

Impact of Advertising on Turnover of Brewery Companies in Nigeria

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Abstract: *This paper examines the impact of advertising on turnover of manufacturing companies with a view to rank the magnitude of importance of advertising among the multifarious factors of promotion, goodwill, product availability, pricing impacting on turnover. Both primary and secondary data used were analyzed using ordinary least square and a multiple regression models and were interpreted using R^2 , adjusted R^2 , and standard error of estimate and t statistics. These were supplemented with augmented Dikky Fuller Unit Root and causality tests. The study concludes that generally advertising is a powerful determinant of manufacturing company's turnover in Nigeria whether considered individually or in combination with other factors(for Nigerian Breweries)but ranked after goodwill for Guinness. It is recommended that advertising models of the brewery sector in Nigeria should consider goodwill sustainability to achieve advertising objectives.*

Keywords: advertising, companies, turnover, rank, goodwill

1. Introduction

The major objective of any organization is to make sufficient profit in order to satisfy stakeholders needs/shareholders' wealth maximisation (value added) as pointed out by Pandey (2000). This is in addition to other sub-objectives such as employee satisfaction, being a market leader or being socially responsible. Whatever the objective might be, the higher the sales/ turnover volume the better an organization will be in terms of objective realization.

Although, advertising has been identified as the backbone of success to most manufacturing companies (Akanbi *et al* 2011) but there have been controversies on whether advertising serves as drive to increase the sales volume of company products or not and whether there would be increase in the demand level of the consumer as advertising increases. While (Bennett, 2006) sees advertising as non-personal communication of marketing-related information in a target audience, usually paid for in order to reach the specific objectives of the sponsor, (Borden, 2007) defined it a controlled identifiable information and persuasion by means of mass communication media.

By careful examination of the above definitions, it can summarily be said that it is a tool for directing consumers desire positively towards the organization products, marketing is the major channel of enhancing advertising campaigns. Kotler (1998) examines five types of marketing concept to include Production concept, Product concept, Sales concept, Marketing concept and Societal Marketing concept while Aderemi (2006) embraces kotler's view that consumers will buy those products that are widely available with low prices. Firms concentrate their efforts on high production efficiency(cost reduction and control) as well as widespread distribution for their products with a view to create awareness.

When there is adequate awareness through advertising, high patronage will be achieved, which will result to an increase in sales volume and productivity. However, poor product communications to the final consumers by a company will give competitors an edge in term of loyalty to brands, sales volume and high market share. The consequence of defective communication (advertising) has been a major setback for matured industries.

Due to custom and religion belief of some people in Nigeria toward the breweries products especially alcoholic drinks such as Star Larger Beer, Heinekens, Gulder, and Guinness they are prevented from listening to their advertisements and subsequent buying of the products. Precisely, some Christians and Muslims switch off their Television sets during advertisement of these products. This attitude invariably affects the sales /turnover of breweries products both in terms of volume and monetary value.

Lack of proper orientation for both the new and existing companies makes it difficult to communicate these products to the final consumers through media houses such as the television houses, radio stations, newspapers, bill boards, GSM and Personal Selling. Most advertising campaigns also fails to educate the customers that breweries products are not limited to only alcoholic drinks but non-alcoholic drinks as well such as Maltina, Betalmalt, Malta-Guinness, Maltex, Fayrous and others which are very useful and consumable for both the Muslim and Christians. As a result of these mix feelings and attitudes it has been difficult if not impossible to estimate the exact impact advertising has on sales/turnover of breweries products. Does advertising induces customers to buy more or inhibits their purchasing rates?

It is on this premises that the study wish to examine the impact of advertising on sales /turnover of breweries industry in Nigeria.

2. Research Questions

In line with the above statement of the problems, the following research questions will be addressed in the course of this study:

- i What impact does advertising has on organizational sales/turnover?
- ii What other factors affects the sales/ turnover of Breweries industry and in what order of importance?

While a number of studies could be found in the literature on advertising; for instance, Adeolu, (2005) determined the influence of advertising on consumer brand preference, Aneza and Najama (2009) evaluates the effects of advertising on consumer. In like manners, Akanbi et al (2011) looked at the association between advertising and sales volume. However, no study has been found to simultaneously determine the effects of multifarious factors influencing turnover. This is considered a serious academic gap which deserves to be filled because a one way approach of the relationship between advertising and turnover might result in spurious or nonsense relationship. Thus, the resultant conclusion therefore will be baseless and lack the research ingredients necessary for generalization. Hence, this research is not an exercise in futility but a serious academic need that is worth the salt in terms of filling the exposed gap explained above.

