Capital Structure and Financial Performance of Listed Manufacturing Companies in Nigeria

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Abstract

Despite numerous empirical studies, the relationship between capital structure and financial performance of firms still provokes debate. Therefore, this study examined the impact of capital structure on the financial performance of consumer goods manufacturing companies between 2012 and 2021. The study's methodology involved the panel regression models using the fixed effect and random effect models. The study found that while short-term debt has a negative impact on return on assets, economic value added, and return on equity, it has a positive impact on return on assets and economic value added and an insignificant impact on return on equity; similarly, long-term debt has a negative and insignificant impact on return on assets, earnings per share, while having a positive and significant impact on return on equity and economic value added. The study also found that total debt had a positive but insignificant effect on economic value added and return on assets. The study also found that total equity has a negative but insignificant effect on return on assets and earnings per share. Total debt has a positive and statistically significant impact on earnings per share. Total equity has a positive and statistically significant on return on equity while having a positive but not statistically significant on economic value added. Therefore, based on its tax benefits, the study advised consumer goods manufacturing companies to think about using more debt in their mix of capital structure as this will lower their overall cost of capital.

Keywords: Economic Value Added, Capital structure, Return on Asset, Return on Equity, Total Equity

1.   Introduction

Profit-oriented organizations, such as manufacturing firms, must institutionalize good financial gearing and capital structure in order to support their economic and investment activities if they are to meet their financial performance goals. Achieving financial results like profitability, return on assets, and return on equity is often regarded as being crucial for the financial viability of manufacturing companies. The success of most nations that have had consistent increases in their gross domestic product (GDP) and per capita incomes has historically been largely attributed to the growth of the manufacturing sector. Achieving the developed Industrialization status requires a manufacturing GDP contribution of at least 10%, which has recently been hovering around the 9% level. The pattern showed that past efforts to fully industrialize Nigeria through manufacturing were failing to produce the anticipated results because of stifling economic restrictions such a lack of adequate infrastructure and a high cost of doing business. The limitations are to blame for

the allegedly subpar performance and low level of competition throughout time.

Capital structure is the specific ratio of long-term debt to common equity that a company utilizes to fund its operations. It speaks of the equilibrium between all of the firm's liabilities and its equity. Thus, it covers the entirety of the liabilities and equity side of a firm's balance sheet. This suggests that a firm's risk and value are directly impacted by the capital structure. Financial managers have a difficult challenge in determining how much funding a corporation should seek externally via debt and the proper ratio of debt to equity to increase shareholders' value (Egwurube, Lateef, & Onipe, 2020).

With the groundbreaking work of Modigliani and Miller in 1958, the connection between capital structure and financial performance of businesses came to light. According to the Modigliani-Miller (MM) Theorem, capital structure theories can only be used in the absence of taxes, rational investors, perfect competition, bankruptcy costs, and other imperfections in the market. According to Modigliani and Miller, a company's worth is determined by its predicted performance and commercial risk, not by how it is financed. They went on to say that the strength of a company's investment strategy and the earning potential of its assets rather define business worth (Phan & Tran, 2019). Since a company's market value is decided by its core earning power and investment choices, Modgliani and Miller's main claim is that it will not be affected by the capital structure choice it makes.

The pecking order theory, on the other hand, was put forth by Myers in 1984 and focused on how organizations adhere to a hierarchy of financing sources, indicating that management strongly preferred internal generation as a source of new fund. This suggests that businesses will not look to the capital markets for outside financing until their reserve of retained earnings has been depleted. The debt market is then tapped first, and corporations only obtain equity financing as a last option. In addition, the trade-off theory presupposed that a corporation has an ideal capital structure based on a trade-off between the advantages and disadvantages of borrowing money. This suggests that a firm's ideal debt ratio is determined by a trade-off between the cost of bankruptcy and the tax benefit of borrowing, and it is reached at the point when the marginal present value of the tax on additional debt is equal to the rise in the present value of financial distress costs (Owolabi & Inyang, 2013).

