

RE-DISCUSSING THE EFFECT OF INFORMATION COMMUNICATION TECHNOLOGY ON MARKETING PERFORMANCE OF AUTOMOBILE PRODUCTS IN NIGERIA

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ABSTRACT

This study re-discussed information communication technology and marketing of auto mobile product in Nigeria. The sampling object used for this research comprises of the dealers of automobile products and gadgets in Onitsha, Anambra State. This study was done in respect of measures of information communication technology; mobile application, artificial intelligence, and internet (independent variables), on marketing performance (dependent variable) and responses from the respondents were collected with the aid of five (5) point likert scale questionnaire. This study adopted descriptive survey research design was adopted for the study because the researcher collected primary data from respondents using questionnaire to collect primary data. The questionnaire was coded with the aid of excel spread sheet, the respondents profile was analyzed with manual simple percentage, the research questions was analyzed with the aid of descriptive statistics which comprises of the minimum, maximum, mean and standard deviation. The hypotheses of the study were tested using the multiple regression statistical tools with the aid of SPSS version 24.0 as the basis of testing hypotheses. The findings revealed that there is significant effect between information communication technology; mobile application, artificial intelligence, and internet and marketing of automobile products in Nigeria. The study recommended that firms could devise ways and means to deploy and sustainably apply artificial intelligence systems, which can improve the operations and processes of their firms. The use of these systems and programs improves operational efficiency and quality of service delivery, which has a positive impact on the overall performance of the company.

Key Words: Information Communication Technology; Mobile Application, Artificial intelligence, Internet, Auto Mobile Product and Marketing Performance

INTRODUCTION

These developments and changes offer many advantages and opportunities to enterprises. Enterprises that develop strategies by foreseeing these developments and changes will have achieved a remarkable economic performance. The fact that these developments in the internet and information and communication technologies (ICT) have made a great contribution to the internationalization of enterprises is a generally accepted approach (Bell & Loane 2024). Moreover, it provides new ways for enterprises to conduct their business, has an exchange of ideas and information and

transfer them (Weill & Vitale, 2025). Therefore, these developments have become an important parameter in the success and sustainability of automobile enterprises. Enterprises that are able to make use of the advantages and opportunities in ICT will make as important contributions to their own future as possible. This is because the right ICT strategy will improve automobile marketing as well as competitive advantage.

With the development of ICT, there have been significant changes in the habits of consumers and marketing activities of companies (McAlarcón-del-Amo, Criado, & Josep, 2023).

ICT is especially used in marketing to create value for customers, build customer relationships and manage stakeholders to benefit them (Strauss, El-Ansary & Frost, 2018). For example, many enterprises with the necessary ICT infrastructure are able to conduct real-time marketing activities for their customers. Additionally, it provides the advantage of gathering intelligence about international markets and promoting customers in new markets at low costs (Quelch & Klein, 2016). Therefore, this situation increases marketing performance and keeps operational costs to a minimum. In the literature, the effect of ICT on the marketing of automobile products is addressed. Therefore, this study will make important contributions to filling the gap in the literature. This study will contribute to the literature particularly in this matter.

Statement of Research Problem

In industry characterized by competition and alternative service providers, consumers have freedom to choose from among the available alternative product and service providers. In such a case, the market leadership and competitive advantage should shift from one service provider to another but in the case of automobile companies. Despite strategies and efforts made by other players in the automobile industry such as artificial intelligence, the application of internet and mobile applications, attractive offers like promos and efficient ordering processes, these efforts did not translate into competitive advantage and there was constant market leadership dominance by the same company. This study discussed information communication technology on marketing of automobile products. The significance of the links between the analyses also is highlighted to help firms understand the findings and take relevant action. In the context of this study, IT firms are businesses that focus on setting up and building an information technology system for clients by combining or isolating

hardware, software, networking, and storage solutions from different vendors.

Objectives of the Study

The study re-discussed information communication technology on marketing performance of automobile products in Nigeria. The specific objectives are to:

- i. determine the impact of mobile application on marketing performance of automobile products in Nigeria
- ii. investigate the impact of artificial intelligence on marketing performance of automobile products in Nigeria
- iii. establish the impact of internet on marketing performance of automobile products in Nigeria

REVIEW OF LITERATURE

Information and Communication Technologies

In addition to being a concept as old as human history, communication has never lost its value for human beings. The fact that communication is the most important tool enabling people to understand each other and to provide information is the most important reason for that. Soon after the invention of electricity and electromechanical power, the technological factor in communication between people has created great changes (Vural & Sabuncuoğlu, 2024). These developments have increased the interest of scientists in ICT. In the literature, the concept of information and communication technologies has been defined in many different ways. UNESCO (2016) describes ICT as technologies used in the transmission, storage, sharing and exchange of information. Erdoğan and Bilir (2022) described ICT as the whole of technology through which information is transmitted via spreading networks. Other communication activities such as Internet service, IT equipment, network-based information services, media

and broadcasting are included in the scope of ICT (UNEC, 2019).

