Company Attributes and Firm Value of Listed Consumer Goods Companies in Nigeria

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ABSTRACT: The study examines the impact of company attributes on firm value of listed consumer goods sector in Nigeria covering the period of 2005 to 2014 using secondary source of data collection. Cluster sampling technique was used in determining the samples of the study. The data generated was tested using Shapiro Wilk Test and Hausman Test. The findings of the study were analyzed in a random effects model of regression analysis using STATA 11.1 software package. The study reveals that firm growth and firm size has a positive and significant impact on firm value of the sampled listed consumer goods companies in Nigeria while firm leverage has a positive relationship with firm value of such company but not significant. The study among others, recommended that the firms in the consumer goods industry should also adopt a proper debt management and appropriate capital structure in order to enhance the firm’s value so as to avoid bankruptcy, Nigerian consumer goods companies should acquire a reasonable amount of asset for efficient and effective running of the company which will lead to increase in the firm’s value and as well lead to increase in sales.

KEYWORDS: Firm Growth, Firm Size, Firm Leverage and Firm Value

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I. INTRODUCTION

The main goal of a firm is to increase the shareholder’s welfare by increasing the value of a firm (Salvatore, 2005). Maximizing firm value is essential for a company because it means increasing the prosperity of shareholders as well, which becomes the company’s main goal. However, a good firm value is able to attract other parties’ interests to join the company. In other words performance on the stock market is an index or indicator of corporate success. Any corporate entity experiencing a rise in the market price of its stocks is considered a good company by the investors. Modigliani and Miller (1958) stated that firm value is determined by company’s asset earnings power. If the company predicted good prospects in the future, the value of the stock will be higher. Otherwise, if the company has fewer prospects the stock price will be low.

Firm attributes are variables that affect the firm’s decision both internally and externally (Shehu, 2009). Therefore, Company attributes are specific variables that contribute towards the changes on firm value. Company attributes are divided into firm performance characteristics and firm structural characteristics. The firm performance characteristic includes firm growth and profitability, while firm structural characteristics include firm size, firm leverage, firm age and capital expenditure or management efficiency (Shehu, 2009). Firm characteristics can be seen as the wide varieties of information disclosed in the financial statement of business entities that serve as the predictors of the firm’s quality of accounting information and performance. Therefore, the current study considered firm growth, firm size and firm leverage as variables of company attributes.

In corporate finance, the commonly used method for financial analysis is the use of profitability and market value ratios as key measures of firms’ overall efficiency and performance (Thavikulwat, 2004). These metrics are widely used in financial models for performance measurements Theoretically, several variables that may influence firm performance as the survival or business success mostly depends on the profitability and market value of the firm. However, the specific firm characteristics remain unknown to firms as to which variable contributes to the prospect and value of a firm and this justify the reason of the current study.

The consumer goods sector has the potential of influencing economic growth and development because in 2014, this sector is the second largest contributor to market capitalization in Nigeria (NSE Factbook, 2014).
Every individual is a consumer and the companies have an impact on all. Consumer goods companies are those companies that engage in the production of goods and services for the daily usage of household. As growing numbers of Consumer goods companies are focusing on global outreach, it is important to analyze Consumer goods companies’ performance (Ali, 2010). Assessing the firm value in consumer goods gained the importance in the corporate finance literature because as intermediaries, these companies not only provide goods, but also helps to channelize the funds in an appropriate way to support the business activities in the economy. However, despite all these the sector has received little attention particularly in developing economies like Nigeria. Since the sector plays an important role in the operation of the economy, their stability is of paramount importance to the entire populace.

Most of the empirical studies outside Nigeria like the study the study of Alghusin (2015) investigates the impact of company characteristics on profitability of Jordanian industrial companies, the study of Sweety and Kuar (2014) determine the impact of firm-specific characteristics on shareholders’ value of listed companies in India, the study of Kaguri (2013) determine the relationship between firm characteristics and financial performance of life insurance companies in Kenya. In Nigeria, most of the studies focused on building materials, oil and gas, manufacturing and food & beverages firms (Shehu 2009; Ibrahim and Hussaini, 2015; Mohammed, 2015; Abdullahi, 2016). None of the aforementioned studies examines the impact of company attributes on value of firms of Nigerian consumer goods companies. Therefore, the present study attempt to cover the gap by examining company attributes within the dimension of firm growth, firm size and firm leverage whether the variables have impact on the firm value of listed Nigerian Consumer Goods companies.

