



The Media and Consumers' Buying Behavior Nexus: Analysis of the Effect on Zartech Limited

¹Adah Amona Akpa, ²Alabi Jacob Abu, ³Onuh Sixtus Samuel, ⁴Julian Chukwuemeka Ibe

¹Department of Economics, Nasarawa State University Keffi, Nasarwa State, Nigeria.

²Department of Entrepreneurial Studies, National Open University of Nigeria, Abuja

³St Albert Institute, Kafanchan, Kaduna State, Julian Chukwuemeka Ibe, Seat of Wisdom Academy, Zaria, Nigeria

⁴Seat of Wisdom Academy, Zaria, Nigeria

DOI: <https://doi.org/10.55248/gengpi.2022.3.11.1>

ABSTRACT

The study was undertaken in a bid to assess the effects of media penetration (social media and legacy media) on consumers' buying behavior (consumers' preference and utility) with reference to Zartech Limited (Ltd). Responses were elicited from 370 (Returned out of 400) questionnaires determined through the Taro Yamane (1967) sampling formula. Survey design and multivariate model were employed for the study from which the regression analysis result showed a significant positive relationship between media penetration and consumers' buying behavior of Zartech Ltd. To enhance market leadership across Nigeria and revenue yield, Zartech Ltd should increase social media advocacies on its products as a percentage increase in social media advocacy will lead to 28% and 40% increase in consumers' preference and satisfaction respectively of Zartech poultry products.

Keywords: Media, Consumers' Preference, Consumers' Utility, Niche Theory, Zartech Ltd

1.1 Introduction

Production is complete when and only if the product gets to the final consumer. The channel of production is constrained with promotion and product awareness as advertisement is seen by Sama (2019) as a critical part of marketing strategy, especially in a business-to-consumer context. A product is less relevant if the targeted population has less information on the product price, quality, new brand, contents, and mix which serves as the competitive edge over competitors. Firms and organizations in the quest to entice customers often engage in sales promotions such as bonanza, discounts, free trials, credit sales, among others which are enormous on revenue and profit of firms. This growing concern and burden on firm's revenue to a large extent is mitigated by promotion through legacy media (old media) and social media penetration in the society. Empirical studies (Attafuah, 2020; Sama, 2019) showed a significant positive relationship between the use of traditional media and consumers' buying behavior which translate to growth of business and national economies.

Despite the breakthrough in the use of traditional media to curb the increasing burden of sales promotion on firm's revenue, sales promotion through the legacy medium such as the newspaper, television, radio, billboards, and print media were constantly mounting huge financial burden on firms' revenue base owing to high advertorial charges by old media firms. Diel (2017) in his study on new and legacy media posits that "new media have a significant advantage over old media when it comes to opportunities for gratification because internet publishing is unencumbered by the scheduling and content constraints common to old media." The ensuing constraint led to new ideas and enquiry on alternative sales promotion and cost effective means of conveying product information and awareness to consumers. A notable empirical enquiry was postulated by Dominic and Rothenbuhler (1984) on dynamic means of advertisement and a paradigm shift to a new and cost effective method of marketing where firms can create a niche and monopoly rather than a cutthroat cost ineffective and competitive business environment.

The advent and growth of internet and Information Technology became the perfect remedy to the constraint posed by legacy media in product marketing and sales as social media usage through the "like economy" enhanced revenue yield via online marketing in various social media platforms. Social media penetration globally and in Nigeria is on the increase. In the first quarter of 2022, an estimated 32.90 million Nigerians which accounts for 15.4% of the total population accessed social media, 26.10 million accessed Facebook, and 176.3 million in a report by GSMA Intelligence accessed mobile phones in the same period (Kemp, 2022). The growing rate of social media penetration and the "like economy" enhances business and economic growth as evident in the 18.44% contribution of ICT to real Gross Domestic Product (GDP) of Nigeria in the second quarter of 2022 (Isaac, 2022).