Despite numerous empirical and theoretical studies, the relationship between capital structure and financial performance of organizations is still up for debate. According to Lie (2015), there is insufficient evidence that capital structure decisions affect corporate entities' growth potentials. The author emphasized that an organization's financial performance and profitability primarily depend on its investment choices and ability to generate revenue. Osterlund (2014) discovered that gearing had a detrimental impact on Chinese company performance, but had a large favorable impact on Swedish and German company performance prior to the 2008 global financial crisis. Uremadu and Onyekachi (2018) found a link between debt utilization and poor financial performance; as a result, he urged businesses (especially those in the non-financial services sector) to cut back on their reliance on long-term debt as a source of funding. Other studies, like those by Javed and Alchter (2012), came to the same conclusion about the existence of a positive association between financial leverage and corporate financial success. Thus, there is no consensus yet among academics on capital structure and firm's financial performance. As a result, research on the capital structure and financial performance of consumer goods manufacturing companies in Nigeria is necessary.

2.   Literature Review
2.1   Financial Performance

Financial performance, according to Mirza and Javed (2017), is crucial for shareholders, other stakeholders, and the nation at large. This suggests that for stakeholders,

a good return shows they made excellent and valued investment decisions. A strong financial performance also suggests that the business will be able to support its workforce by providing better pay, benefits, working conditions, and job security. Such a business can also make on-time payments to its funding and supply sources. Additionally, it will be able to offer its customers high-quality products and services. Additionally, the company will have greater retained profits/earnings in a given accounting period, which will be available for future expenditures to support growth and thrive against any competition.

2.2 Capital Structure

A company's capital structure is made up of the long- and short-term debt as well as equity that it utilizes to finance its operations. Making the optimum capital structure mix decisions for a company is a crucial part of the financing process. Capital structure, according to Egwurube, Lateef, and Onipe (2020), is a combination of a company's long- and short-term debts, common equity, and preferred equity. Finding a well-balanced capital structure, where the cost of capital is reduced and company value is increased, takes up the majority of the effort in the financial decision-making process. A capital structure that is well-balanced optimizes long term debt and long term equity which helps to provide healthy earnings for equity shareholders, which in turn helps to expose a company's performance.

2.3 Theoretical Review

When the tax component was included in 1963, the Miller and Modigliani theory was followed by a discussion that gave rise to the trade-off theory. According to the trade-off theory, which is an improvement on irrelevance theory, the ideal financing mix for a corporation is established by weighing the benefits and drawbacks of debt (Babalola, 2014). While Modigliani and Miller demonstrated that the tax-shield effect that results from the deductibility of interest payments is the primary advantage of debt, he essentially merged this model with the bankruptcy cost framework. Financial distress is a major component of these bankruptcy costs. The static trade-off theory used in this article makes the assumption that businesses with higher financial distress risk tend to borrow less than businesses with lower financial distress risk. Furthermore, because these costs are mostly based on a firm's assets, financial distress costs vary for each company.

According to the theory, a company has an ideal capital structure that balances the advantages and disadvantages of employing debt. This argument does not explain why businesses are conservative when using debt financing or why the majority of nations have consistent levels of leverage but different taxation regimes. The optimal debt ratio for a company is determined by balancing the costs of bankruptcy with the tax benefits of borrowing, and it is reached when the marginal present value of the tax on additional debt equals the rise in the present value of costs associated with financial distress (Owolabi & Inyang, 2013). According to the theory, which was related to the study, gearing ratios are changed when additional funding is required as a result of an imbalance between internal cash flow after dividends and viable investment options. As a result, this theory is pertinent to this study since it establishes a connection between debt capital, equity capital, and profitability.

2.4 Empirical Review

Using empirical data from Malaysia, Thailand, and Indonesia, Kusuma and Mallisa (2017) conducted research on the relationship between capital structure factors and company performance. The study looked into how the enterprises in Indonesia, Malaysia, and Thailand's capital structures were determined. Profitability, business size, potential for expansion, volatility, gross domestic product (GDP), inflation rate, and corporate governance were the variables. The study examined 94 Indonesian firms, 153 Malaysian firms, and 74 Thai firms from 2008 to 2012 using route analysis of two-multiple regression.