3. Objectives of the Study

The general objective of this study is to determine the impact of advertising on sales/turnover of Nigerian Breweries, while specific objectives are:

- To evaluate the impact of advertising on organizational sales/ turnover.
- To determine other factors that influences sales /turnover of Breweries industry in Nigeria and rank them in the order of importance.

This study examines the influence of advertising an organization sales turnover between 2003 – 2007 with special reference to Nigeria Breweries Plc and Guinness Nigeria Plc.

3.1 Review of Relevant Literature

The success of any organization is the acceptability of its output by the consumers because manufacturing or production is incomplete until the product gets to the final consumers/buyers.

A lot of studies have been carried out from the origin of advertising to its current trends. For instance, Holtje (1978) as quoted by Ewuola (2004) pointed out that modern advertising operation started during the American Colonial days corresponding with the time the colonial newspapers were accepting advertisement directly from people and institutions that needed their services. Some local post offices were also assisting in this respect by acting as agents for these newspapers.

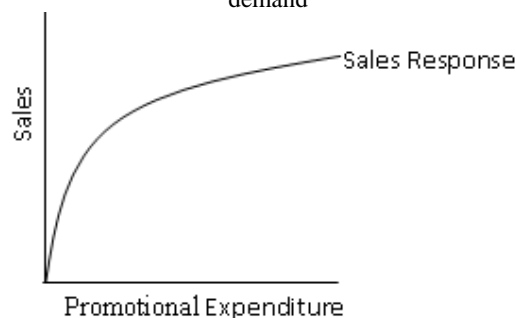
When advertising objectives cannot be defined directly in terms of final sales, some types of behavioral activity by consumers may be used as a measure of the impact of the

advertising campaign. For example, some advertisers try to get their target audience to take a specific action short of making a purchase such as requesting for more information, or visiting a retail outlet.

Whatever the objective of advertising, if purchases were eventually made, does it translate to higher turnover and indeed other factors (goodwill, product availability, pricing etc.) exist to either draw down or skyrocket the purchase pattern also. Thus, empirical investigation of exact impact advertising has on sales turnover will not be a wasted effort but a research that worth the salt. This is against the backdrop of the general philosophical saying that advertising is the soul of business.

All things being equal, the effect of advertising will be to increase the turnover of any associated product as indicated in the diagram below.

Table 2.1: Relationship between advertising and product demand



Source: (Aderemi 2006), and George (2003)

This concave downward response curve behaves in line with the macroeconomic law of diminishing returns. By reference therefore, there is a threshold for realizing the apriori expectation- the more the promotional expenditure, the more the turnover level. After the threshold, additional advertising expenditure is associated with incremental value decreases in turnover.

However, in reality the interplay of other factors might lead to aberration from expectation, take for instance, existence of goodwill and product availability will also increase turnover while unbearable pricing policy tends to lower turnover. What then is the exact effect of advertising on turnover when other factors simultaneously exact some degree of influence on turnover?

3.2 Model Specification and Analytical Technique

To evaluate the impact of advertising on sales, there is also the need to evaluate the relationship between Sales and other factors that may influence it. This is because the effect of advertising on sales cannot be adequately captured in isolation. To achieve this, a standard multiple regressions is formulated taking into cognizance six variables that have been identified as major determinants of sales value/turnover. This factors namely Advertising, Goodwill, Product availability, Sales promotion, Fair pricing, Seasonal effect were entered as the independent variable, while Sales turnover was the dependent variable.

Mathematically, the model is expressed as follows;

$$St = \beta_0 + \beta_1 Ad + \beta_2 Gw + \beta_3 Pa + \beta_4 Sp + \beta_5 Fp + \beta_6 Se + \epsilon$$

Where:

St = Sales /Turnover

Ad = Advertising

Gw = Goodwill

Pa = Product availability

Sp = Sales promotion

Fp = Fair pricing

Se = Seasonal effect

β_0 = intercept

$\beta_1 - \beta_6$ = regression coefficient

ϵ = stochastic error term

This model enables the researcher to get a more complete picture of the variables and determine the significance of independent variables individually and jointly on the dependent variable.