Despite the foregoing benefits of media to consumers and the economy, social media penetration in Nigeria is constraint with inadequate network coverage and scarce resources to access the necessary information that will enhance consumers' buying behavior. Business organizations in Nigeria are still skeptical on the benefits and usage of social media in promoting and showcasing their products and services to the wider public. Zartech Limited is

a leading company with less social media presence as evident in the portal where it is clearly stated that the company does not have an official Facebook handle. The study is divided into three sections of introduction, objectives, and hypotheses; conceptual review, theoretical review, and literature review, while methodology, discussion of findings, conclusion, and recommendations make up section three.

1.2 Objectives of the Study

The main objective of the study is to assess the effects of media on consumers' buying behavior of Zartech Ltd while the specific objectives are;

- (i) To examine the effects of social media on consumers' buying behavior of Zartech Ltd.
- (ii) To evaluate the effects of legacy media on consumers' buying behavior of Zartech Ltd.

1.3 Research Hypotheses

To assess the effects of media on consumers' buying behavior of Zartech Ltd, two research hypotheses are formulated based on the specific objectives. Thus;

H₀₁: There is no significant relationship between social media and consumers' buying behavior of Zartech Ltd.

H₀₂: There is no significant relationship between legacy media and consumers' buying behavior of Zartech Ltd.

2.1 Conceptual Review

2.1.1 Media

Media for the study is proxy by social media and legacy media. Social media is also seen as new media where information, communication, ideas, and contents are shared between individuals, groups, and the general public through platforms such as, WhatsApp, Twitter, Snapchat, YouTube, Instagram, Google, TikTok, MySpace, Facebook, Zoom, among others. Akram and Kumar (2017) sees social media as the interaction between groups or individuals in which they produce, share, and sometimes exchange ideas, images, videos and many more over the internet and in virtual communities. Social media are tools that permit users to participate and produce content (Kita and Thesavitz, 2010).

Legacy media is synonymous to old or traditional media where information and ideas are shared via platforms such as Television, print media, billboards, radio, and newspapers. Diel (2007) in his definition of legacy media in relation to Westlund (2013) opined that legacy media are associated with mass media companies including those that operate print newspapers or broadcast news organizations, which have significant resources and which are guided by traditional news values and practices.

2.1.2 Consumer Behavior

Consumer behavior connotes humans' varying characteristics and attitude people exhibit at different times and situations. Firms and organizations through visibility study must take into cognizance consumers' preference, taste, income, and utility in the production and distribution process so as to maximize profit. This calls for proper framing of company's image, branding, promotion, and packaging of products to enhance competitive edge and market leadership. Solomon, Bamossy, Askegaard and Hoggs (2010) sees consumer behavior "as the process involving the choice, purchase, use or disposal of products, services, ideas or experiences in order to meet needs and wants".

Consumer buying behavior in the study connote consumers' preference which deals with individuals' choice and ranking of wants and needs; and consumers' utility which is the amount of satisfaction and pleasure a consumer derives from the use of commodities. As social beings, individual's taste, preference, and satisfaction differ. Astute managers are obligated to carry out surveys and visibility studies on marketing mix and hybrid media advertisement necessary to enhance consumer's preference, utility, and the profitability of firms. The relevance of media in influencing consumer's behavior is seen a study by Sama (2019) in India where responses from 529 students showed a significant positive effect of newspaper on awareness, interest, conviction, purchase, and post-purchase of consumers.

2.1.3 Zartech Limited

Zartech Limited (Ltd) is a subsidiary of ZARD group of companies established in 1983. It specializes in the production, processing, and distribution of poultry products. Zartech Ltd is headquartered at Ibadan, Oyo State Nigeria with wholesale and retail outlets across the country. It has a revenue base of US\$6 million accruing from sales of chicks, frozen, processed, and chicken parts, and processed beef with staff strength of 279.