In light of the foregoing the present study raised the following questions:

i. How does firm performance characteristic (firm growth) impact on firm value of listed consumer goods companies in Nigeria?

ii. What impact do firm structural characteristics (firm size and firm leverage) have on firm value of listed consumer goods companies in Nigeria?

The remainder of the paper is organized as follows: Section two (2) provides literature on company attributes and firm value and previous researches about these concepts. Section three (3) presents methodology of the study. Section four (4) Presents results and discussions and lastly section five (5) discusses conclusions and recommendations.

II. LITERATURE REVIEW

Components of Company Attributes
Firm attributes are firm characteristics or specific features that distinguish one company from the other. Firm attributes are numerous; it could be in terms of the size, profitability, leverage, industry type, geographical location, tangibility, and nature of business, corporate governance mechanisms and any other feature that distinguishes one company from the other (Akinsulire, 2011). The current study focused on firm growth, firm size and firm leverage.

Firm Growth
Growth of firm (sales growth) represents the extent to which a company increases its sales yearly. It is measured as current year’s sales minus previous year’s sales divided by previous year’s sales (Rimo & Panbunyuen, 2010). The growth opportunity of the firm can be described as the growth of the total asset of the firm. The greater the growth opportunity of the firm the better their value, Most especially since they have high potential of effectively diversifying their growth opportunity to further perform better (Akinsulire, 2011).

Firm Size
The size of a firm cannot be overruled in determining the value of the firm. Larger firms are prone to having a maximized value than smaller firms. Most companies are intent to expand the size of their business operation for them to grow either in revenue, number of employees, or size of facilities (Pervan & Visic, 2012). Firm’s size is measured in different ways such as asset, employment, sales, and market capitalization. This study measured firm size as natural logarithms of firm’s total assets.

Firm Leverage
Leverage is a financial debt ratio that is used in order to establish the relationship between the external financing of the firm and its total assets (Abbadi & Abbadi, 2012). Leverage financing on the other hand refers to the ratio of debt to equity capital of a company. As a result of the payment of interest and repayment of principal amount of the debt a large part of the firm’s cash flow would decrease (Magpayo, 2011). Financial leverage also involved the use of debt to acquire additional assets.
The Concept of Firm Value

In the long term, the goal of the company is to maximize the firm value. The higher the firm value shows the prosperity level of the company owner. The firm value becomes the main concern for the investors. The prosperity level of shareholders and investors are reflected from the firm value. In other words, the firm value becomes the performance indicator for finance manager (Salvatore, 2005).

To measure firm value, this study used Tobin’s Q. Tobin’s Q is defined as Number of ordinary shares multiplied by the market value per share, and then divided by the value of ordinary shares. This equation is known as Price-to-Book Value as used by Hidayah (2014). The decision rule for the Tobin’s q value is as follows: if the Tobin’s q value is between 0 and 1, this means that the firm assets value is higher than the value of the firm stocks, this imply that the firm stock price is undervalued and if the value is higher than 1, this means that the firm assets value is lower than the value of the firm stocks, this implies that the firm stock price is overvalued.

Empirical Studies

Many studies focused on company attributes and firm value from different views and in different environments. It can therefore be deduced that there exists a significant relationship between firm value and company attributes.

Mohammed (2015) examines the impact of firm characteristics on firm value of listed healthcare firms in Nigeria. The study used panel data regression to analyze the secondary data extracted from the annual reports and accounts of the ten firms for the period 2008 to 2015. The study found that firm size has positive significant impact on the firm value of listed healthcare firms in Nigeria. The study also found that liquidity has negative significant influence on the firm value of listed healthcare firms in Nigeria suggesting that excess liquidity position will be counter-productive to the firms because it decreases their value. Lastly, it was reported that leverage has negative and significant effect on firm value implying that high leverage does not lead to increase in value of the firm.

In a study conducted by Alghusin (2015) investigates the impact of firm characteristics and profitability of listed industrial companies in Amman stock exchange. A sample of 25 Jordanian Industrial listed companies for a period of 10 years (from 1995-2005) was selected. The results of the study show that there is a significant effect of the Financial Leverage and Growth on profitability of industrial companies. Therefore, industrial companies may enhance the profitability of their firms by minimizing the debt, and increasing financial assets compared with total assets.

