EFFECT OF FINANCIAL LEVERAGE ON FINANCIAL PERFORMANCE OF LISTED CONSUMER GOODS FIRMS IN NIGERIA

By

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Abstract

The study examines the effect of financial leverage on financial performance of listed consumer goods firms in Nigeria. Proxies to measure financial leverage are long-term debt and debt to equity, while the financial performance was proxied by gross profit margin. The study concentrated on the period from 2018 to 2022. Panel data was used to analyse the data sourced from the individual financial reports of the listed consumer goods firms. The sample adopted sixteen (16) listed consumer goods firms out the twenty (20) listed consumer goods firms in Nigeria due to unavailability of data. The study employed panel regression model to estimate the key relationship between financial leverage and gross profit margin. The result shows that Long-term debt had significant effect on gross profit margin of listed consumer goods firms in Nigeria, while, the result shows that debt to equity had no significant effect on gross profit margin of listed consumer goods firms in Nigeria. The study recommends the management of the consumer goods firms should critically examine the gross profit margin level before deciding the amount of debt or equity to employ to finance the firm's investment, since debt financing is cheaper than equity financing. The study also recommends that consumer goods firms in Nigeria should consider higher percentage of long-term debt by encouraging more expansion as it will help financial manager to improve the financial performance of the firm.

Keywords: Financial leverage, Long-term debt, Debt to Equity, Gross profit margin, Listed Consumer Goods Firms.

Introduction

In the global market, financial leverage reflects the efficiency of a firm in terms of its assets, financed through different options. Financial leverage is very vital in the smooth running of the business and it predicts the equity and underlines the debts being employed by the firm in relation to its total capital. Khan and Siddiqui (2023) posited that a higher amount of debts means higher risk. Since bankruptcy costs exist, deteriorating returns occur with further use of debt in order to get the benefits of tax deduction and interest. Therefore, there is an appropriate capital structure beyond which increases in bankruptcy costs are higher than the marginal tax-sheltering benefits associated with the additional substitution of debt for equity. Firms are willing to maximise their performance and minimise their financing cost by maintaining the appropriate dividend pay-out (Syofyan et al., 2021).

Financial leverage decision is one of the most crucial aspects of managing the firm since one of the tasks of the management of an organization is to increase the firm's value. A growing company will usually need capital which can be financed by a mix of debt and equity. The job of the financial manager will be to find the optimal combination of funding that increases the value of the shareholders. Financial leverage is not the only determinant of a firm's profit-earning potential and it is also a source of risk. Eventually, if firm managers cannot administer finance sources, the firms will not be able to handle the cost and firms may also not achieve the objectives of minimizing cost and maximizing performance. Financial leverage refers to the extent to which a firm relies on debt. Therefore, any firm must make the right decision in terms of its capital structure to forecast capital costs (Kaupelyte &

Mscichauskas, 2016).

The link between financial leverage and financial performance of consumer goods companies explains how the use of debt to finance operations and it incur interest expenses, which can affect its profitability. Also, when manufacturing companies take too much debt, they may find it difficult to meet its interest obligations, which could lead to default and bankruptcy. On the other hand, when consumer companies use little debt, it may not be able to take advantage of growth opportunities or make the necessary investments to remain competitive. Subsequently, debt to equity is expected to have an influence on a firm's performance. Total debt to total equity assesses the extent to which a firm is using borrowed funds. It shows the extent to which a firm is using borrowed funds in relation to its equity. It indicates the solvency of the business and the extent of cover for external liabilities. It is also a measures of a company's financial leverage calculated by dividing its total liability by stockholders' equity, it indicates what proportion of equity and debt a company is using to finance its (Ismawati, 2018).

Statement of the Problem

Firm performance clearly predicts the efficiency of management and its ability to creates the earnings for the firm which is expected to generate returns for the business. However, the existing condition of the firm's output has heavily inclined towards financial assets, as most companies have been folding up in Nigeria (NGX, 2023). Also, the consumer goods firms are finding it difficult to earn cash from their business operations which has affected the firm performance. As a result, these firms have increased their overall borrowings order to finance their working capital obligations. Data gathered by NGX 2023 on Dangote Sugar Refinery Plc, BUA Foods Plc, Nestle Nigeria Plc, Cadbury Nigeria Plc, Nigerian Breweries Plc, and NASCON Allied Industries Plc revealed that total borrowings by these firms were up by 38.63 percent in 2022 while total cash returns from operations was down by 32.01 percent during the period.