Nowadays ICT progresses rapidly and has a great impact on the applications of the digitalized business world. By means of ICT, enterprises can innovate products and services, publish information and news related to enterprise in digital media, develop creative and flexible business strategies and take many more actions (Weill, Subramani, & Broadbent, 2022). Furthermore, ICT is the most important tool that can be used to maintain and strengthen the strategic competitive advantage in a constantly changing and developing business world (Mastilo, 2017).

Information Communication Technology and Marketing Performance

IT has become a competitive weapon that may affect an industry's structure. Galliers (2014) indicated that due to the quick speed of technical advancements and the influence of information technology on the changing competitive environment, organizations must assess their management of information and technology resources to meet their strategic objectives. The firm-level analysis in industrialized nations is one of the greatest pieces of evidence of IT's influence (OECD, 2023). Most of these studies study sectors and enterprises using growth accounting and econometric models.

Gretton (2022) revealed favorable and substantial correlations between IT use and growth in manufacturing and services. IT has a strong influence on productivity (Brynjolfsson & Hitt, 2013). (Pilat & Wolf, 2014) examined the role of ICT-producer and key ICT-consumer sectors in explaining overall productivity growth in OECD countries. They found that ICT-producer sectors have the most impact in Finland, Ireland, and Korea, while ICT-consumer sectors in the US and Australia had impressive growth in the second half of the 1990s. (Hempell, 2014) evaluated Dutch and German service industry panel data and concluded ICT capital deepening and innovation boost productivity. In 1991, MIT

researchers found that information technology provides the platform for success, but organizational variables are key to achieving the benefits of automation and "informatizing" process (Zuboff, 2018). Information technology is innovative. Even while innovations provide organizations with new approaches to solve issues and improve performance, there is still a lot of study and discussion on how innovations should be adopted and managed and how they affect organizations on different levels.

Theoretical Elucidation

The research involved the construction of a conceptual framework for the technological acceptance model from the perspective of measuring the technological device's utilization. Emerging information technology is incapable of enhancing organizational effectiveness if it is not adopted and utilized by potential users. Among practitioners and academics, the Technology Acceptance Model (TAM) is one of the most successful evaluations of computer utilization efficiency (Davis, 1989). TAM is congruent with Rogers's (1983) thesis on the diffusion of innovation, which states that technological adoption is dependent on a range of factors, including relative advantage and usability. TAM addresses two specific beliefs: perceived usefulness and perceived ease of use. Perceived usefulness is the extent to which an individual believes that using a system will enhance his performance. Perceived ease of use is the degree to which an individual believes that using a system will be simple. TAM not only seeks prediction, but also explanation, in order to assist academics and practitioners in determining why a specific system may be unsatisfactory and in taking relevant action.

METHODOLOGY

The cross-sectional research design was used in order to generate the relationship between the variables over a period of time. The study was conducted in Onitsha, Anambra State.

Onitsha market comprises flock of dealers of Automobile products and gadgets. The population was comprised of 100 members from whom the researcher purposefully selected 42 owners and 58 employees that are engaged in Automobile Businesses and related transactions because of their willingness to participate and provide data required for this study. The sample size for this study comprises a total of 100 respondents. The number of respondents was based on the number of automobile and gadget dealers that were willing to participate in the study. The study adopted purposive random sampling technique. Structured questionnaire was used since the aim of the study is to assess the effect of information communication technology on marketing performance. To ensure face validity of measurement procedure, content validity was conducted to examine the face validity of questionnaire items and to make sure the instructions in the questionnaire would be adequate. This study used Cronbach's alpha to assess the internal consistency of variables in the research

instrument. Data was obtained, edited and then analyzed to produce meaning full information. This was done to eliminate errors in order to ensure that only correct and vital information were identified and used to draw conclusion. Both qualitative and quantitative analytical techniques was used to analyze qualitative and quantitative data respectively, like; means, percentages, Pearson's coefficient of correlation coefficient, frequency tables and Excel to draw graphs, among others.