In the work of Ahmed and Ibrahim (2015) that examines the relationship between financial leverage and profitability in Pakistani listed firms in cement and service sector for the period of 2006 to 2012. The results of correlation shows that in cement sector Financial leverage (FL) has a negative relationship with profitability (ROA), while Size of the firm (FS) and growth of the firm (FG) have no impact on financial leverage. It means that as financial leverage increases profitability decreases. In Services sector financial leverage (FL) has a positive relation with Size of the firm (FS) while profitability (ROA) and growth of the firm (FG) have no impact on financial leverage (FL). It means that as size increases financial leverage also increases.

Mule, Mukras and Nzioka (2015), explores the effect of corporate size on profitability and market value of listed firms in Kenya. Data for companies which were active in Nairobi Securities Exchange (NSE) between the years 2010 to 2014 has been used. Results indicates that there is a positive significant relationship between firm size and profitability, that is, return on equity. The result shows that corporate size has no statistically significant impact on firm market value under random effects specification.

Ramadan (2015) investigates the impact of leverage on the firms’ value utilizing unbalanced pooled Ordinary Least Square (OLS) cross-sectional time series panel data regression approach of all listed companies in Amman Stock Exchange (ASE) during the period 2000-2013. The results shows that the firms’ leverage level affect the firms’ value for the Jordanian listed companies included in the sample test.

In addition, a study conducted in Kenya by Gweyi and Karanja (2014) examines the effect of financial leverage on financial performance of deposit taking savings and credit co-operative society (SACCOS). The sample data was extracted from 40 SACCOS registered by Sacco Society Regulatory Authority (SASRA) extended from the period 2010 to 2012. The secondary data used for analysis was collected from the financial statements of the various deposit taking SACCOS. The results show perfect positive correlation between debt equity ratio with return on equity and profit after tax at 99% confidence interval and a weak positive correlation between debt equity ratio with return on assets and income growth.

Sweety and Kaur (2014) discovers the impact of firm-specific characteristics on the shareholder value of 100 listed companies in India for the financial period of 1997/1998 to 2008/2009. Multiple regression analysis is employed to study the relationship. The study reveals that investors tend to reward the companies which have higher profitability, lower market risk, efficient resource management, high leverage, more liquidity, higher marketing expenditures and robust market capitalization.

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Hidayah, (2014) examines the effect of company characteristic toward firm value in the property and real estate Companies listed in Indonesia stock exchange. The samples of the study was determined using purposive sampling method which consist of 30 property and real estate companies from 2010 to 2012. The result of the study shows that Managerial Ownership, Firm Size, and Return on Assets affect the Firm Value while capital structure does not have any effect on firm value of listed property and real estate companies in Indonesia.

Kaguri (2013) determine the relationship between firm characteristics and financial performance of life insurance companies in Kenya. Secondary data of 17 life insurance companies over the period of 2008-2012 was obtained from the audited annual reports and accounts of the companies. The study findings indicate that the variables are statistically significance to influencing financial performance of life insurance companies as indicated by the positive and strong Pearson correlation coefficients. This implies that premium growth is relied upon to make conclusions about the financial performance of life insurance companies’ as shown by its strong and positive correlation coefficients.

Similarly, Chambers, Sezgin and KaraaSlan (2013) investigated the effect of capital structure on stock values of companies listed on Istanbul Stock Exchange. The study used three periods: the whole period from 1994 to 2010, the sub-period from 1994 to 2002 and another sub-period from 2003 to 2010. Panel regression analysis was used in which total debt to market value (TD/MV) and beta ratio were found to have statistically significant effect on both nominal and real stock values in all the three periods. The TD/MV ratio is also found to be statistically significant but with a negative effect on both nominal and real stock values in the 1994 to 2002 sub-period but in the 1994 to 2010 period only real stock value that was statistically significant.

Ulil, Bambang and Djumahir, (2013) examine the effect of firm characteristics proxies by size, firm age, profitability, leverage and firm growth on the governance quality which represented by Internet Based of Corporate Governance (IBCG) rating, and its impact on firm value. The findings of the study reveals that firm size has impact on governance quality, and firm age, profitability, leverage and firm growth does not have impact on corporate governance quality.