2.2 Theoretical Framework

2.2.1 The Niche Theory of Marketing.

The theoretical framework for the study is the niche theory of marketing which is based on the ecological theory of niche coined and popularized by Roswell Hill Johnson; Joseph Grinnel (1917). Dominic and Rothenbuhler (1984) introduced the theory into marketing which is loosely seen as concentrated, target, and segmentation marketing in literature where a narrow market segment hypothesized as “Big fish in a small pond” exist with continuous survival and special offering of products (Choudhary, 2014). In a competitive business environment, the theory advocates for a carved territory and monopoly through a paradigm shift from the traditional and cost ineffective media to innovative and cost effective product awareness and promotion in the growing social media “Like economy” that will translate to market leadership and competitive edge. Dimmick, Kline and Stafford (2000) in their empirical analysis of a displacement media effect showed a significant shift from legacy media to social media as fewer time is spent on news television stations. The theory is relevant to the study in showing that firm’s profitability and customer base will improve significantly through media advocacies and hybrid marketing techniques oriented at consumers’ preference, satisfaction, and market segmentation.

2.3 Literature Review

Al-Haddad, Al-Haddad, Qaqish and Yacoub (2019) examined the impact of using Facebook on consumers’ buying behavior in online clothing shops. The study employed primary data elicited from 500 respondents through a qualitative approach from which the regression analysis result revealed a significant impact of Facebook usage on online shopping behavior of customers.

A study by Inegbedion, Inegbedion, Asaleye, Obadiaru and Asamu (2020) on use of social media in the marketing of agricultural products and farmers’ turnover in South-South Nigeria, employed primary data with the aid of survey design and the instrument of questionnaire. The result from Ordinary Least Square (OLS) method showed a significant positive relationship between the use of social media and farmers’ turnover in South-South region of Nigeria.

Empirical study by Balkrishna and Deshmukh (2017) on role of social media in agriculture marketing and its scope, employed primary data and descriptive method to show that social media is a useful tool in agricultural marketing as it aids farmers in assessing relevant information in an efficient way.

Darmatama and Erdiansya (2021) assessed the influence of advertising in TikTok social media and beauty product image on consumer purchase decisions. The result from AISAS model and multiple linear regression analysis showed that advertising on TikTok social media and the image of beauty products together have a significant effect on consumers’ purchasing decisions.

Sama (2019) assessed impact of media advertisement on consumer behavior. Exploratory factor analysis and Kruskal-Wallis test were carried out on data elicited from 529 respondents in India from which the result showed a significant positive relationship between newspaper advert and consumers’ behavior. It thus recommends that managers should invest in appropriate media to enhance productivity and return on investment.

Dirir (2022) conducted a study on investigating the impact of TikTok on the generation Z buying behavior and their insight of selecting brand. The results showed a significant relationship between TikTok and consumer’s behavior with brand selection.

Karadeniz and Kocamaz (2019) assessed the effect of Facebook, YouTube and Instagram advertisements on consumers’ buying behaviors. The study was carried out spanning 2nd April to 15th May 2019 on 317 Facebook, YouTube, and Instagram Users in the city of Istanbul. The result from LISREL structural equation modeling showed a significant relationship between informativeness, hedonic motivation, trustworthiness, and economic benefit (proxies for Facebook, YouTube, and Instagram) and consumers’ buying behavior in Istanbul.

Armah and Attafuah (2020) in a study on impact of television advertisement on consumer buying behavior of consumer products assessed the effects of television advertisement on the purchase of propa baby diapers. Result from regression analysis showed a significant influence of propa baby diapers’ television advert views on the purchase of propa baby diapers in the Denkyira East District of the Central Region, Ghana. The study recommends that the company should increase television advert of propa baby diapers to enhance revenue and market leadership.

3.1 Methodology

Survey and descriptive designs were adopted for the study. Survey design is a systematic method for gathering information from (a sample of) entities for the purposes of constructing quantitative descriptors of the attributes of the larger population of which the entities are members (Avedian, 2014). The study employed survey design due to its ability to gather information not available from other sources, unbiased representation of the population of interest, and the need to complement existing data from secondary sources (Owens, 2002).