RESULT AND DISCUSSION

Presentation of Data

One hundred (100) copies of questionnaire were administered for this study, but only ninety three (93) copies were retrieved. Out of the ninety three (93) copies on seventy copies (70) were properly filled by the respondents and used for the study analysis. The data were analyzed using multiple Regression statistical method. Data analyzed are as presented below:

Table 1: Questionnaire Administration

Questionnaire	Number	Percentage (%)
Retrieved questionnaire	93	93.0
Questionnaire not retrieved	07	7.0
Distributed questionnaire	100	100%

Source: Field Survey Analysis (2026)

As indicated in Table 1, a total of 93(93%) copies of the questionnaire were retrieved, while 7(7.0%) copies were not retrieved. Out of the ninety three (93) copies retrieved,

twenty three (23) copies were not properly filled, thus only seventy (70) copies were proper filled and used for the analysis.

Table 2: Sex of Respondents

S/N	Gender	Respondents	Percentage (%)
1	Male	38	54.3
2	Female	32	45.7
	Total	70	100

Source: Field Survey Analysis (2026)

Table 2 shows that 38(55.2%) of the respondents are males while 32(45.7%) are females. This indicates that the males were more in number than the female respondents for this study.

Table 3: Marital Status

S/N	Status	Respondents	Percentage (%)
1	Single	43	61.4
2	Married	27	38.6
3	Divorced	-	-
4	Separated	-	-
	Total	70	100

Source: Field Survey Analysis (2026)

Table 3 shows that 43(61.4%) of the respondents are single, while 27(38.6%) of the respondents are married.

Table 4: Trade Experience

S/N	Years	Respondents	Percentage (%)
1	1-5	22	31.4
2	6-10	38	54.2
3	11-15	7	1
4	Above 16 years	3	0.4
	Total	70	100

Source: Field Survey Analysis (2026)

Table 4 shows that 22(31.4%) of the respondents had 1-5 years trading experience, 38(54.2%) respondents had 6-10 years trading experience, 7(1%) respondents had 11-15 years trading experience, while 3(0.4%) respondents have above 16 years trading experience.

Table 5: Educational Background of Respondents

S/N	Educational Qualification	Respondents	Percentage
1	SSCE	4	0.6
2	HND/B.Sc.	54	77.1
3.	M.Sc./MBA	11	15.7
4.	Others	1	0.014
	Total	70	100

Source: Field Survey Analysis (2026)

Table 4.5 shows that 4(0.6%) of the respondents had SSCE certificate, 54(77.1%) respondents had HND/B.Sc. certificates, 11(15.7%) respondents had M.Sc./MBA certificates and 1(0.014) respondent had other certificate.

Regression Analysis

The regression analysis was employed as the statistical tool for testing of the hypotheses formulated for the study

Decision rule:

The null hypotheses will be accepted if the p-value (calculated value) is greater than the set level of significance (critical value) of 0.05(5%) and reject the null hypotheses (i.e. accept the alternate) if it is less than the critical value.

Table 5: Regression Analysis for Information Communication Technology and Marketing Performance**Variables Entered/Removed^a**

Model	Variables Entered	Variables Removed	Method
1	Mobile Application, Artificial Intelligence, Internet		Enter

a. Dependent Variable: Marketing Performance

b. All requested variables entered.

Table 6: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.866 ^a	.549	.456	1.028

a. Predictors: (Constant), Mobile Application, Artificial Intelligence, Internet

Source: Field Survey Analysis (2026)

All analysis revealed the extent to which information communication technology accounted for change in marketing of automobile products in Nigeria as indicated by the adjusted R Squared value which showed

great positive responses of the change in marketing performance is brought about by the use of information communication technology

Table 7: ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	24.966	4	6.241	5.901	.000 ^b
	Residual	142.777	135	1.058		
	Total	167.743	139			

a. Dependent Variable: Marketing Performance

b. Predictors: (Constant), Mobile Application, Artificial Intelligence and Internet

Source: Field Survey Analysis (2026)

The *F* ratio in the table above test whether the overall regression model is a good fit for

the data. The table indicated that information communication technology statistically significantly predict marketing of auto mobile products in Nigeria, $F(4, 135) = 5.901$, $p < 0.05$ (this indicates that the regression model is a good fit for the model

Table 8: Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.194	.565		5.658	.000
	Mobile Application	.183	.083	.208	2.198	.030
	Artificial Intelligence	.544	.122	.411	4.450	.000
	Internet	.153	.063	.210	2.438	.016

Source: Field Survey Analysis (2026)
The result from the regression analysis on table 7 showed that mobile application exhibit positive effects on marketing performance (β

Test of Hypotheses

Hypothesis One

H0₁: mobile application does not have significant effects on marketing of automobile products in Nigeria

