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Effect of Firm Size on Financial Performance of Listed Consumer Goods Companies in Nigeria

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Abstract

This study examined the effect of firm size on financial performance of listed Consumer Goods Companies in Nigeria. Firm size is the independent variable whereas financial performance (proxied by Return on Assets) is the dependent variable of the study. The study used ex-post facto research design; data was collected from Secondary sources, i.e.; the annual reports and accounts of the listed consumer goods companies in Nigeria. The population of this study comprises of all the listed firms operating in the Nigerian consumer goods industry as at 31st December 2016 and from the population, a sample of seven (7) companies were selected out of 28 listed Consumer Companies in Nigeria. The Techniques used for Data Analysis includes descriptive statistics, Pearson correlation and multiple regression. Findings were made that firm size does not significantly influence financial performance of listed consumer goods companies in Nigeria. And also there is a negative and significant relationship between firm size and Return on Asset as a measure of financial performance. Furthermore, Recommendations are made that firms should expand and diversify with the aim of achieving optimum size so as to enjoy economies of scale which will ultimately result in higher level of financial performance.

Keywords*: Firm size, Corporate attributes, Financial performance, Return on Assets, Listed Consumer goods Companies*

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Background to the Study

Firm size is said to be one of the determinants of financial performance and performance indicators like return on assets and earnings per share are major pointers of strong or weak corporate attributes. By simple conception, firm size is a characteristics or feature of a firm which is determined by capital base, number of employees or turnover, whereas financial performance is the result of activity and the appropriate measure to assess performance in terms of profit output of an entity.

Consumer goods industry in Nigeria are category of stocks and companies that produces goods and services that are purchased by individuals rather than by manufactures and industries. This sector includes companies involved with food production, packaged goods, clothing, beverages, automobiles and electronics (Jeli, 2010 and Aldrich, 2013). In Nigeria for instance, this industry includes companies like the Cadbury Nigeria PLC, Seven-Up Bottling Company, Nestle Nigeria PLC and so on.

In a more elaborate term, concept of financial performance is elusive in terms of definition and measurement. This study seeks to buttress financial performance as the result of activity and the appropriate measure used to assess corporate performance, which may be considered to depend on the type of organization to be evaluated, and the objectives to be achieved through that evaluation. The performance of any firm not only plays the role to increase the market value of that specific firm but also leads towards the growth of the whole industry which ultimately leads towards the overall prosperity of the economy.

In this study, the performance of the consumer goods companies was measured by Return on Assets (ROA). The ROA, defined as net income divided by total assets, reflects how well a company management is using the company real investment resources to generate profits. ROA is widely used to compare the efficiency and operational performance of company as it looks at the returns generated from the assets financed by the company.

The causal relationships between size and financial performance have been widely tested with ambiguous results. Several studies suggest that a positive relationship exists between company size and financial performance. Bigger firms are presumed to be more efficient than smaller ones. The market power and access to capital markets of large firms may give them access to investment opportunities that are not available to smaller ones (Amato and Wilder, 1985). Firm size helps in achieving economies of scale.

Objectives of the Study

This study is aimed at examining the effect of firm size on financial performance of listed consumer goods Companies in Nigeria. Financial performance is proxied by Return on Assets and firm size was measured as the natural logarithm of total assets that is the sum of current and noncurrent assets.

Scope of the Study

The research examined the effect of firm size on the financial performance listed consumer goods companies in Nigeria, using ten (10) years' time frame of 2005 to 2014. The consumer goods companies in Nigeria consist of whole sale marketers and retail marketers which are privately owned.

Literature Review

This section consists of two broad areas of conceptual framework and empirical review. The conceptual framework discussed concepts related to the variables of the study (firm size and financial performance) and the empirical framework reviewed local and global prior studies related to the study.

Conceptual Review

The conceptual framework reviewed concepts related to firm size, financial performance and development of the Nigerian Consumer Goods Industry.

Firm Size

The concept of firm size is mainly viewed from the perspective of sales volume, number of employees, capital base, assets or values add features. Normally, those using the technological theory based on economy of scale derived from capital inputs would use only sales figures or assets for measurement purposes. It has been found that sales and assets are not particularly appropriate methods of measurement for size; the main issue would be how agency transactions and the range of costs impact the profits. Costs are normally related to the fundamental way the organization is controlled by a hierarchy more than just the value of physical assets.