In the work of Pervan and Visic (2012), the study investigates the relationship between firm size and performance of Companies operating in the Croatian manufacturing industry for the period of 2002-2010. The results revealed that firm size has a significant positive (although weak) influence on firm profitability.

In Kenya, Kisengo and Kisengo (2012), examines the impact of firm characteristics on the performance of 48 microfinance institutions (MFIs). The study adopted correlation research design. Primary data was collected using questionnaires. This was supplemented with secondary data. The relationship between firm characteristics and performance of MFIs was examined using correlation and regression analysis for the period of 2012. Findings revealed that firm characteristics have a significant positive effect on performance of MFIs. Structure related characteristics had the greatest while capital related had the least effect on performance of microfinance.

Akhitar, Javed, Maryam and Sadia, (2012) investigates the impact of shareholders return in Fuel & Energy Sector of 20 listed public companies at Karachi stock exchange (Pakistan), the study demonstrated that financial leverage has got a positive relationship with financial performance. Hence, the companies in the fuel and energy sector may enhance their financial performance and can play their role for the growth of the economy while improving at their optimal capital structures.

Welch and Ivo (2004) conducted a research on relationship between capital structure and stock values by examining the US listed firms for the period 1960-2000, and found that stock values were negatively correlated to debt-equity ratio when firms were inactive and did not reschedule their debt ratios in period of stock prices increase or decrease.

III. THEORETICAL FRAMEWORK

Different theories have been used by previous researchers to underpin studies in area of company attributes and firm value. However, stewardship theory signaling theory and agency theory have been found to be the most appropriate theories that underpin the current study.

Stewardship theory assumes that managers whose behavior is aligned with the objectives of their principals are steward to their organizations. Donaldson and Davis (1991) viewed steward as a person who essentially wants to do a good job, be a good steward of the corporate assets and his role is seen as a caretaker or an individual for whom the prosperity of the firm is internalized as something good. The theory argues and looks at a different firm motivation for managers drawn from organizational theory. Managers are viewed as loyal to the company and interested in achieving higher performance for the company.

Signaling theory is concerned with understanding why certain signals are reliable and others are not in terms of decision making. The theory looks at the quality and reliability of accounting information sent by a company to its users of accounting information for investment decision making by the potential investors. Spence (1973) posited that a well performing firm distinguishes itself from the nonperforming one by sending a
creditable signal about its performance to capital markets as well as potential investors. Signals sent by a firm are the results of its operating activities which would inform investors about the company’s future prospects.

IV. METHODOLOGY

The study was conducted using ex-post factor research design and used quantitative research approach in order to examine the impact of company attributes towards firm value in listed Nigerian consumer goods companies, covering the period of 2005 to 2014. The population of the study consists of all the listed Nigerian consumer goods companies as at December, 2014. Therefore, Twenty seven companies constitute the population of the study namely: 7UP Bottling Company PLC, Big Treat PLC, Cadbury Nigeria PLC, Champion Breweries PLC, Dangote Flour Mills PLC, Dangote Sugar Refinery PLC, DN Tyres & Rubber PLC, Flour Mills of Nigeria PLC, Golden Guinea Breweries PLC, Guinness Nigeria PLC, Honeywell Flour Mills PLC, International Breweries PLC, Jos Int’l Breweries PLC, Multi Trex Integrated Foods PLC, Nascon Allied Industries PLC, Nestle Nigeria PLC, Nigeria Enamelware PLC, Nigerian Breweries PLC, Northern Nig Flour Mills PLC, P.S Mandrides PLC, Premier Breweries PLC, PZ Cussons PLC, Unilever Nigeria PLC, Union Dicon Salt PLC, UTC Nigeria PLC, Vitafoam Nigeria PLC and Vono Products PLC.

Sample size and Sampling Techniques

For the purpose of this study a cluster sampling technique is adopted in which companies in the consumer goods sector are grouped based on their peculiar characteristics. Each sample represents a sub-sector of the consumer goods sector. 7-Up Bottling Company PLC, represents Beverages Non-alcoholic, DN Tyre & Rubber PLC, represents Automobile & Auto parts, Guinness Nigeria PLC, represents Beverages - Brewers/Distillers, Nascon Allied Industries PLC, represents Food Products, Nestle Nigeria PLC, represents Food Products – Diversified, P Z Cussons Nigeria PLC, represents Personal/Household products and Vita foam Nigeria PLC, represents Household Durables.

