and improving infrastructure throughout the country.

3. Methodology, Model Specifications and Findings

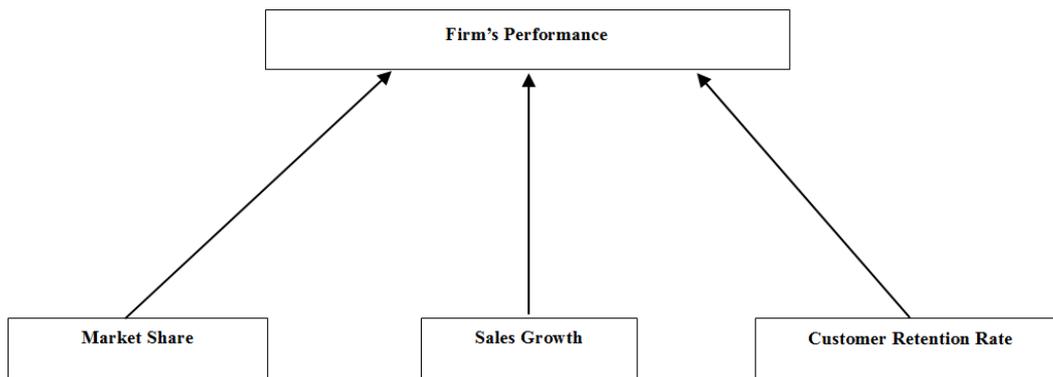
The data for this study was obtained from a survey conducted in 2014. The study covered states in the Southwestern, Nigeria. This was as a result of the fact that majority of the paints companies in Nigeria are situated in the region while other regions in the country depend solely on regular supplies from the paints firms from the Southwestern part of Nigeria which are achieved through effectual vast dealership networks they operate. The paper also employed a structured questionnaire to collect data from randomly

selected paints manufacturing firms drawn from the Nigerian business directory. Albeit, only paints companies belonging to the International Standard Industrial Classification (ISIC) Rev.3 code 15-37, were selected for the study. This was based on the definition of SME's by Nigeria National Council on Industry in terms of employee number as one between 11 and 100 employees [26]. The questionnaire were administered on the Chief Executive Officers, Heads/Senior Officers of Marketing/Sales department and other employees identified to be relevant to the study. A total number of 203 completed questionnaire representing 84.5% response rate were used in this work. The pattern of distribution of the respondents was in line with a prior expectation of having more of paints manufacturing firms in Lagos State, Nigeria and its environs with a progressive decrease as one moves away from the city. This was as a result of the location and commercial nature of city which still remains the commercial hub of the country. This make it easier for paints companies to procure raw materials needed for production from the outside world with very high potential for rapid economic and sales growth.

The statistical analysis adopted for the study was the Least squares multiple regression for estimating the model which are more than one independent variable. This statistical technique seeks to determine the nature of relationship among the selected variables [27]. The performance model adopted in the study was in line with the [28], who recognised that there are numbers of profitability performance indicators, which are market share, sales growth and customer retention. The model examines whether each of the indicators have significant impact on the profitability performance of the sampled firms and also whether they jointly have impacts on firms' performance. The number of employee in the firm was used to proxy market share, sales growth and customer retention rate. The model further shows the direction of relationship between performance measures and firms' profitability rate. The statistic aims to examine whether changes in one or more variables lead to changes in other variable(s). The attention of this paper is central on market share, sales growth and customer retention rate.

The firms were asked to indicate their firm's estimated market share rate and sales growth performance in percentage before and after the adoption of eM to ascertain the performance over the period. Also, respondents were asked to rate their companies' customer's retention performance before and after the adoption of eM.

This model describes the relationship among the firm's profitability, the market share, sales growth and customer retention rate. Performance is used as a proxy for firm's profitability while information on market share (i.e. total market that a firm controls for a particular product or product category), sales growth (i.e. the value of goods and services provided to customers during a specified time period - usually one year) and customer retention (i.e. set of steps taken or processes implemented to reduce customer defections or churn rate) are used as proxies for performance indicators.