According to Kaen and Baumann (2003) measuring the employee's enrolment and value add are a better choice in measuring the size of the firm in organizational theories rather than sales or assets. Firms should be large enough in order to be capable of competing in the global market. Because of the increasing competition and improvements in communication networks, larger firms have better advantages in the international market.

Financial Performance

Financial performance refers to the degree to which financial objectives has been accomplished. It is the process of measuring the results of a firm's policies and operations in monetary terms. It is used to measure firm's overall financial health over a given period of time and can also be used, to compare similar firms across the same industry or to compare industries or sectors in aggregation.

The financial performance analysis identifies the financial strength and weakness of the firm by establishing relationship between the items of the balance sheet and profit and loss account. According to Ogebe, Ogebe and Alewi (2013), the performance of a firm reflects how effectively the firm has been managed and resources utilized. It can be measured in terms of profitability.

Almajali (2012) argue that there are various measures of financial performance. For instance return on sales reveals how much a company earns in relation to its sales, return on assets explain a firm's ability to make use of its assets and return on equity reveals what return investors take for their investments. Company's performance can be evaluated in three dimensions. The first dimension is company's productivity, or processing inputs into outputs efficiently. The second is profitability dimension, or the levels at which company's earnings are bigger than its costs. The third dimension is market premium, or the level at which company's market value exceeds its book value (Walker, 2001).

A very important aspect of financial performance that has not focused much attention by researcher and scholars in the finance literature is growth. A rise in growth rate is regarded as an indication of a firm's financial strength and may cause higher demands for raising equity funds from external sources. Firms with large volume of growth rate need to raise additional financial support to back up their capital expenditure strategies (Khalid, 2012). Growth can also be referred to the increase in a firm size, measured from one period to another (Delmar, Davidsson, and Gartner, 2003; Hoy, McDougall, and Dsouza, 1992).

Development of the Nigerian Consumer Goods Industry

Consumer goods have been around since the earliest days of civilization; while advancements in manufacturing led to the efficient, high-technology factories and production facilities used today, ancient craftspeople produced goods slowly and laboriously by hand or via manual or semi-automated machines to address a specific market need (clothing, cookware etc).

General consumer products range from utilitarian goods such as shoes and pens and pencils to cutting edge technology such as i-pads and smart phones. There is also a wide range of quality and price within each product category. For example, one can find basic shoes for N1, 600 or N3, 200, but a pair of running shoes endorsed by a super star athlete can cost hundreds of thousands of Naira. Consumer goods companies are located in every state and throughout the world. Manufactures ranges from massive, multinational corporations to small firms with fewer than 50 employees.

Retail is a major aspect of consumer products industry. Retailers sell the products that manufacturers produce. Retail shops are located in nearly every town and city. These include department stores, super markets," big-box" stores and drug stores. Many companies sell products on-line while others sell products only on internet and have no brick and mortar stores. Workers with wide range of of Educational backgrounds and skills are employed in the general consumer products industry, career paths include those in product development (such as product design) manufacturing, sales, administrative support, law (especially intellectual property and labor law) and other fields.

Empirical Review on Firm Size and Financial Performance

The nature of the relationship between firm size and financial performance has received considerable attention in the literature and has motivated strong debate. Several arguments favor larger firm size in attaining higher performance. Large firms are more likely to exploit economies of scale and enjoy higher negotiation power over their clients and suppliers (Serrasqueiro and Nunes, 2008). A major study done by Crum in 1939 for all United States industries formed the basis for much of the later research done in this field (Velnampy and Nimalathasan, 2010). One of the early themes in the empirical study of this relationship is the economies of scale. Chen and Hambrick (1995) and Mintzberg (1979) provide a summary and overview of the importance of firm size in the determination of financial performance. Previous studies have found a positive relationship between firm size and financial performance. For example Chibber and Majumder (1999) and Kuntluru (2008) find statistically a significant positive relationship between firm size and profitability (ROA and return on sales) of Indian firms. Leng (2004) also confirms the above findings using data from Malaysian companies.