Method of Data Analysis

Various statistical methods have been utilized to determine the impact of Company Attributes on Firm Value of listed consumer goods companies in Nigeria. Descriptive, Correlation and Regression Analysis via panel data are used. Therefore, pooled Ordinary Least Square (OLS), Fixed Effect Model (FEM) and Random Effect Model (REM) were employed for estimating the regression equation using STATA version 11.1 statistical packages. In order to verify the distribution of the variables, Shapiro-wilk test to normalize the data was conducted using normal probability plot to ensure robustness. Furthermore, the study uses Durbin-Wu-Hausman test to determine the choice between fixed effect and random effect.

Proxy Variables and Their Measurement

The Dependent Variable in the study is Firm Value (Tobin’s Q) measured as Number of ordinary shares multiplied by the market value per share, and then divided by the value of ordinary shares. This equation is known as Price-to-Book Value as used by Hidayah, (2014). On the other hand, the Independent Variables are Firm Growth measured as change in current year sales over preceding year sales and divided by preceding year sales, Firm Size measured total assets owned by the company and Firm Leverage measured as the ratio of total debt to equity as used by Ulil, Bambang and Djumahir, (2013). The study control for Board Size and measured as the Number of board members and Management Efficiency measured by sales divided by total assets as used by Sweety and Kuar (2014).

Model Specification

The following models as used by Sweety and Kuar (2014) were adopted with little modification as shown below:

\[ \text{Tobin’s Q}_i = \alpha_0 + \beta_1 \text{GROWTH}_i + \beta_2 \text{SIZE}_i + \beta_3 \text{LEV}_i + \beta_4 \text{BSIZE}_i + \beta_5 \text{MGT-EFF}_i + \epsilon_i \]

Where:

- \( \text{Tobin’s Q} \) = Tobin’s Q (Firm Value) 
- \( \text{GROWTH} \) = Firm Growth 
- \( \text{SIZE} \) = Firm Size 
- \( \text{LEV} \) = Firm Leverage 
- \( \text{BSIZE} \) = Board Size 
- \( \text{MGT-EFF} \) = Management Efficiency

\( \alpha_0 \) = Parameters to be estimated (is the average amount the dependent variable increases when the independent variables held constant).

\( \beta_1–\beta_5 \) = Partial derivatives or the gradient of the independent variables.
\( \varepsilon \) = an error term assumed to satisfy the standard OLS assumption/ \( \text{Ut} \) = Gaussian White Noise (Stochastic error term)

\( i \) = Firm

\( t \) = time

V. RESULTS AND DISCUSSION

This section presents the results of the analysis of the collected data from the Annual Report and accounts of the sampled companies. The descriptive statistics, correlation and regression are presented below.

Tests for Model Validation and Fitness

In order for a regression results to be accurate, valid and relied upon, the results obtained must be free from an abnormality to achieve this, Shapiro-wilk test was carried out to ensure robustness.

Shapiro Wilk Test for Normal Data

To verify what the distribution of the variables, Shapiro-Wilk normality test was conducted using STATA 11.1. The “W” ratio from the result is always a positive ratio between 0 and 1 and it is the ratio of the best estimator of the variance to the variance’s corrected sum of the square. The closer the “W” ratio is to 1 the better the result (the closer the normality of the distribution). A significant P-value indicates the probability that the null hypothesis of normality is true.

Table 4.1

| Variable | obs | W     | V     | z     | Prob>|z|
|----------|-----|-------|-------|-------|-----|
| r        | 70  | 0.81408 | 11.444 | 5.300 | 0.00000 |

Source: Generated using STATA 11.1 from the Annual reports and accounts of the sampled companies 2005 - 2014.

From the above table, the W ratio is 0.81408 and the P value is 0.00000. Therefore, the data is said to be significantly and normally distributed because the W ratio is closer to 1 and the P value is less than the level of significance of 0.00005.