The study employed two stage sampling techniques for the study. Purposive sampling technique was used to select three Local Government Areas (Oyo West, Iseyin, and Ibadan North) in order to have a geographical spread. Purposive sampling is intentional selection of informants based on their ability to elucidate a specific theme, concept, or phenomenon (Robinson, 2014). Simple random sampling technique (via lottery) was used to select 400 respondents for questionnaire administration. Simple random sampling is a type of probability sampling in which the researcher selects a subset of participants from a population, in this sampling method, each member of the population has an equal chance of being selected (Thomas, 2020).

Closed ended questionnaire was used to elicit relevant information from the respondents for analysis with the aid of regression analysis. The significant p-value, t-statistic, and the Analysis of Variance (ANOVA) were employed to test the formulated hypotheses at 5% level of significance. In all, 370 questionnaires were returned for analysis with the aid of Statistical Package for Social Science (SPSS) version 23.

3.2 Study Area and Sample Size Determination

Oyo State is bordered by Kwara State to the North, Osun State to the East, and to South-East by Ogun State and Benin Republic. Oyo State is situated between latitudes 7°22' and 7°40' North of the Equator and longitudes 3°53' and 4°10' East of the Greenwich. The state has a projected population of 9,019,283 with a landmass of 28,454 km². The selected study population (Oyo West, Iseyin, and Ibadan North) was projected using Doston (2018) cited in Muhammed and Zakari (2021) population projection based on 0.3% growth rate. The projected population was based on population figure of 670,195 from National Population Census (NPC) (2006). Thus;

$$N_t = P e^{rt}$$

Where

N_t = Future population (2022)

P = Past population (670,195) (2006)

e = Natural logarithm base of 2.71828 (constant)

r = Population growth rate (0.03 or 3%)

t = Time 2022-2006 (16 years)

Thus,

$$\begin{aligned} N_t &= 670,195 (2.71828^{0.03 \times 16}) \\ &= 670,195 (2.71828^{0.48}) \\ &= 670,195 (1.6161) \\ &= 1,083,102 \end{aligned}$$

From the study population of 1,083,102 persons, a sample size of 400 heads was determined using Taro Yamane (1967) Sampling formula for limited population expressed bellow:

$$n = \frac{N}{1 + N(e)^2}$$

Where:

n = sample size

N = population of the study area

e = Level of significance (0.05)

1 = Unity (a constant)

This formula was substituted thus;

$$\begin{aligned} n &= \frac{1,083,102}{1 + 1,083,102 (0.05)^2} \\ &= \frac{1,083,102}{2708} \\ &= 400 \text{ (approximately)} \end{aligned}$$

Table 3.1: Number of respondents selected across Oyo State

LGAs	Population (2006)	Population (2022)	Sample size
Oyo West	136,457	220528	80
Ibadan North	308,119	497,951	215
Iseyin	255,619	364,623	105
Total	670,195	1,083,102	400

Source: NPC, 2006, Modified.

3.3 Model Specification

To assess the effects of media on consumers' buying behavior of Zartech limited, a multivariate model was built to examine the relationship between legacy media and social media on consumers buying behavior. Thus;

$$CBB = f(MDA) \text{ ----- (3.1)}$$

Where: CBB Consumers' Buying Behavior

MDA Media

From equation 3.1, the following functions are derived.

$$CPR = f(SMD, LMD) \text{ ----- (3.2)}$$

$$CTY = f(SMD, LMD) \text{ ----- (3.3)}$$

From equation (3.2 and 3.3), the following multivariate models are derived:

$$CPR = a + \beta_1 SMD + \beta_2 LMD + \epsilon \text{ ----- (3.4)}$$

$$CTY = a + \beta_1 SMD + \beta_2 LMD + \epsilon \text{ ----- (3.5)}$$

Where:

CPR Consumers' Preference

CTY Consumers' Utility

SMD: Social Media

LMD Legacy Media

a is constant

β_1, β_2 are the coefficient of the parameter estimate.

ϵ is the error term.