Source: Authors

Figure 1. Conceptual Framework for the study.

3.1. Model Specifications

This section provides the model for the conceptual framework in Figure 1. The model of the framework can be written as:

$$FPP_b = f(MKS_b, SLG_b, CTR_b) \quad (1)$$

$$FPP_a = f(MKS_a, SLG_a, CTR_a) \quad (2)$$

Where $LFPP_b$ and $LFPP_a$ = Logs of firm's profitability performance before and after the adoption of eM respectively

MKS_b and MKS_a = Market Share Rate before and after the adoption of eM respectively

SLG_b and SLG_a = Sales Growth Rate before and after the adoption of eM respectively

CTR_b and CTR_a = Customer Retention Rate before and after the adoption of eM respectively

The Equations (1 and 2) can be logged, so as to reduce the stochastic error term and expressed as

$$LFPP = \alpha_0 + \alpha_1MKS + \alpha_2SLG + \alpha_3CTR + U_t \quad (3)$$

Where α_0 = Constant factor

α_1, α_2 and α_3 = Coefficient of market share, sales growth and customer retention rate of firms respectively.

3.2. Study Hypothesis

Four hypotheses were formulated to examine the impact of

the market share, sales growth and customer retention rate of firms on the profitability performance. These are stated below:

Hypothesis 1 $H_0: \alpha_1 = 0; H_1: \alpha_1 \neq 0$

Hypothesis 2 $H_0: \alpha_2 = 0; H_1: \alpha_2 \neq 0$

Hypothesis 3 $H_0: \alpha_3 = 0; H_1: \alpha_3 \neq 0$

Hypothesis 4 $H_0: \alpha_1, \alpha_2, \alpha_3 = 0; H_1: \text{At least one } \alpha_k \neq 0, \text{ where } K = 1, 2 \text{ and } 3.$

From Hypothesis 1 to 3, H_0 is the Null hypothesis and it states that each independent variable has no significant impact on the firm's profitability performance before and after the adoption of eM while the Alternative hypothesis H_1 means that each independent variable has a significant impact on firm's profitability performance before and after the adoption of eM. Meanwhile, H_0 in Hypothesis 4 shows that the independent variables are not jointly significantly important in explaining changes in firm's profitability performance before and after the adoption of eM while H_1 in Hypothesis 4 illustrates that at least some variables in the model are jointly significant in explaining the firm's profitability performance before and after the adoption of eM.

3.3. Results and Discussions

The results of the study are shown in the tables below with discussions.

Table 1. Regression results before the adoption of eM.

Dependent Variable	FPP _b			
Sample	203			
Variable	Coefficient	Std error	t-statistic	Prob(p-value)
MKS _b	0.175	0.098	1.780	0.078
SLG _b	0.159	0.070	2.263	0.026
CTR _b	0.125	0.065	1.928	0.056
C	2.094	0.295	7.104	0.000
R ²	0.128			
F-statistic	5.190			
Prob. (F-statistic)	0.002			

Source: Authors' Analysis (2015) using SPSS 20.0

The ANOVA analysis before adoption of eM shows that the probability value (P-value) of 0.002 depicting that the null hypothesis cannot be rejected at 10%, 5% and even 1%. Thus, there is no significant difference between the dependent variable (profitability level) and the independent variables (customer retention rate, sales growth, market share). This implies that all the independent variables are jointly significant in explaining the dependent variable. The regression result shows that profitability is positively related to customer retention rate, sales growth and market share. Each of the independent variables also significantly affected

the profitability performance of the firms using 10% level of significant. Market share has more influence on profitability of the firms with coefficient of 0.175 as against that of sales growth of 0.159 and customer retention of 0.125. More so, before the adoption of eM, the independent variables can only explain or is responsible for 12.8% of the factors influencing the performance of the paints companies. In other words, with $R^2 = 0.128$, the result indicates how much of a dependent variable can be explained by the independent variables.