Descriptive Statistics

Table 4.2 below presents the descriptive statistics of the variables included in the Regression Models as presented. It represents the variables of the 7 firms operating in Nigeria consumer goods Industry for the period 2005-2014. Therefore, the mean, standard deviation, minimum value and maximum value are depicted in the table below:

Table 4.2

<table>
<thead>
<tr>
<th>variable</th>
<th>obs</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>firm_value</td>
<td>70</td>
<td>210.9995</td>
<td>424.3691</td>
<td>-440.0005</td>
<td>2400</td>
</tr>
<tr>
<td>f_growth</td>
<td>70</td>
<td>1.9284e+07</td>
<td>6853619</td>
<td>-1.83e+07</td>
<td>2.02e+07</td>
</tr>
<tr>
<td>F_size</td>
<td>70</td>
<td>1.9284e+07</td>
<td>6853619</td>
<td>-1.83e+07</td>
<td>2.02e+07</td>
</tr>
<tr>
<td>leverage</td>
<td>70</td>
<td>12.67596</td>
<td>-103.5678</td>
<td>8.627436</td>
<td></td>
</tr>
<tr>
<td>b_size</td>
<td>70</td>
<td>10.24286</td>
<td>3.009337</td>
<td>3</td>
<td>17</td>
</tr>
<tr>
<td>mgf_eff</td>
<td>70</td>
<td>2.109714</td>
<td>2.440691</td>
<td>-2.78</td>
<td>9.76</td>
</tr>
</tbody>
</table>

Source: Generated using STATA 11.1 from the Annual reports and accounts of the sampled companies 2005 - 2014.

Table 4.2 reveals that Tobin’s Q was used as a proxy to check the efficiency of company attributes in influencing firm value to an average of 210 while the standard deviation is 424 within the minimum of .440 and maximum of 240. The table also reveals that firm growth has an average of 434 between the minimum of -1.83 and maximum of 2.02 this indicate that growth of the companies in Nigerian consumer goods sector does not significantly differs in terms of growth. Firm size has an average of 1.92 between the minimum of 65 and maximum of 9.15 indicates a wide level of dispersion in size of the industry during study period. Firm leverage has average of .330 between the minimum of -103 and maximum of 8.6 shows a considerable level dispersion in leverage of the firms during the study period.
The control variables used in the study shows the mean of Board size is 10 and a standard Deviation of 3 between the minimum of 3 and maximum of 17 indicates a considerable level in board size among the firms during the study period. Management efficiency measured by sales divided by total assets has a mean of 2.1 and standard deviation of 2.4 within the minimum of -2 and maximum of 976 of the samples firms during the study period.

**Correlation Coefficients**

Table 4.3 shows the correlation coefficients on the association between the dependent variable (Tobin’s Q) and explanatory variable (Firm Growth, Firm Size, Firm Leverage, Board Size and Management Efficiency). Firm growth has a strong relationship with firm value of 0.453 which is 45.3%. Table 4.3 further shows that result on the correlation analysis where Firm size has a strong relationship with firm value of 0.6076 which is 60.76% and lastly firm leverage has a weak relationship with firm value of 0.0690.

<table>
<thead>
<tr>
<th>firm_value</th>
<th>f_growth</th>
<th>f_size</th>
<th>leverage</th>
<th>b_size</th>
<th>mgt_eff</th>
</tr>
</thead>
<tbody>
<tr>
<td>firm_value</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>f_growth</td>
<td>0.4530</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>f_size</td>
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<td>0.2720</td>
<td>1.0000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>leverage</td>
<td>0.0690</td>
<td>0.0813</td>
<td>0.1068</td>
<td>1.0000</td>
<td></td>
</tr>
<tr>
<td>b_size</td>
<td>0.1065</td>
<td>0.2428</td>
<td>0.4790</td>
<td>0.2617</td>
<td>1.0000</td>
</tr>
<tr>
<td>mgt_eff</td>
<td>0.0324</td>
<td>0.0616</td>
<td>-0.2341</td>
<td>0.2205</td>
<td>0.2740</td>
</tr>
</tbody>
</table>

Source: Generated using STATA 11.1 from the Annual reports and accounts of the sampled companies 2005 - 2014.