3.4 Test of Hypotheses and Discussion of Findings

3.4.1 Equation 3.4

Table 3.1: Variables Entered/Removed^{a,b}

Model	Variables Entered	Variables Removed	Method
1	LMD, SMD ^c	.	Enter

a. Dependent Variable: CPR

b. All requested variables entered

Source: SPSS 23 (Field work, 2022)

Table 3.2: Model Summary^{c,d}

Model	R	R Square ^b	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.856 ^a	.733	.732	1.89487	1.736

a. Predictors: LMD, SMD

b. Dependent Variable: CPR

Source: SPSS 23 (Field work, 2022)

Table 3.2 shows the fitness of the model which according to Zygmunt and Smith (2014) should have adjusted R-square of equal to or more than 60%. Given the adjusted R-square 0.732 (73.2%), the model is considered fit for the study. The model summary shows the relationship between the explanatory variables (LMD and SMD) regressed with a common dependent variable CPR. The R value of 0.856 and R-square value of 0.733 depicts a good relationship between the dependent and independent variables and showed that LMD and SMD accounts for 73% variation in consumers preference for Zartech poultry products. The significant F change of 506 (Table 3.3) also revealed that the model is statistically significant at 5% level of significance. The Durbin Watson of 1.736 is an indication of no presence of auto-correlation and multi Co-linearity among the variables.

Table 3.3: ANOVA^{a,b}

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3636.680	2	1818.340	506.424	.000 ^c
	Residual	1321.320	368	3.591		
	Total	4958.000 ^d	370			

a. Dependent Variable: CPR

b. Predictors: LMD, SMD

Source: SPSS 23 (Field work, 2022)

Table 3.4: Coefficients^{a,b}

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	SMD	.377	.065	.286	5.784	.000	.296	3.373
	LMD	.589	.048	.602	12.189	.000	.296	3.373

a. Dependent Variable: CPR

Source: SPSS 23 (Field Work, 2022)

3.4.2 Equation 3.5**Table 3.5: Variables Entered/Removed^{a,b}**

Model	Variables Entered	Variables Removed	Method
1	LMD, SMD ^c	.	Enter

a. Dependent Variable: CTY

b. All requested variables entered

Source: SPSS 23 (Field, 2022)

Table 3.6: Model Summary^{c,d}

Model	R	R Square ^b	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.889 ^a	.790	.789	1.83892	1.635

a. Predictors: LMD, SMD

b. Dependent Variable: CTY

Source: SPSS 23 (Field, 2022)

From the result of equation 3.5, the R value of 88% showed a strong relationship between the dependent variable (CTY) and the independent variables (SMD and LMD). The R-square value of 79% revealed that SMD and LMD accounts for 79% variation in consumers' satisfaction (Utility) (CTY) of Zartech poultry products while the adjusted R-square of 79% is an indication of a fit model.

Table 3.7: ANOVA^{a,b}

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	4695.558	2	2347.779	694.273	.000 ^c
	Residual	1244.442	368	3.382		
	Total	5940.000 ^d	370			

a. Dependent Variable: CTY

b. Predictors: LMD, SMD

Source: SPSS 23 (Field work, 2022)

Table 3.8: Coefficients^{a,b}

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	SMD	.603	.060	.400	9.964	.000	.353	2.832
	LMD	.602	.045	.535	13.323	.000	.353	2.832

a. Dependent Variable: CTY

Source: SPSS 23 (Field work, 2022)

3.4.3 Test of Hypothesis One

From **equation 3.4**, social media is a proxy for media while consumers' preference is a proxy for the dependent variable of consumers' buying behavior. The first hypothesis H_{01} was formulated and tested at 5% significance level that there is no significant relationship between social media and consumers' buying behavior of Zartech Ltd. Given that the significant P-value ($P < 0.000$ and $P < 0.000$ in table 3.4 and 3.8 respectively) are less than 0.05% and the t-statistic in absolute form is 12 and 13 (table 3.4 and 3.8 respectively), the Null hypothesis was rejected and the Alternative hypothesis was accepted that there is a significant positive relationship between social media and consumers' buying behavior of Zartech Ltd. The result showed that a percentage increase in the use of social media will lead to 28% and 40% (table 3.4 and 3.8 respectively) increase in consumers' preference and satisfaction of Zartech poultry products. The ANOVA test result of 0.000% (table 3.3 and 3.7 respectively) is also an indication of a significant relationship between social media and consumers' buying behavior. Several studies (Dirir, 2022; Inegbedion, Inegbedion, Asaleye, Obadiaru and Asamu, 2020; Al-Haddad, Al-Haddad, Qaqish and Yacoub, 2019; Balkrishna and Deshmukh, 2017) have come up with similar findings of a significant positive relationship between social media and consumers' buying behavior.