Yana (2010) examines the determinants of firm performance of New Zealand listed companies over the period of twelve years from 1996-2007 during which one recession occurred. Performance proxies such as Return on Assets (ROA), Economic profit (EP) and Tobin's Q in relation to the firm characteristics were used to determine the firm performance. The regression model encompasses eight key factors found to have the most impact on the operating performance of the companies in other markets. The empirical investigation of the factors that affect firm performance confirmed that long term leverage, size, risk, tangibility and non-debt tax shield were the factors that significantly affect the firm's financial performance. The study was conducted in the food sector of Pakistan for the period of six years from 2005-2010 and fixed effect regression estimation was used to analyze the panel data. (Zahid, Ali, Shahid and Muhammad, 2013).

Velnampy and Nimalathasan (2010) empirically investigated the impact of firm size on profitability of banks in Srilanka for the period of ten years. Correlation analysis shows that, there is a positive relationship between firm size and profitability in Commercial Bank of Ceylon Ltd, but there is no relationship between firm size and profitability in Bank of Ceylon. Waqas, Imran, Hafis and Jawad (2013) empirically evaluated the factors that significantly affect the firm's performance in textile and food sector of Pakistan. The researchers used panel data set from the period of 2005 to 2010. One-way fixed effect model was used due to the presence of cross-sectional fixed effect in the regression results. The researchers concluded that the firm's performance in the case of textile sector is significantly affected by short term leverage, size, risk, tax and non-debt tax shield while taking long term leverage as first independent variable, the leverage becomes insignificant along with tax factor. In food sector, long term leverage, size, risk, tangibility and non-debt tax shield are factors significantly affecting the firm's financial performance. The findings of Zeitun and Tian (2007) indicated that leverage, risk and tangibility have significant and negative relationship with the firm's performance while firm's size and tax have positive and significant relationship with firm's performance. They used leverage, growth, size, tax, risk and tangibility as independent variable to see their effect on firm's performance.

Similarly, Maina and Ismail (2014) found a negative and significant relationship between size and financial performance of the listed firms in Nairobi proxied by ROA, ROE and Tobin's Q. In the same vein, Hashem, Javad and Fatemah (2012) had an article featuring the impact of company characteristics on working capital management. They sampled out 83 firms listed in the Tehran stock Exchange for the period of ten years correlation and regression were used in analyzing the data. The result indicated that profitability, operating cash flow, company size, sale growth and debt ratio affect the company's working capital management. The relationship between ROA and firm's size is positive but not significant. However, the relationship between ROE and the size of firm is positive and significant, thus firm's size is an important determinant of firm's financial performance (Gleason, Mathur and Mathur, 2000 and Zeitun and Tian 2007).

Similarly, Chandrapala and Guneratne (2012) examined the ownership concentration and financial performance of listed Srilanka companies. Both pooled and ordinary least square regressions were used to analyze the data obtained from the financial statement. While ROA was used as the performance measure, they found no significant relationship between ownership concentration and financial performance of companies on the Colombia stock exchange. On the hand the study indicates that firm size, quick ratio and ratio of inventory to total asset have significant positive impact on the ROA but debt ratio is negatively related to the financial performance.

According to Yana (2010), firm size, leverage, tangibility, firm specific risk, corporate governance, growth and cash holding significantly impact on the financial performance of listed companies in New Zealand over the period of ten years 1996-2007. ROA, economic profit (EP) and Tobin's Q were used as financial performance proxies.

Waqas, Imran, Hafiz and Jawad (2013) assessed the factors significantly affecting the firm's performance in the textile and food sector of Pakistan. The researcher used panel data set created from the financial statement of the listed firms for the period from 2005-2010 and one way fixed effect estimation regression analysis applied on the data. The dependent variable was profitability while the independent variables were leverage, growth, firm size, risk, tax, tangibility, liquidity and non-debt tax shield. Their result indicates that the firm's performance is significantly affected by short term leverage, size, risk, tax and non-debt tax shield.