Most consumer goods firms suffered a 4.1 per cent decline in capacity utilisation in the second half of 2022 (NGX, 2023). The review said that year-on-year capacity utilisation in the consumer goods declined to 54.9 per cent from 59 per cent recorded in the corresponding half of 2021. The review further stated that quarter-on-quarter, capacity utilisation declined by 3.0 percentage points when compared with 57.9 percent recorded in the first half of the year. It stated that the capacity utilisation averaged 56.4 per cent in 2022 as against 55.9 percent average of 2021. Masturah et al (2022) argued in support of debt use and considers debt finance as good in enhancing firms' performance provided it is acquired at the favourable rate and its proceeds utilized in a good way. These developments coupled with the lack of universal theory triggered the need for further research to look into the effects of composition of capital on the firm performance, which motivated this research study. Therefore, the study intends to investigate the effect of financial leverage on financial performance of listed consumer goods firms in Nigeria from 2018-2022.

In line with the main objective of the study, the following hypotheses was tested:

H_{01}: Long-term debt has no significant effect on financial performance of listed consumer goods firms in Nigeria.

H_{02}: Debt to equity ratio has no significant effect on financial performance of listed consumer goods firms in Nigeria.

Literature Review

Concepts of Financial Leverage

Financial leverage is the use of fixed-charges source of funds, such as debt and

preference capital along with the owner's equity in the capital structure (Pandey, 2010). It is explained as the proportion to which a company uses fixed income securities such as debt and equity. Financial leverage according to Rajput et al (2020), is a two-edged sword as it once provides the potentials of increasing the shareholders earnings as well as creating the risk of loss to them. The level of debt speaks volume of how levered a firm is and for a firm that is able to channel its fund to profitable investment opportunities, they help create the chances of expansion as well as meeting the expectations of shareholders such as meeting the wealth maximization objectives of the firm. High leverage indicates that the debts use more than equity, if the debts use more than equity it will lead to increase in the financial cost. In case of high Finance cost earning per share is affected negatively. High financial leverage means high interest payment as a result of decrease earning per share (Ali et al, 2022). However, this study adopted the definition of Rajput et al (2020), which states that financial leverage measures the amount of total funds provided by creditors in relation to the total assets of the firm. Financial leverage is a proportion of an organization's debt financed by using borrowed money from the externalities.

Long Term Debt

Long-term debt to total assets measures the relative weight of long-term debt to the capital structure (long-term financing) of a firm's long-term debt to- total assets. Long term debt to total assets ratio is the ratio that represents the financial position of the company's ability to meet its financial requirements (Akinyomi, 2013). As this ratio is calculated yearly, decrease in the ratio would denote that the company is faring well, and is less dependent on debts for their business needs (Khan, et al. 2017). The higher the level of long-term debt, the more important it is for a company to have positive revenue and steady cash flow. It is very helpful for management to check its debt structure and determine its debt capacity (Akinsulire, 2014). This study adopted the definition of long-term debt as a measure of the financial leverage of a company. Long term debt is debt due for repayment in over 12 months and is not included in the current liabilities figure on the balance sheet. It includes mortgages and long-term leases, but not general trading liabilities.

Financial Performance

Financial performance is the determination of certain variables that can measure the success of a bank in generating profits. Achievements of the company shown by its financial statements displays the state of the company during a certain period, and it is called the company's financial performance (Almajali et al, 2012). In the work of Ameur and Mhiri (2013), performance measurement is defined as a way of ensuring that resources available are used in the most efficient and effective way. The essence is to provide for the organization the maximum return on the capital employed in the business. This is used as a general measure of a firm's overall financial health over a given period of time, and can be used to compare similar firms across the same industry or to compare industries or sectors in aggregation. There are many different ways to measure financial performance, but all measures should be taken in aggregation. One way of managers controlling the financial affairs of an organization is the use of ratios. Ratios are simply relationships between two financial balances or financial calculations which establish our references so that we can understand how well an entity is performing financially. Ratios also extend the traditional way of measuring financial performance; that is by relying on financial statements (Bui, 2017). In this study, the financial performance of a firm can be interpreted as future prospects, growth and good development potential for the company. Financial performance information is needed to assess potential changes in economic resources, which may be controlled in the future and to predict the production capacity of existing resources.