The study demonstrated that the primary and recurrent factors in explaining the differences in the capital structure include profitability, business size, and volatility. However, the diversity in the capital structure is influenced by growth potential, GDP, inflation rate, and corporate governance in general. Furthermore, there was a strong correlation between a firm's success and its capital structure. The correlation between the capital structure and firm performance was positive for Thai and Malaysian firms (0.231 and 0.187, respectively), but it was negative for Indonesian firms (-0.116), according to the coefficient signs of the variables. Both the pecking order theory of capital structure and the trade-off theory were validated by the investigation.

Hasanudin, et al. (2016) used imbalanced Panel Data to examine the capital structure of Indonesian listed mining companies for the five-year period (2011-2015) and its effects on financial performance. Based on the pecking order theory, the study found a negative association between capital structure and financial performance since increased debt will result in lower profitability. The trade-off argument, which asserts that businesses with higher debt levels will generate better profitability levels to avoid default risk, further supports the idea that capital structure and financial performance have a positive relationship. As a result of the data above, it can be concluded that no one capital structure theory can adequately account for the connection between capital structure and financial performance.

The effect of capital structure on the profitability of publicly traded manufacturing enterprises in Bangladesh was examined by Rahman, Sarker, and Uddin in 2019. The fixed effect regression method was used to analyze the paper in order to determine the relationships between the dependent variables (return on asset, return on equity, and earnings per share) and the independent variables (debt ratio, equity ratio, and debt to equity ratio). A sample of 50 observations from ten manufacturing companies that were chosen and listed on the Dhaka Stock Exchange between 2013 and 2017 were analyzed. The study found that the debt to equity ratio has a large negative impact on ROA whereas the equity to debt ratio has a considerable positive influence. Additionally, the report demonstrated that while debt to equity ratio has a substantial negative influence on ROE, equity ratio has a significant favorable impact. The researchers came to the conclusion that while organizations raise debt financing to lower their cost of capital and benefit from tax advantages, debt levels that are higher than those required for the best capital structure have a considerable negative impact on ROA, ROE, and EPS.

In a related study, Ahmad (2017) investigated the impact of capital structure on the performance of Malaysia's consumer and industrial sectors. The study employed short-term debt (STD), long-term debt (LTD), and total debt (TD) as proxies for capital structure and return on asset (ROA) and return on equity (ROE) as proxies for performance. As control variables, four factors—size, asset growth, sales growth, and efficiency—that have been found in the literature to have an impact on a firm's operating performance were used. For this study, 58 companies were chosen as the sample firms. Financial data from the years 2005 through 2015 were used as observations, yielding a total of 358 observations. For the models, several regression analyses were run. In order to make sure that any extended impact of capital structure on company performance was also investigated, lag values for the proxies were also employed to replace the non-lag data. According to the findings, total debt and short-term debt have a substantial link with ROA. The study of lagged values, however, reveals that there is no significant correlation between performance and any of the lagged values for short-term debt, total debt, or long-term debt.

The best capital structure for Pakistan's cement sector was examined by Ashraf and Shahzadi (2017), who also looked into the effect of capital structure on business

profitability. The information was gathered during a ten-year period, from 2006 to 2015, from 18 companies listed on the Karachi Stock Exchange (KSE). The firm's profitability was assessed using ROA and ROE, whereas the capital structure was measured using the debt to equity ratio, interest coverage ratio, debt ratio, short-term debt ratio, and long-term debt ratio. Descriptive, correlational, and panel least squares methods were used to analyze the data. The findings showed that whereas short-term debt has a considerably favorable association with return on asset (ROA) and return on equity (ROE), long-term debt ratios have a significantly negative relationship with both ROA and ROE.