Methodology

The design for this study is ex-post facto research design, which was used to test hypotheses about the cause-and-effect or correlational relationship between firm size and financial performance. The study was carried out based on panel data analysis, where the annual report and accounts of consumer goods companies listed on the floor of Nigerian Stock Exchange and the Fact book were used in extracting the relevant data.

Population and Sample Size of the Study

The population of this study comprises of 28 firms operating in the Nigerian consumer goods industry listed on the Nigerian Stock Exchange as at 31st December 2014. The population of the study is presented on Appendix A. A sample size of 7 was selected from the population to represent the listed consumer goods companies in Nigeria to carry out the studies. The criteria for selecting the sample were that only those firms whose annual financial statements were consistently available during the period of study (2005-2014) were considered. Secondly, a firm must have been quoted without being delisted from 2005 to 2014. After applying the criteria/sampling technique elaborated above, the researcher came up with seven (7) out of the 28 companies consisting the population of the listed consumer goods companies, Table 1 presents the sampled firms for the Study.

Table 1: Sample Size

S/No	Company Name	Year of incorporation	Year of Listing
1.	Seven-up Bottling Co.	1960	1986
2.	Cadbury Nig PLC	1965	1976
3	Nestle Nigeria PLC	1961	1979
4	Rokana Industry PLC	1978	2001
5	UTC Nigeria PLC	1932	1972
6	VITA Foam Nig. PLC	1962	1978
7	Vono Products PLC	1964	1974

Source: Generated by the researcher from Population of the Study (Appendix A)

Study Variables and their Measurement

The study investigates the relationship between firm size and financial performance of listed consumer goods Companies in Nigeria. Firm size is the independent variable while financial performance is the dependent variable. Firm Size (FSIZE) was measured as the natural logarithm of total assets that is the sum of current and noncurrent assets. Whereas financial performance was proxied by Return on Asset (ROA) and measured by the overall effectiveness of a firm in generating profit with the available assets. It is measured as a ratio of profit before tax to total assets.

Data Analysis and Interpretation

The data generated from the annual report and accounts relate to firm size and financial performance of listed consumer goods companies in Nigeria. The results of the data generated on the dependent and independent variables were analyzed using descriptive statistic tools like Mean, Maximum, Minimum and Standard Deviation. And the data were further tested using Pearson's correlation and multiple regressions (OLS)

Descriptive Statistics

The descriptive statistics is presented in Table 2 where minimum, maximum, mean and standard deviation of the data for the variables used in the study are described.

Table 2: Descriptive Statistics

Var.	Minimum	Maximum	Mean	Std. Dev
ROA	-0.319	0.595	0.114	0.206
FSIZE	12.310	20.055	17.085	1.354

Source: Generated by the Researcher using STATA (2017)

Table 2 shows that the mean ROA of the sample firms is 11.4% which indicate that on the average, for every N100 worth of total assets of the firms, N11.4 was earned as profit before tax.. The table shows that the minimum value of ROA is -0.319 which attributes to the losses incurred by Vita Foam Nigeria PLC and Vono Products PLC. The result also reveals a standard deviations of ROA (0.206) and firm size (1.354).

The minimum and maximum value of ROA is -0.319 and 0.595, this means that for every one hundred naira worth of net investment, the industry had at worst made a loss of N31.9 and had at best earned a maximum of N59.5. On the other hand, the minimum and maximum value of FSIZE is 12.310 and 20.055

Correlation between the Variables of the Study

Correlation analysis is used to assess the nature of relationship between the dependent and independent variables and to determine whether Multicollinearity exist among the variables of the study. The Pearson correlation analysis is used in this study to assess the relationship between firm size and financial performance.

Table 3: Correlation Matrix of the Study Variables

VAR	ROA	FSIZE
ROA	1.0000	
FSIZE	-0.4021	0.3489

Source: Generated by the Researcher using STATA (2017)

Table 3 shows the correlation matrix between the variables of the study. ROA is seen to have a positive and constant (1.000) correlation with itself. ROA is reported to be negatively correlated with the independent variables of firm size (-0.4021). This means that an increase in any of the explanatory variable will lead to a decrease in the return on assets of the firms.