3.4.4 Test of Hypothesis Two

From **equation 3.5**, legacy media is a proxy for media while consumers' utility is a proxy for the dependent variable of consumers' buying behavior. The second hypothesis H_{02} was formulated and tested at 5% significance level that there is no significant relationship between legacy media and consumers' buying behavior of Zartech Ltd. Given that the significant P-value ($P < 0.000$ and $P < 0.000$ in table 3.4 and 3.8 respectively) are less than 0.05% and the t-statistic in absolute form is 5 and 9 (table 3.4 and 3.8 respectively), the Null hypothesis was rejected and the Alternative hypothesis was accepted that there is a significant positive relationship between social media and consumers' buying behavior of Zartech poultry products. The result showed that a percentage increase in the use of legacy media will lead to 60% and 53% (table 3.4 and 3.8 respectively) increase in consumers' satisfaction (utility) of Zartech poultry products. The ANOVA test result of 0.000% (table 3.3 and 3.7 respectively) is also an indication of a significant relationship between legacy media and consumers' buying behavior. Several studies (Armah and Attafuah, 2020; Sama, 2019) have come up with similar findings of a significant relationship between legacy media and consumers' buying behavior.

3.5. Test of Ordinary Least Square Assumptions

Durbin Watson Statistics was computed to detect the presence of autocorrelation among the study variable from which the values 1.736 and 1.635 (Table 3.2 and table 3.6 respectively) indicates no presence of auto-correlation among the variables (Gujarati and Sangeetha, 2009). Also, to ensure no violation of the assumptions of normality, linearity, multicollinearity and homoscedasticity, the Variance Inflation Factor (VIF) was computed. VIF refers to a situation where two or more independent variables are highly correlated (>0.9) hence leading to multicollinearity problem (Jingyu, 2003). According to the rule of thumb, a VIF greater than 10 will lead to multicollinearity (Jingya, 2003). All the VIF presented in table 3.4 and 3.8 respectively are less than 10 indicating the absence of multicollinearity and homoscedasticity. Also, all the tolerance values in table 3.4 and 3.8 respectively are greater 10 which confirm the absence of multicollinearity. More also, the significant F change of 506 and 694 in table 3.3 and 3.7 respectively (ANOVA Tables) is an indication of a strong model.

3.6 Conclusion

The study was carried out in a bid to enhance the growing body of knowledge on the role of media (social and legacy media) on consumers' buying behavior. In line with the findings, the study concludes, there is a significant positive relationship between the growth of media and consumers' buying behavior. Zartech Ltd is yet to tap from the enormous benefits of social media advocacies as revealed by the study that a percentage increase in SMD will translate to a significant 28% increase in consumer's preference (table 3.4). The study is quick to note that Zartech Ltd is not active on social media but there are series of Facebook accounts claiming to be Zartech's as envisaged in the company's portal. The adequate awareness of Zartech Ltd owing to social media penetration is likely due to social media accounts claiming to be Zartech's official account.

3.7 Recommendations

The following study recommendations are advanced based on the empirical result;

- (i) Zartech Ltd in a bid to enhance return and productivity should increase the use of social media to create awareness to larger audience on social media platforms as shown in the study that a percentage increase in SMD usage by the company will lead to a 28% increase in consumer's preference (table 3.4) and 40% increase in consumer's utility (table 3.8) of Zartech poultry products.
- (ii) Zartech Ltd has LinkedIn with less penetration in the country. Effort should be made to create Facebook, Twitter, Youtube, TikTok accounts, among others with large audience in the country as this will introduce the company to larger audience in the country and around the world.