Empirical Review

Ghardallou (2023) looked at the effect of financial leverage on the performance of Saudi listed companies. It particularly proposes to examine the heterogeneity of this relationship depending on firm profitability and firm size. The study used a sample of 120 nonfinancial companies listed on the Tadawul stock exchange during the period 2017–2020. Data is obtained from the companies' financial reports. This study uses the system GMM and the quantile regression. The first methodology examines the effect of leverage decisions on firm performance, whereas the second one tests the heterogeneity of this relationship. The findings demonstrated the adverse effect of leverage on firm performance in terms of return on assets, return on equities and Tobin's Q. Besides, quantile regression results show that this relationship is heterogeneous. Particularly, leverage seems to have a greater adverse effect on the performance of high-profitable firms than low-profitable firms. With the same findings with Laghari et al (2023), leverage has a negative effect in larger firms, whereas the influence becomes negative in smaller ones. This study is unique in that it approaches the capital structure issue from a different perspective, where the leverage decision is distinctly considered at various levels of firm profitability and firm size. In addition, the majority of the existing studies is carried out in developed countries. However, the results might not apply to emerging countries given the specificity of their institutional structure. In this regard, Saudi Arabia has a distinctive business climate characterized by the absence of corporate tax and an illiquid bond market.

Khan and Siddiqui (2023) examined how financial leverage, supply chain finance, and liquidity affect a firm's performance in Pakistan's cement, textile, sugar, and pharmaceutical sectors. The financial reports for all 50 companies in four industries, which were available on their official websites, were used to compile data for the past 10 years. The data was collected from 2011 to 2020. Another source used to collect data is the World Bank. Analyzing data was done using the generalized method of moment (GMM) the data, and the results show that financial leverage has a negative impact on company performance in the cement industry, but a positive impact in the textile, sugar, and pharmaceutical industries. In the cement industry, supply chain finance (SCF) has a detrimental effect on firm performance whereas supply chain financing has a positive impact on the textile, sugar, and pharmaceutical sector. Liquidity (LIQ) has a favorable impact on firm performance in the cement, textile, sugar, and pharmaceutical sectors. sectors. The results also reveal the critical role supply chain finance plays in boosting firm performance. This study's innovative conclusion is that increased debt levels and their inefficient use have a detrimental effect on firm performance. The findings indicate that financial leverage improves a company's performance as long as debt levels do not exceed equity, Ghardallou (2023) disagree with the results. This research could help upper management at cement, textile, pharmaceutical, and sugar companies make better decisions by clearly defining how to perform effectively to boost company performance, which can entice investors to make investments in businesses with strong market positions. and also use that knowledge to enhance future performance

Laghari et al (2023) investigated the impact of changes in leverage cash flow measures and metrics on firm financial performance. The study uses generalized estimating equations (GEEs) methodology to analyze longitudinal data for sample of 20288 listed Chinese non-financial firms from the period 2018:q2-2020:q1. The main advantage of GEEs method over other estimation techniques is its ability to robustly estimate the variances of regression coefficients for data samples that display high correlation between repeated measurements. The findings of study show that the decline in cash flow measures and metrics bring significant positive improvements in the financial performance of firms. The empirical evidence of Masturah et al (2022) suggested that performance improvement levers (i.e. cash flow measures and metrics) are more pronounced in low leverage firms, suggesting that changes in cash flow

measures and metrics bring more positive changes in low leverage firms' financial performance relatively to high leveraged firms. The results hold after mitigating endogeneity based on dynamic panel system generalized method of moments (GMM) and sensitivity analysis considering the robustness of main findings. The paper makes significant contribution to the literature related to cash flow management and working capital management. Since, this paper is among few to empirically study, how cash flow measures and metrics are related to firm performance from dynamic stand point especially from the context of Chinese non-financial firms.