Table 2. Regression results after the adoption of eM.

Dependent Variable	FPP _a			
Sample	203			
Variable	Coefficient	Std error	t-statistic	Prob(p-value)
MKS _a	0.054	0.092	0.582	0.562
SLG _a	0.538	0.082	6.571	0.005
CTR _a	0.064	0.084	0.762	0.447
C	1.067	0.355	3.007	0.003
R ²	0.324			
F-statistic	16.965			
Prob. (F-statistic)	0.005			

Source: Authors' Analysis (2015) using SPSS 20.0

The ANOVA result after the adoption of eM by firms shows that the probability value (P-value) of 0.005 depicting that the null hypothesis cannot be rejected at 10%, 5% and even 1%. Thus, there is no significant difference between the dependent variable (profitability level) and the independent variables (customer retention rate, sales growth, market share). This is similar to the ANOVA result before the adoption of e-Marketing. However, the regression result after the adoption of eM shows that while the market share, sales growth and customer retention have positive relationship with the profitability of the firms, sales growth has more influence on the firm's performance in general. This is shown by the coefficient of 0.538 for the sales growth as against that of market share and customer retention of 0.054 and 0.064 respectively. The probability values show that it is only sales growth that significantly impacted profitability of firms after the introduction of eM at 10% with the p-value of 0.005 as against that of market share (0.562) and customer retention (0.447). Also, the study revealed that after the adoption of eM, the independent variables are only responsible for 32.4% ($R^2 = 0.324$) change in the profitability performance of the industry.

Conclusively, the information depicted in the table indicated an increase in the paints company's market share and customer retention rate, but more impressively in sales growth which was as a result companies' deploying eM for marketing activities. This is in correlation with the findings of [18] which discovered a positive relationship between e-Marketing and firm's performance where a comprehensive conceptual model that included antecedents of e-Marketing

adoption and performance were considered in their study. This conformed to this study from the scenario of the Nigerian paints industry and also to the [8] findings which say that e-Marketing is "starting to come of age".

4. Conclusion

This paper has been able to examine the impact of e-Marketing on the profitability performance of the Nigerian paints industry by comparing the effects before and after ICT adoption for marketing purposes. The results from the study affirmed that the market share, sales growth and customer retention rate with p-values of 0.078, 0.026 and 0.056 respectively before the adoption of e-Marketing have significant impact on paints company's profitability performance at 10% level of significant, while the regression coefficient shows that market share has more influence on profitability of the firms with coefficient of 0.175 as against that of sales growth of 0.159 and customer retention of 0.125 before the adoption of e-Marketing. However, it can concluded that the market share and customer retention with p-values of 0.562 and 0.447 respectively after the adoption of e-Marketing have significant impact on paints company's profitability performance at 10% level of significant, while sales growth with p-value 0.005 after the deployment of e-Marketing has significant impact on paints firm's profitability performance at 1% and 5% level of significant, whereas the regression result shows that sales growth has more influence on the profitability of the industry as at the time of this study. This

is shown by the coefficient of 0.538 for the sales growth as against that of market share and customer retentions of 0.054 and 0.064 respectively after the adoption of e-Marketing. This could distinctly be as a result of the role ICT plays on the marketing activities and automation in the Nigerian paints industry which was manifested as sales growth improved remarkably after the adoption of e-Marketing.

The Nigerian paints industry is envisaged to intensify the use of ICT in coming years and embrace more of e-Marketing facilities for their daily operations and automations so as to create a competitive advantage environment which will further stimulate their turnover and profitability level. Also, it is necessary for the industry to carry out need analysis and assessment before acquiring a specific ICT for marketing and operations. Aggressive marketing strategies should be embedded into future plans of firms by deploying ICT as a driver for growth as this would guarantee optimum utilisation of ICT facilities in the industry at the long run. Therefore, the study concludes that the deployment of appropriate ICT infrastructures in the companies would enhance the production and sales growth of the Nigerian paints industry.

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