The above Correlation Matrix tables show correlation coefficients on the relationship between the dependent variable (Tobin’s Q) and explanatory variables (Firm Growth, Firm Size, Leverage, Board Size and Management Efficiency). Table 4.3 shows a positive correlation between independent variables (Firm Growth, Firm Size, Leverage, Board Size and Management Efficiency) and the dependent variable (Tobin’s Q). These results indicated a positive relationship between Company attributes and firm value of listed consumer goods companies in Nigeria which differed significantly with the result of Welch and Ivo (2004) that discovered no significant relationship between the of company attributes and firm value. However it is consistent with the findings of Pervan and Visic, 2012, Kaguri, 2013, Mule, et.al, 2015.

**Fixed Effects Regression**

Table 4.4, fixed effects regression shows Firm growth has a positive coefficient and a P value of 0.053; therefore firm growth has a positive impact on firm value but not significant. Table 4.4 also shows that the fixed effects regression where firm leverage has a positive coefficient and a P value of 0.788; which means leverage has a positive relationship with firm value of listed consumer goods companies in Nigeria but not significant.

| firm_value | covf | Std. Err. | t | P>|t| | [95% conf. interval] |
|------------|------|-----------|---|-----|------------------|
| f_growth   | 9.52e-06 | 4.82e-06 | 1.98 | 0.053 | -1.26e-07 to 0.000192 |
| f_size     | -0.000126 | 2.24e-06 | 5.64 | 0.000 | 6.15e-06 to 0.000171 |
| leverage   | -7.25e-05 | 2.69e-05 | 0.27 | 0.768 | -4.59e-06 to 6.11e-05 |
| b_size     | -29.71e-03 | 23.60e-03 | -1.43 | 0.159 | -1.36e-02 to 11.93e-02 |
| mgt_eff    | 7.83e-05 | 26.63e-05 | 0.29 | 0.770 | -45.49e-03 to 61.15e-03 |

Source: Generated using STATA 11.1 from the Annual reports and accounts of the sampled companies 2005 - 2014.
From the result in table 4.4, it is observed that the model has an overall R-Square of 0.5239\. That means 52.39% of variations in Firm Value could be explained by this model. The overall P value is 0.0000; which is below 5% level of significance. It implies that 47.61% of the firm value of the sampled firms is accounted for by other determinants. This shows that there is a significant positive relationship between the independent variables with the dependent variable.

**Random Effects Regression**

Although the three results are shown, however, analysis and interpretation would only be made on the Random Effects (RE) as the Hausman test suggests RE more efficient because the P value is 0.4305 which is greater than the level of significance (0.05). Hence, random effects were adopted (APPENDIX A).

Random effects regression in table 4.5 depicts Firm growth has a positive coefficient and a P value of 0.009; meaning Firm growth contributes positively to firm value of listed Nigerian consumer goods companies, and the relationship is significant with a P value of 0.009. Using the random effects regression to interpret the findings of the study as a result of the Hausman test, for every increase in firm growth, it will lead to 0.00124% increase in firm value. This is in line with the study of Kaguri (2013). The result on the random effects regression shows Firm size has a positive coefficient and a P value of 0.0000. Therefore, Firm size has a significant positive relationship with firm value. Using the random effects regression to interpret the findings of the study as a result of the Hausman test, for every increase in Firm size will lead to 0.00139% increase in firm value, the relationship is significant with a P value of 0.0000. This study is also in line with the study of Mule, et.al,2015 and Pervan and Visic (2012) where there is a significant positive relationship between firm size and profitability but statistically weak.

The result of the random effects in table 4.5 also shows firm leverage has a positive coefficient and a P value of 0.919, which means leverage has a positive impact on firm value of listed consumer goods companies in Nigeria but not significant. Using the random effects regression to interpret the findings of the study as a result of the Hausman test, for every increase in the company’s leverage will lead to 26.27% increase in the firm value of such company, the association is not significant because it has a P value of 0.919 which is greater than 0.05 level of significance. This study concurs with the study of Gweyi and Karanja, (2013) where firm leverage showed a perfect positive relationship with profitability but contrast to the study of Ahmed and Ibrahim (2015), Ramadan (2015) where leverage show a negative significant relationship with profitability.