Abideen (2023) investigated the association between financial leverage, firm liquidity, and firm size with the performance of companies in China. The study adopted a quantitative approach and gathered secondary data from 2010 to 2022 from firms listed on the China Stock Exchange via the wind database. Using a fixed effect model, we empirically tested our hypotheses. The study's outcomes indicate that firm liquidity and firm size significantly affect a company's performance in China. Moreover, Rizqa et al (2023) also adopted the findings that the study that financial leverage also plays a significant role in influencing firm performance. In conclusion, findings indicate the importance for corporate managers, policymakers, and investors to consider factors such as financial liquidity and firm size when making decisions related to firm performance, particularly in an emerging stock market. These findings have important implications for corporate managers, policymakers, and investors. Corporate managers, investors, and policymakers should focus on policies that promote financial stability and economic growth. Overall, this study provides valuable insights into the factors that influence firm performance in China.

Rizqa et al (2023) investigated the relationship between leverage and firm value as well as to examine the potential mediating role of firm performance, specifically return on equity and earnings per share. The study employs a quantitative approach, utilizing the partial least squares-structural equation modelling (PLS-SEM) tool, with a sample of 687 companies listed on the Indonesia Stock Exchange (IDX) for the 2021 period. Sampling was conducted using a purposive sampling method. The findings indicate that leverage does not have a direct impact on firm value, but rather, the mediating role of return on equity is significant in this relationship. In contrast, earnings per share were found not mediate the relationship between leverage and firm value. However, the study used earnings per share as a measure of financial performance, likewise this study use gross profit margin.

Ali et al (2022) investigated the relationship between the leverage and firm performance. The study used accounting based measured to measure the performance, which is return on assets (ROA) and return on equity (ROE) as dependent variables, while leverage, ownership proxies and other control variables as independent variables. The ownership proxies included the managerial ownership, institutional ownership and family owned ownership while the control variables included the size of the firm and net income of the selected firms. This study has used panel data analysis while using data of 70 firms listed on Pakistan Stock Exchange, for the years 2010 to 2016. This study found negative but statistically significant relationship of leverage on firm performance with both ROA and ROE. The study in conducted in Pakistan so the researcher took data from the Pakistan Stock Exchange which is developing country but some researcher conduct study in different developed countries. Pakistan economy is a rising economy having different culture different corporate governance so that way our result is different as compared to other results. However, the author did not elaborate more on the research design.

Masturah et al (2022) examined the effects of financial leverage on firm performance that focussed on Shariah-listed Consumer Products & Services firms in Malaysia from 2014 to 2018. The data for firm performance was Tobin's Q and return on asset, while debt-asset ratio, debt-equity ratio, and tangibility were indicators of financial leverage. This study applied a

balanced panel regression model, including the pooled regression model, fixed-effect model, and random effect model. The results indicated that Tobin's Q is the best model to identify the impact of financial leverage on Shariah firm performance. The outcome showed that the financial leverage indicators had a significant and negative effect on Shariah firm's performance, in line with the assumption of the pecking order theory assumptions that internal financing will be the first option of financing compared to external financing.

Das et al (2021) investigated the heterogeneous effect of leverage on performance of the listed nonfinancial joint stock companies in Bangladesh. A large panel sample of 165 listed nonfinancial firms under different industries of Bangladesh studied for the period 2007–2016 employing the dynamic panel approaches, namely, differenced generalized method of moments (GMM) and system GMM. The asymmetric relationship between leverage and performance is also examined by quantile regression approach. GMM showed that the leverage indicators have the negative impact on the performance of the firms in terms of return on equity and return on asset while the quantile regressions revealed the heterogeneous relationship between leverage and profitability. It showed that greater negative impact of leverage on performance in high-profitable firms than low-profitable firms. The study is confined to only the listed nonfinancial joint-stock companies of Bangladesh.

Kalantonis et al (2021) examined the effect of leverage and firm performance of Athens Stock Exchange Market for the time period 2005-2018. The authors used the panel data methodology in the estimation of the financial structure models since unobservable heterogeneity is an important determinant towards the target leverage. A fixed effects estimation procedure, with robust intercepts allowed to vary across firms, was employed to examine the relationship between leverage and performance. The findings offer evidence of patterns of pecking order behaviour and thus for the necessity of internal financing over external debt. The authors also extended the set of determinants by investigating the effect of macroeconomic conditions on the debt decision of firms. Contrary to the authors' expectations, short-run beliefs of economic agents appear to play a negative role in leverage. This paper contributes to the literature in a number of ways. First, following the growing literature of loan dynamics, the findings provide useful insights into corporate capital structure decisions in an economy in which businesses were almost excluded from external financing for over a decade. Second, in order to better understand corporate financing decisions, it is necessary to consider the overall economic framework in which companies and especially the listed ones operate.