Regression Results and Discussion

The regression results of the dependent variable (ROA) and the independent variable (firm size) of the study were presented and discussed here. A multiple linear regression model was used to test the research hypotheses at 5% level of significance (95% confidence level).

Table 4: Regression Results

	Model	Dummy	Dummy
Constant	4.090***	-1.750	3.200***
	(1.224)	(-17.143)	(4.297)
	0.000	0.085	0.001
FSIZE	-3.270***	1.060	-1.100
	(-0.074)	(0.711)	(-0.110)
	0.001	0.294	0.270
R-square: within	0.209	0.218	0.0708
between	0.592	0.214	0.925
Overall	0.235	0.209	0.239
F- value	19.39***	2.650**	19.82***
P- value	0.0036	0.0245	0.0030

Source: Generated by the Researcher using STATA (2017)

Table 4 present summary of the regression result obtained from the model ($ROA_{it} = \beta_o + \beta_1 FSIZE_{it} + \beta_2 Dummy_t + \beta_3 Dummy_{ii} + \mu_{it}$) of the study. The regression result reveals that the cumulative R2 (0.235) which is the multiple coefficient of determination gives the proportion or percentage of the total variation in the dependent variable explained by the independent variables jointly. Hence the result of the F- statistic (19.39) shows that the model is well fitted and the firm size in this study are well selected and utilized as confirmed by the P-value (0.0036). From the result the coefficient of firm size is – 0.0741 while P- value is 0.001, this indicates a negative and significant relationship between ROA and firm size at 1 percent level of significance.

Hence the supposed Hypothesis of the study which predicts that there is no significant relationship between firm size and financial performance (ROA) of listed Consumer goods Companies in Nigeria which is in line with the objective of the study is accepted.

Results and Discussion

The hypothesis of the study which states that there is no significant relationship between firm size and ROA of listed Consumer goods Companies in Nigeria was tested and the result from the analysis reveals that the F-statistics is 20.98 while the prob > F is 0.0019 which is significant at 1%. Therefore, the study concludes that there is a negative but significant relationship between firm size and ROA of listed Consumer goods Companies in Nigeria.

Conclusion

Based on the analysis and discussions in the preceding sections, the study concludes that there is a negative but significant relationship between firm size and financial performance (ROA) of listed consumer goods companies in Nigeria.

Recommendations

Hence, the study recommends that companies should expand and diversify with the aim of achieving an optimum size, so as to enjoy economies of scale which will ultimately result in higher level of financial performance. However, if a firm expands beyond the optimum size diseconomies of scale will set in and this can result to a decline in the financial performance of the firm.

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APPENDIX A: Population of the Study

S/No	Company Name	Year of Incorporation	Year of Listing
1.	Seven-up Bottling Co.	1960	1986
2.	Cadbury Nig PLC	1965	1976
3.	Champion Brewery PLC	1980	1983
4.	Dangote Flour mills Plc	1999	2006
5.	Nestle Nigeria PLC	1961	1979
6.	Rokana Industry PLC	1978	2001
7.	UTC Nigeria PLC	1932	1972
8	VITA Foam Nig. PLC	1962	1978
9.	Vono Products PLC	1964	1974
10	Dangote Sugar Refinery plc	2000	2007
11	DN Tyre and Rubber PLC	1961	1961
12	Flour Mills Nigeria PLC	1962	1979
13	Golden Guinea brewery	1960	1979
14	Guiness Nigeria PLC	1962	1965
15	Honey well flour mill PLC	1983	2009
16	International breweries PLC	1994	2005
17	Jos International Breweries	1975	1992
18	MCNICHOLAS Plc	2004	2009
19	Multi-trex integrated foods plc	1999	2010
20	N-Nigeria flour mills PLC	1960	1978
21	Nascon Allied Industries Plc	1973	1992
22	Nigerian Brewery Plc	1946	1973
23	Nigerian Enamel ware plc	1960	1977
24	P.S Mandrides andco PLC	1949	1978
25	PZ Cussons Nigeria PLC	1958	N/A
26	Premier breweries PLC	1978	1991
27	Unilever Nigeria PLC	1973	N/A
28	Union Dicon salt Nigeria PLC	1993	N/A

Source: Generated by the researcher from NSE Fact book (2014)