<table>
<thead>
<tr>
<th>Table 4.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>. xtreg firm_value f_growth f_size leverage b_size mgt_eff, re</td>
</tr>
</tbody>
</table>

| Random-effects GLS regression | Number of obs = 70 |
| Group variable: co_no | Number of groups = 7 |
| R-sq: within = 0.3919 | Obs per group: min = 10 |
| between = 0.7852 | avg = 10.0 |
| overall = 0.5880 | max = 10 |

Random effects u_i ~ Gaussian  
\( \text{corr}(u_i, X) = 0 \) (assumed)  
\( \text{Prob > chi2} = 0.0000 \)

| firm_value | Coef. Std. Err. | z | P>|z| | [95% Conf. Interval] |
| --- | --- | --- | --- | --- |
| f_growth | 0.0000124 | 4.76e-06 | 2.60 | 0.009 | 3.07e-06 | .0000217 |
| f_size | 0.000139 | 2.09e-06 | 6.68 | 0.000 | 9.85e-06 | .000018 |
| leverage | 0.2626621 | 2.572707 | 0.10 | 0.919 | -4.778771 | 5.304095 |
| b_size | -39.88502 | 17.35557 | -2.30 | 0.022 | -73.90311 | -5.86836 |
| mgt_eff | 31.11445 | 21.68627 | 1.43 | 0.151 | -11.38985 | 73.61875 |
| _cons | 233.0703 | 178.4353 | 1.31 | 0.191 | -116.6356 | 582.7971 |

Source: Generated using STATA 11.1 from the Annual reports and accounts of the sampled companies 2005 - 2014.

From the result in table 4.5, the random effects regression has an overall R square of 0.5880. This means that 58.8% of variations in firm value are explained by this model. The P value of the model is 0.0000.
VI. CONCLUSION AND RECOMMENDATIONS

The study concludes that firm growth has a positive impact on the firm value of listed consumer goods companies in Nigeria. The relationship is significant but statistically weak this shows that firm growth is enough for market valuation of shares and does not lead to value increment. Firm size has a positive impact on the firm value of consumer goods companies in Nigeria. The relationship is significant but statistically weak as well, this indicate that larger firms enjoy more investor’s confidence and patronage relative to smaller firms. Firm Leverage also has a positive impact on the firm value of consumer goods sector in Nigeria. This reveals that the higher the debt ratio the higher the firm value.

Based on the findings of the study, the study recommends that firms in consumer goods industry in Nigeria should also adopt a proper debt management and appropriate capital structure in order to enhance the firm’s leverage so as to avoid bankruptcy. Nigerian consumer goods companies should acquire a reasonable amount of asset for efficient and effective running of the company which will lead to increase in the firm’s value and as well lead to increase in sales.

REFERENCES


Corresponding Author: Kabiru Shuaibu
APPENDIX A

Hausman Test

\[
\text{. hausman fe re}
\]

<table>
<thead>
<tr>
<th>(b)</th>
<th>(B)</th>
<th>(B-b)</th>
<th>sqrt(diag(V_b-V_B))</th>
</tr>
</thead>
<tbody>
<tr>
<td>fe</td>
<td>f_growth</td>
<td>9.52e-06</td>
<td>0.0000124</td>
</tr>
<tr>
<td>re</td>
<td>0.00000126</td>
<td>-0.000139</td>
<td>-1.32e-06</td>
</tr>
<tr>
<td>leverage</td>
<td>0.7258336</td>
<td>0.2626621</td>
<td>0.4631715</td>
</tr>
<tr>
<td>b_size</td>
<td>-29.71351</td>
<td>-39.88932</td>
<td>10.16952</td>
</tr>
<tr>
<td>mgt_eff</td>
<td>7.833154</td>
<td>31.11445</td>
<td>-23.2813</td>
</tr>
</tbody>
</table>

\[b = \text{consistent under } H_0 \text{ and } Ha; \text{ obtained from } xtreg\]
\[B = \text{inconsistent under } Ha, \text{ efficient under } H_0; \text{ obtained from } xtreg\]

Test: \(H_0: \text{difference in coefficients not systematic}\)

\[
\chi^2(3) = (b-B)'[(V_b-V_B)^{-1}](b-B) = 2.76
\]

Prob>\chi^2 = 0.4305

(V_b-V_B is not positive definite)

Source: Generated using STATA 11.1 from the Annual reports and accounts of the sampled companies 2005 - 2014.