Kaluarachchi et al (2021) examined the impact of financial leverage on the performance of listed manufacturing companies in Sri Lanka. Methodology: The present study employed ratio analysis to examine whether the financial leverage in listed manufacturing firms in Sri Lanka affected their performance involving the financial performance indicators of return on assets (ROA), return on operating assets (ROOA), return on net operating assets (RNOA), return on equity (ROE) and the impact on the financial level indicators as the debt to equity (DE) and financial spread. The results found both a positive and negative relationship between financial leverage and the firms' performance using two different methods of analysis (overall business analysis and main business analysis). The overall business analysis showed a positive relationship between financial leverage and firm performance, which supports the agency cost theory of financial leverage, whereas the main business analysis showed a negative relationship between financial leverage and the firms' performance. The article presents significant evidence in terms of its scrupulous approach towards checking the toughness of results. The article offers insights to the capital structure and the performance of manufacturing companies in Sri Lanka which helps to investors, managers and debtors on their investment decision.

Theoretical Framework

Modigliani-Miller Theory

The theory was proposed by Franco Modigliani and Merton Miller, which suggests that financial leverage boosts the value of a firm and reduces the weighted average cost of capital (WACC) when tax information is available. In 1958, the two financial researchers developed Modigliani and Miller propounded the theory which contributed widely to capital structure by Proposition I Theorem which showed that under certain restrictive assumptions the value of the firm is unaffected by the debt. Later they developed Proposition II that relaxed the assumptions under Proposition I and further considered corporate taxes. In 1977 Miller advanced the two propositions and developed a model that recognized personal taxes.

Proposition I also known as net operating income, they argued that the capital structure is irrelevant in determining the value of the firm. Capital structure decisions do not affect the value of the firm since firm value is independent of its leverage there is no advantage of using debt since there are no corporate taxes, the weighted average cost of capital of a levered firm and unlevered firm is independent of the capital structure, the cost of equity increases as the gearing increases and the cost of debt remain unchanged as level of gearing increases hence irrelevance of capital structure decision on the value of the firm. Under restrictive assumptions of a perfect market, tax free economy, no transaction costs and homogeneous expectation of investors, capital structure is irrelevant in determining the firm's value.

According to Modigliani and Miller, if the assumptions do not hold, the arbitrage process shall take place where investors take advantage of the market imperfections and opt to sell their shares in the overvalued firms and buy the shares in the undervalued firms resulting to arbitrage gain realized. They supported their argument that capital structure is irrelevant in determining the value of the firm by applying the arbitrage process to two companies identical in every aspect. As investors take advantage of arbitrage opportunities, the market will reach equilibrium when the prices of overvalued shares fall and the undervalued shares rise (Ryan, 2007; Watson and Head, 2007; Welch, 2009 & Pandey, 2010). Modigliani and Miller (1958), respect except for their leverage levels have equal cost of capital and therefore should not have different market values (Welch, 2009). Studies carried out thereafter concludes that these assumptions do no hold and have led to researchers to rationalize the MM proposition I and its underlying assumptions to prove that capital structure affects firm value and performance.

Watson and Head (2007) argued that the theory had serious flows based on their restrictive assumptions. Firstly, the assumption that individuals and companies can borrow at the same rate can be challenged, since borrowing by individuals are riskier and costly. Secondly, presence of no transaction cost is untrue since borrowing cost exists and eliminate risk free profit thus affecting arbitrage gain, Thirdly, investors have a variant in expectation and finally a perfect market do not exist. Later they developed a second paper, Proposition II also known as net income approach that relaxed the unrealistic assumptions under proposition I (Net operating income) and recognized that corporate tax exists and tax shield benefit associated with debt capital exists. They concluded that as companies take more debt, they shield more of their profit from corporation tax. They further argued that the value of a levered firm will always be higher than that of unlevered by an amount equal to the interest on tax shield (Pandey, 2010).

However, this study adopted the Modigliani and Miller's Approach because it suggested that financial leverage boosts the value of a firm and reduces the weighted average cost of capital (WACC) when tax information is available.