However, the one to one relationship between advertising and sales turnover is evaluated using linear regression model given by:

$$Y = a + bx, \text{ Where;}$$

Y= Dependent variable (sales /turnover)

a= fixed impact

b= intercept

The parametric statistics of computed R^2 values and **beta** values were extensively used for the analysis. R^2 values denote the magnitude of relationship that exists between the dependent variable and the independent variables. It is the conventional measure of goodness of fit. The **Beta** values measure the individual contribution of each variable in the predictive power of the model on the criterion variable. The t statistics in line with the sampling theory measures the significance of each variable in the model while F statistics tests for the joint significance of all parameters in the estimated model.

The results reveal the following:

4. Data Presentation, Analysis and Discussion of Findings

Table 4.1: Advertising and Turnover of Guinness Plc; and Nigerian Breweries Plc.

Year	2003	2004	2005	2006	2007	2008	2009	2010
Currency Naira (₦)	Million	Million	Million	Million	Million	Million	Million	Million
<i>Guinness Plc;</i>								
Advertising	2177752	2957668	3468792	4072091	5349226	6740024	8492431	10700463
Turnover	38103096	47369394	46859356	53651781	54200200	61951000	80439500	100087500
<i>Nigerian Breweries</i>								
Advertising	3635782	4972834	5622450	6325925	8592857	10741071	13426339	16782924
Turnover	62974995	73594134	80130968	86322075	111748297	145460000	164210000	185862000

Source: Extract from Financial Statements of the Companies

Table 4.2: Regression Results for Guinness Plc

Dependent variable: Turn
Method: Least Squares
Date: 04/29/13 Time : 09:12
Sample: 2003 2010
Included observations: 8
Variable coefficient std. Error t- Statistics Prob.
ADV 6.754726 0.571172 11.82608 0.0000
C 23216819 3513799 6.607326 0.0006
R-Squared 0.958864 Mean dependent Var. 60332728
Adjusted R-Squared 0.952008 S.D. dependent Var. 20400708
S E of regression 4469220 Akaike info Criterion 3367564
Sum squared resid 1.20E+14 Schwarz Criterion 33.69550
Log likelihood -132 7026 F-Statistics 139.8563
Durbin-Watson Stat 1.449204 Prob(F-statistic) 0.000022

Source: Author's Computation (2013)

4.1. Ordinary Least Square (OLS) Results for Guinness Plc

Analysis of data in table 4.1 shows the results in table 4.2 with OLS regression coefficient of 7.61 and R^2 of 85.7% while the adjusted R^2 is 83.4% after incorporating the associated standard error of regression. The Dubin Watson

Statistics amounted to 85.3%. By reference therefore, a high correlation/relationship exists between the two variables. However, the Schwarz Criterion and F- Statistics were too high which symbolizes the likely presence of unit roots or spurious relationship between turnover and advertising. The relationship between advertising and turnover for Guinness Plc is shown in figure 1.

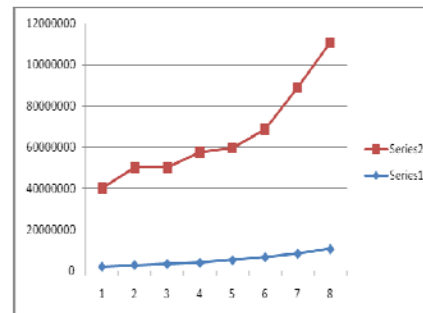


Figure 1: Relationship Between Advertising And Turnover (Guinness Plc)

KEY: SERIES 1= ADVERTISING
KEY: SERIE2 = TURNOVER

Table 4.3 Augmented Dicky-Fuller Unit Root Test for Guinness Plc

Null Hypothesis: Turn has a unit root Exogenous: Constant Lag Length 1 (Automatic based on SIC, MAXLAG= 1)
t- Statistics Prob. Augmented Dicky-Fuller Unit Root Test statistics 2.856684 0.9993 Test Critical Values 1% Value -5.119808 5% Value -3.519595 10% Value -2.898418

Source: Author's Computation (2013)

Table 4.4: Causality Test

Pairwise Causality Test Date: 04/29/13 Time : 09:29 Sample :2003 2010 Lags : 2
Null Hypothesis Obs F- Statistics Prob. Turn does not Granger Cause ADV 6 0.00202 0.99799 ADV does not Granger Cause Turn 0.65650 0.65753

Source: Author's Computation (2013)