REFERENCES

Akram, W. and Kumar, R. (2017). A Study on Positive and Negative Effects of Social Media on Society. *International Journal of Computer Science and Engineering*. Volume 5(10). E-ISSN: 2347-2693

- Al-Haddad, S. I., Al-Haddad, I., Qaqish, J. and Yacoub, S. (2019). The Impact of using Facebook on Consumers' Buying Behavior in Online Clothing Shops. The 13th International Business Information Management Association Conference, Madrid Spain. ISBN:978-0-09998551-3-3.
- Armah, M. and Attafuah, H. F. (2020). Impact of Television Advertisement on Consumer Buying Behavior of Consumer Products. *Worldwide Journal of Multi-Disciplinary Studies*. Volume 2(9). Doi:10.159769/WJMS/2020/VOL2/ISS4/SEPT002
- Avedian, A. (2014). Survey Design. Harvard Law School.
- Balkrishna, B. B. and Deshmukh, A. A. (2017). Role of Social Media in Agriculture Marketing and its Scope. *Global Journal of Management and Business Research*. E Marketing. Volume 17(1).
- Darmatama and Erdiansya (2021). Influence of Advertising in TikTok Social Media and Beauty Product Image on Consumer Purchase decisions. *Advances in Social Science, Education and Humanities Research*. Volume 570.
- Diel, S. (2007). New Media, Legacy Media and Misperceptions Regarding Sourcing. *KOME-An International Journal of Pure Communication Inquiry*. Volume 5 (1).
- Dimmick, J., Kline, S., and Stafford, L. (2000). The Gratification Niches of Personal e-mail and the Telephone Competition, Displacement, and Complementarity. *Communication Research*. Volume 27(2).
- Dirir, S. A. (2022). Investigating the Impact of TikTok on the Generation Z buying Behavior and their Insight of Selecting Brand. *Journal of the Market Research Society*. DOI: 10.13140/RG.2.2.19845.22249
- Inegbedion, H., Inegbedion, E., Asaleye, A., Obadiaru, E. and Asamu, F. (2020). Use of Social Media in the Marketing of Agricultural Products and Farmers' Turnover in South-South Nigeria. *F1000Research*. <http://doi.org/10.12688/F1000research.26353.1>
- Isaac, N. (2022, August 29). Nigeria Records 18.44% ICT Contribution to GDP in Q2 2022. *Science Nigeria*. Assessed 17/08/2022.
- Karadeniz, M. and Kocamaz, I. (2019). The Effect of Facebook, YouTube and Instagram Advertisements on Consumers' Buying Behaviors. *Turkish Journal of Marketing*. Volume 4(3).
- Kemp, S. (2022, February 15). Digital 2022: Nigeria. Dataportal.
- Kita, A. and Thesenvitz, J. (2010). Social Media Overview. Ontario Health Promotion E. Bulletin 676. www.ohpe accessed 27.07.2022.
- Muhammed, B. S. and Zakari, T. S. O. A. (2021). Assessment of Trans-Border Crime on Security of Borderland Communities in Benue State, Nigeria. *The Journal of the Army War College Nigeria*. Volume 4, No.1. ISSN 2672-4081.
- National Population Census (NPC). (2006).
- Owens, (2002). Introduction to Survey Research Design. SRL Fall 2002 Seminar Series. <http://www.srl.uic.edu>
- Sama, R. (2019). Impact of Media Advertisement on Consumer Behavior. *Journal of Creative Communications*. Volume 14(1)
- Solomon, M., Bamossy, G., Askegaard, S. and Hogg, M. (2010). *Consumer Behavior: Buying: A European Perspective*. 4th ed. Financial Times Press.
- Taro, Y. (1967). *Elementary Sampling Theory*. Englewoods Cliffs, New Jersey.
- Thomas, L. (2020, August 28). Simple Random Sampling: Definition, Steps and Examples. Scribbr.
- Zygmunt, C. and Smith, M. R. (2014). Robust Factor Analysis in the Presence of Normality Violations, Missing Data, and Outliers: Empirical Questions and Possible Solutions. *The Quantitative Methods for Psychology*. Volume 10(1).