Methodology

The research design for this study was expo-facto research design. Expo-facto design involves describing the relationship between the past factors on the present trend or occurrence.

The population of the study was all the twenty (20) consumer firms listed on the floor of Nigerian exchange group (NGX). which are, Cadbury Nigeria Plc, Champion Brew. Plc, Dangote Sugar Refinery, Dunlop, Flourmill, Goldbrew, Guinness, Honyflour, International Breweries Plc, Mcnichols, Multitrex, Nig. Flour Mills Plc, Nascon, Nestle, Nigerian Brew. Plc, Enamelwa, PZ Cussons Nigeria Plc, Unilever, Uniondicon, and Vitafoam. With convinience sampling technique, four (4) companies were exempted from the population due to inconsistent and unbalanced panel data for the period of this study. Therefore, sixteen (16) listed consumer goods firms were used as the sample size for this study. This study used secondary method of data collection. The panel data was extracted from the published annual reports of listed consumer firms in Nigeria, from 2018 - 2022. The research data related to long-term debt and debt to equity ratio was used as proxies for financial leverage of quoted consumer firms in Nigeria, while gross profit margin was used as proxy for financial performance in this study. It also employed multiple regression analysis to identify, explain and estimate the key relationship between leverage (independent variable) and financial performance of listed consumer firms in Nigeria. The panel data was analyzed using E-views version 12. Descriptive statistics, correlation matrix, normality test and regression analysis was carried out and post estimation analysis such as Heteroskedasticity test, serial correlation and Hausman test was also carried out. The specific model given below for the Hausman test describes a convenient version for regression applications that involves testing whether certain transformations of the original regressors have zero coefficients.

$$H_n \equiv n\,(\theta_{1n} - \theta_{2n})\,S'\,[S\,V_n\,S\,]^{-}\,S'\,(\theta_{1n} - \theta_{2n}).$$

The Model Specification:

The model adopted for this study is given as thus:

$GPM_{it} = ao + \alpha_1 LTD_{it} + \alpha_2 DEA_{it} + e_{it}$……..(1)

Where;

GPMit = Gross profit margin (depend variable)

LTDit= Long-term debt asset

DEAit= Debt to equity asset

a0 = Constant,

e_{it} = Error term

a1,a2, = the slope or the coefficient of the independent variables.

Decision Rules

The decision rule to test the hypothesis of the study is as follows: If the p-value of the t-coefficient is less than 5% (0.05), the null hypothesis is rejected, otherwise accept.

Table 1: Variables Measurement

Variables	Description	Source
Gross profit margin	Measures as Revenue minus the cost of goods sold/ Revenue	Abideen (2023)
Debt to Equity Ratio	Measures as Short Term Debt + Long Term Debt + other fixed payments / Shareholder's equity	Bui (2017)

Long Term Debt	Measures as the relative weight of long-term debt to the capital structure (long-term financing)	Akinsulire, (2014)

Results and Discussions

Tables 2: Descriptive Statistics

	GPM	LTD	DEA
Mean	31.94895	20.59747	2.438228
Median	28.50920	14.00000	1.450000
Maximum	92.79010	178.4000	47.92000
Minimum	6.122802	0.800000	0.240000
Std. Dev.	19.69762	28.14252	5.505987
Skewness	0.391517	3.682194	7.387675
Kurtosis	4.771190	18.65611	60.69448
Jarque-Bera	12.34460	985.3537	11675.42
Probability	0.002086	0.000000	0.000000
Sum	2523.967	1627.200	192.6200
Sum Sq. Dev.	30263.71	61776.10	2364.640
Observations	80	80	80

Source: E-Views 12, 2024

The table 2 revealed the data used in the study with GPM, LTD and DEA having a mean value of 31.94895, 20.59747 and 2.438228 respectively. The deviation from the mean (standard deviation) was 19.69762, 28.14252 and 5.505987 respectively. In like manner, the Jacque-Bera values of 12.34460, 985.3537 and 11675.42 respectively confirms that the data was not the normally distributed.