Table 4.5: Regression Results for Nigeria Breweries Plc

Dependent variable: Turnover Method: Least Squares Date: 04/29/13 Time : 09:25 Sample:2003 2010 Included observations: 8
Variable coefficient std. Error t- Statistics Prob. ADV 9.979728 0.524708 19.01960 0.0000 C 26340217 5116633 5.147959 0.0021
R-Squared 0.983684 Mean dependent Var. 1.14E+08 Adjusted R-Squared 0.980965 S.D. dependent Var. 46026385 S E of regression 63501217 Akaike info Criterion 34.37817 Sum squared resid 2.42E+14 Schwarz Criterion 34.39803 Log likelihood -135.5127 F-Statistics 361.7452 Durbin-Watson Stat 1.536282 Prob(F-statistic) 0.000001

Source: Author's Computation (2013)

4.2 Ordinary Least Square (OLS) Results for Nigerian Breweries

Similarly for Nigerian Breweries Plc, a high and positive relationship exists between turnover and advertising as indicated by R^2 of 98.4%, adjusted R^2 of 98.1% while the Akaike Information Criterion was 34.4. This extra-ordinary high relationship is evidenced by the extreme F-Statistics of 361.74.

These conditions led to the conduct of Augmented Dicky Fuller Unit Root Test in table 4.3 which reveals the presence of unit roots at 1%, 5% and 10% critical values(-5.2459, -3.5507 and -2.9312) respectively.

This OLS regression results was considered inadequate, thus, a multiple Regression analysis was conducted taking

into consideration the earlier aforementioned factors that simultaneously influence turnover (goodwill, product availability, promotion, pricing and seasonality. These variables derived from staff survey conducted with respect to the factors influencing turnover, advertising inclusive were modelled into a multiple regression model analysis shown respectively for Guinness Plc and Nigerian Breweries Plc in tables 4.7 and 4.8.

The multiple regressions conducted in table 4.6 produced high values of R square (R^2)= 0.82 for Guinness Plc; which means that the independent variables account for the 82% variation of the dependent variable i.e. Sales/turnover.

See figure 2 for structural relationship between turnover and advertising. The relationship between advertising and turnover of Nigerian Breweries Plc.

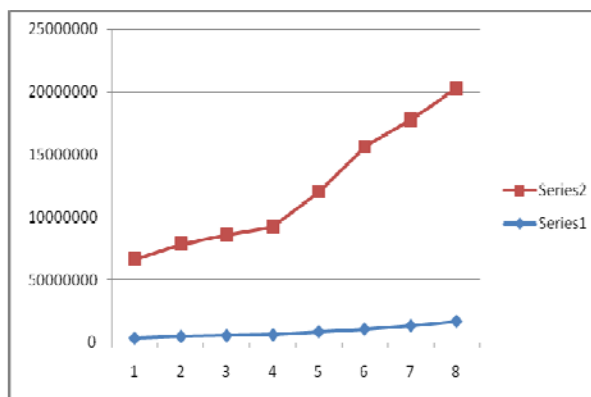


Figure 2: Relationship between Advertising and Turnover (Nigerian Breweries Plc.)

KEY: SERIES 1= ADVERTISING
KEY: SERIE2 = TURNOVER

Table 4.6: Summary of Regression Results

	Model	R	R Square	Adjusted R Square	Std Error of the Estimate
Guinness Plc.	1	.906 ^a	.820	.793	.24285
Nigerian Breweries Plc.	1	.972 ^a	.946	.942	.31622

a. Predictors: (Constant), seasonal, pricing, Availability, advertising, promotion, Goodwill
Source: Authors computation (2013)

However, with respect to Nigerian Breweries, the changes in the dependent variable as a result of variation in the independent variables R square (R^2)= 0.942. This indicates that 94% change in sales/Turnover of Nigerian Breweries is caused by changes in advertising. The result of the linear regression is compared with the multiple regressions conducted in table 4.6 and 4.7 reveals:

- (i) For Guinness Plc goodwill advertising was the most powerful determinant of Sales/turnover with R^2 of (0.545). Such goodwill may arise from possession of a respected business name, quality products, good business location, and quality of the employees among

others. This is followed by advertising ($R^2 = 0.347$), product availability $R^2 = 0.318$, promotion $R^2 = 0.183$ and seasonality $R^2 = 0.196$ while pricing has negative effect on turnover. This indicates that sales will decrease if prices increases which is in line with the law of demand.