Decision Rule: Reject null hypothesis (H0) if p-value is less than 0.05 if not, do not reject. The results from the regression analysis on table 4.12 showed that the calculated level of significance which is 0.030 is less than the p-value of 0.05 i.e. (sig value $0.030 < p$ value 0.05). The stated null hypothesis is rejected thereby accepted the alternate hypothesis which implies that mobile application does have significant effects on marketing of automobile products in Nigeria

Hypothesis Two

H0₂: artificial intelligence does not have significant effects on marketing of automobile products in Nigeria

From the results showed from the regression analysis on table 4.12 the calculated level of significance which is 0.000 is less than the p-value of 0.05 i.e. (sig value $0.00 < p$ value 0.05). The stated null hypothesis is rejected thereby accepted the alternate hypothesis which implies that mobile application does have significant effects on marketing of automobile products in Nigeria

Hypothesis Three

H0₃: internet does not have significant effects on marketing of automobile products in Nigeria

Results from the regression analysis on table showed that the calculated level of significance which is 0.016 is less than the p-value of 0.05 i.e. (sig value $0.016 < p$ value 0.05). The stated null hypothesis is rejected

= 0 .208, $P > 0.05$). Artificial intelligence exhibit positive effects on marketing performance ($\beta = 0.411$, $P > 0.05$), and internet has positive effects on marketing performance ($\beta = 0 .210$, $P > 0.05$),

thereby accepted the alternate hypothesis which implies that mobile application does have significant effects on marketing of automobile products in Nigeria

Discussion of Findings

The results revealed that there is a significant positive effect between mobile application and marketing performance. The results revealed that there is a significant effect between mobile application and marketing performance at 0.000. Also, the model summary table revealed that the r value is 0.866^a. The r squared value of 0.549 depicts a near goodness of fit relationship between mobile application and marketing performance. The adjusted r square value on its own part shows 0.456 implies that 45.6% of the variants of mobile application used in this study positively affect marketing performance. The result from the regression analysis showed that mobile application exhibit a positive effect on marketing ($\beta = 0 .208$, $P > 0.05$).

The results revealed that there is a significant positive relationship between artificial intelligence and marketing performance. The results revealed that there is a significant relationship between artificial intelligence and marketing performance at 0.000. Also, the model summary table revealed that the r value is 0.866^a. The r squared value of 0.549 depicts a near goodness of fit relationship between artificial intelligence and marketing performance. The adjusted r square value on its own part shows 0.456 implies that 45.6% of the variants of artificial intelligence approach used in this study affect marketing performance of automobile products in Nigeria. The result from the regression analysis

showed that between artificial intelligence exhibit a positive effect on marketing performance ($\beta = 0.264$, $P > 0.05$).

The results revealed that there is a significant positive relationship between internet and marketing performance. The results revealed that there is a significant relationship between internet and marketing performance at 0.016. Also, the model summary table revealed that the r value is 0.866^a. The r squared value of 0.549 depicts a near goodness of fit relationship between internet and marketing performance. The adjusted r square value on its own part shows 0.456 implies that 45.6% of the variants of internet measures used in this study affect positively marketing. The result from the regression analysis showed that internet exhibit a positive effect on marketing ($\beta = 0.210$, $P > 0.05$).

CONCLUSION AND RECOMMENDATIONS

Conclusion

The primary purpose of the study was to evaluate the impact of information communication technology on marketing of automobile products in Nigeria. Therefore, the

Recommendations

The study recommended the following:

- i. the findings indicated that fewer firms make use of the systems and applications that are widely available, thus it is imperative that

findings of the study indicate that investments in information technology have a very strong correlation with marketing performance in comparison to other variables. As a result, it is possible to draw the conclusion that local businesses ought to carefully consider their investments in information communication technology in order to improve their marketing performance of their products.

In addition to this, the study reveals that the use of information communication technology in terms of hardware is shifting toward mobile devices, which indicates that mobility is replacing stationary devices. On the other hand, in terms of application usage, the study reveals that businesses are not making as much use of these technologies as they could be, but their responses indicate that they are in agreement that these technologies have a positive impact on their overall performance. This study has proved, in a nutshell, that the usage of information technology, adoption of information technology, and investment in information technology all have a significant and beneficial impact on the enhancement of performance on automobile firms in Nigeria.

those firms get themselves up to the speed with the most recent technological developments in the fields of computer hardware and software.

- ii. Based on the reports provided by the respondents, the majority of businesses have automated internet processes by implementing technology-driven

solutions. However, this automation internet process does not take place on a larger scale than what was indicated by the mean score, which was in the moderate range.

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