Table 3: Correlation Matrix

	GPM	LTD	DAE
GPM	1	0.30432	0.03612
LTD	0.304	1	0.11699
DDE	0.036	0.11699	1

Source: E-Views 12, 2024

Table 3 explained the correlation of financial leverage and financial performance of listed consumer firms in Nigeria where the GPM were correlated with LTD to the value of 0.30 which signifies there is correlation since the value is positive. GPM were correlated with DEA to the value of 0.03 which signifies there is correlation since the value is positive. LTD was correlated with GPM to the value of 0.30 which signifies there is positive correlation since the value is high. LTD was correlated with DEA to the value of 0.11 which signifies there is correlation since the value is positive. Finally, DEA was correlated with GPM to the value of

0.03 which signifies there is positive correlation. DEA were correlated with LTD to the value of 0.11 which signifies there is correlation since the value is positive.

Table 4: Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	3.347802	2	0.3410

Source: E-Views 12, 2024

The result of the Hausman test in the table 4 indicates that the fixed effect regression model is the most appropriate model to analyse the data of the study. With the probability of 0.3410, the random effect was rejected. Therefore, the fixed effect estimator was used to run the regression.

Table 5: Panel Result

Dependent Variable: GROSS_PROFIT_MARGIN
Method: Panel Least Squares
Sample: 2018 2022
Periods included: 5
Total panel (balanced) observations: 80

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	30.65417	3.327882	9.211316	0.0000
LTD	0.040990	0.011549	3.549311	0.0007
DEA	0.281334	0.320012	0.879137	0.3828

Effects Specification

Cross-section fixed (dummy variables)

Root MSE	11.06864	R-squared	0.680189
Mean dependent var	31.94895	Adjusted R-squared	0.584246
S.D. dependent var	19.69762	S.E. of regression	12.70083
Akaike info criterion	8.127121	Sum squared resid	9678.662
Schwarz criterion	8.696988	Log likelihood	-302.0213
Hannan-Quinn criter.	8.355427	F-statistic	7.089494
Durbin-Watson stat	1.458833	Prob(F-statistic)	0.000000

Source: E-Views 12, 2024

The P-value of long-term debt (LTD) is 0.0007 which is less than 0.05, this indicates that long-term debt has a significant effect on gross profit margin of listed consumer firms in Nigeria. Therefore, for every 1% increase in LTD, there is a 0.040990 increase in GPM. Conversely, the P-value of debt to equity ratio (DEA) is 0.38 which is more than 0.05, this indicates that DEA does not significantly affects GPM of listed consumer firms in Nigeria. Therefore, for every 1% increase in DEA, there is a 0.281334 decrease in GPM. The coefficient of determination R^2 value at 0.68 shows that 68% of change in the dependent variables is explained by the independent variables. The probability of the F-Statistics which is less than 0.05 indicates that the independent variables jointly explain the independent variables.

Therefore, the model is fit and appropriate with 0.000000 value.

Discussion of Findings

Based on the findings of the research, the result of insignificant effect of debt to equity and financial performance of listed consumer firms in Nigeria, shows consistency with the works of Laghari et al (2023), Das et al (2021), Kaluarachchi et al (2021). The implications of the findings indicate that even though consumer firms would desire to attain outstanding gross profit margin, it means that the ratio of equity or debt financing may not be considered. Thus, companies with a higher debt to equity ratio are considered riskier to creditors and investors. The result of significant effect of long-term debt and financial performance of listed consumer firms in Nigeria, shows consistency with the works of Khan and Siddiqui (2023), Masturah et al (2022). A high ratio of long-term debt usually indicates a higher degree of business expansion because the company must meet principal interest of shareholders maximization. The findings is in line with the Modigliani and Miller's theory because it suggested that financial leverage boosts the value of a firm and reduces the weighted average cost of capital.

Conclusion and Recommendations

The paper evaluates the effect of financial leverage on financial performance of listed consumer firms in Nigeria. In agreement with prior evidence from developed countries that show significant linkage between financial leverage and financial performance. Thus, the study concluded that a unit increase in long term debt will have an increase on gross profit margin. The study also concluded based on the model that debt to equity ratio has no significant effect on gross profit margin, a unit increase in equity ratio will not have any increase on gross profit margin.

Drawing from our research findings, the recommendations are proffered as follows:

i. The management of the consumer firms should critically examine the gross profit margin level before deciding the amount of debt or equity to employ to finance the firm's investment, since debt financing is cheaper than equity financing.
ii. The study recommends that consumer firms in Nigeria should consider higher percentage of long-term debt by encouraging more expansion as it will help financial manager to improve the financial performance of the firm.

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