- (ii) For Nigerian Breweries Plc; the order of importance of the factors is advertising, goodwill, availability, seasonality and pricing while promotion has a negative effect on turnover.
- (iii) Summarily therefore, be it Guinness Plc; or Nigerian Breweries Plc; advertising plays prominent roles as an important determinant of turnover.

Table 4.7: Multiple Regression results for Guinness Plc

Coefficients ^a						
Model	Unstandardized Coefficients		Standardize d Coefficients	t	Sig.	
	B	Std. Error	Beta			
1 (Constant)	3.36	0.119		28.1	0	
Advertising	0.14	0.134	0.347	1.02	0.32	
Goodwill	0.2	0.191	0.545	1.06	0.29	
Availability	0.12	0.196	0.318	0.61	0.55	
Promotion	0.07	0.14	0.183	0.51	0.61	
Pricing	-0.2	0.19	-0.571	-1.1	0.28	
Seasonal	0.04	0.088	0.096	0.44	0.66	

Source: Authors computation (2013)

Table 4.8: Multiple Regression results (Nigerian Breweries Plc)

Coefficients ^a						
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
1 (Constant)	0.263	0.098		2.686	0.01	
Advertising	0.422	0.105	0.435	4.002	0	
Goodwill	0.126	0.14	0.142	0.9	0.37	
Availability	0.221	0.15	0.245	1.475	0.14	
Promotion	-0.063	0.107	-0.067	-0.591	0.56	
Pricing	0.081	0.065	0.076	1.245	0.22	
Seasonal	0.155	0.094	0.17	1.651	0.1	

a. Dependent Variable: sales

Source: Authors computation (2013)

The Beta value of each independent variable in the model (Table 4.1) after taking out standard error effect reveals that the company's goodwill resulting from long lasting prestige/benefit of good name and quality output/customer loyalty over the years constitutes the most significant beta value of 0.545. Other factors: pricing has -0.571, promotion; 0.183 while product availability and seasonal effect have 0.318 and 0.096 respectively.

It can be concluded from this analysis that advertising the major factor being considered in this study is second to company/ product goodwill in terms of impact on sales/turnover for Guinness Plc but take first position for Nigerian Breweries.

This conclusion is in line with the results obtained by Akanbi *et al* (2007) and who pointed out that advertising policy is one of the inevitable laws of success in an organization. Therefore, evaluating the impact of advertising on sales of Nigerian breweries especially in Guinness Plc is not a wasted effort.

4.3 Test of Hypothesis

H₀: Advertising has no significant effect on organizational sales /turnover.

In measuring the relationship between advertising and sales/turnover of breweries industries in Nigeria and in particular test the above hypothesis, an ordinary linear regression is conducted over a period of eight(8) years using sales/turnover as dependant variable while advertising serves as the independent variable. The data is shown below:

Table 4.9 Summary of Regression Statistics

	Beta Value (B)	R ²	Adjusted R ²	F	Durbin Watson
GUINNESS Plc;	0.979	0.959	0.952	139.856	1.449
NIGERIAN BREWERIES	0.992	0.984	0.981	361.745	1.536

Source: Authors computation (2013)

From table 4.5 above, beta values for both companies are positive 0.992 and 0.979 respectively for Nigerian Breweries and Guinness Plc respectively more so that the regression coefficients are also positive and high 0.984 and 0.959 respectively. However, the predictive strength of advertising on sales/turnover is 98.1% and 95.2% respectively for Nigerian Breweries and Guinness Plc respectively. All the study statistics point to the fact that advertising has significant impact on sales/turnover of breweries in Nigeria. Hence, the null hypothesis is hereby rejected for the acceptance of alternative hypothesis.

5. Conclusion and Recommendations

Advertising is significant in explaining sales/turnover of Nigerian breweries when considered individually and in conjunction with other variables. However, with respect to Guinness Plc, the companies' image/goodwill has more predictive power than advertising in determining the trend in which sales/turnover will move. Additionally, pricing policy in Guinness Plc; has negative impact on its turnover.

Evaluating the impact of advertising on sales individually is grossly inadequate; a more appropriate approach is simultaneous evaluation of all the factors affecting sales rather than one by one factor analysis.

It is recommended that during planning therefore, companies should take into consideration and more

importantly, how to build and sustain company goodwill which is also a significant determinant of sales/turnover.

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Authors Profile



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