Revathy and Santhi (2018) looked into the effect of capital structure on the profitability of Indian manufacturing companies and attempted to establish the hypothesized relationship between how much the capital structure variables affect a company's business revenue and how they are related to profitability. After classifying the chosen manufacturing enterprises into three groups based on stages and time periods, this study was carried out. Manufacturing businesses were divided into three phases based on their phases of expansion and consolidation. Second, these businesses were divided into pre- and post-merger categories according to the time period. Multiple-stage sampling approaches were used to choose a sample of 70 businesses. The study demonstrated that factors affecting capital structure have a major impact on the profitability of Indian manufacturing enterprises. The study also showed that capital structure variables and profitability have a strong one-to-one relationship, and that an increase in the debt equity ratio has a negative impact on the profitability of manufacturing companies listed on the Bombay Stock Exchange in India.

3. Methodology

Ex-post facto research design was used in this study. The decision to employ this research methodology is based on the study's intention to use historical data that was gathered from the pertinent publications, which means that the data are already available. Data for this study were gleaned from chosen manufacturing businesses' annual reports for the years 2012 through 2021.The secondary data for this study was gathered and retrieved from the ten (10) chosen consumer goods manufacturing companies' published financial statements. This is due to the fact that the data is perfect for addressing the study's research questions and testing its defined research hypotheses empirically.

3.1. Model Specification

The model in this study will follow the work of Rahman, Sarker and Uddin (2019) where they examined effect of capital structure on profitability of publicly traded manufacturing firms in Bangladesh. Specifically, the profitability variables will be defined as return on equity, return on equity, return on capital employed and earnings per share while capital structure is captured by equity to total asset, short term debt to total asset and long term debt to total asset. Taking cognizance of their models, the model for this study will be coined and modified in respect to the objectives of the study and giving as:

$FP = f (STD, LTD, TD, EQTY)$ ……………………………………….. (1)

Mathematically, the model is giving below

$FP = \beta_0 + \beta_1 STD + \beta_2 LTD + \beta_3 TD + \beta_4 EQTY + \mu$ --(2)

Where:

FP is the Financial Performance

Capital structure indicators

Where:

TD = Total Debt

STD = Short Term Debt

LTD= Long Term Debt
EQTY = Total Equity
Where FP indicators are
ROA is Return on Assets
ROE is Return on equity
EPS is Earnings per share
EVA is Economic Value Added

$ROA=\beta_0 +\beta_1STD + \beta_2LTD+ \beta_3TD+\beta_4EQTY+ \mu$- --(4)

$ROE=\beta_0 +\beta_1STD + \beta_2LTD+ \beta_3TD+\beta_4EQTY+ \mu$---(5)

$EPS=\beta_0 +\beta_1STD + \beta_2LTD+ \beta_3TD+\beta_4EQTY+ \mu$---
---(6)

$EVA=\beta_0 +\beta_1STD + \beta_2LTD+ \beta_3TD+\beta_4EQTY+ \mu$- --(7)

β_0 is the intercept of the regression line which measures the value of the independent as all independent indicators are held constant

$\beta_{1,2,3,4}$ is the Parameters of the independent indicators which measures the rate at which each independent variable affects dependent

μ is the error term or stochastic which probable measure the other variables omitted in the model

4. Data Analyses and Discussion of Findings
4.1 Capital Structure and Financial Performance (Return on Asset)
Table 1: Capital structure and Return on Asset

Variable	Pooled	Random	Fixed
	Coeff.	Coeff.	Coeff.
	Std. Dev. ( )	Std. Dev. ( )	Std. Dev. ( )
	Prob.[ ]	Prob.[ ]	Prob.[ ]
	-0.000366	-0.000466	-0.001411
	(0.000132)	(0.000146)	(0.000636)
STD	[0.0060]	[0.0016]	[0.0279]
	-0.014819	-0.014790	-0.013043
	(0.004386)	(0.002312)	(0.003610)
LTD	[0.0009]	[0.0000]	[0.0004]
	-0.002548	0.007760	0.010120
	(0.018455)	(0.017031)	(0.024512)
TD	[0.8903]	[0.6491]	[0.6802]
	0.004456	-0.015587	-0.018628
	(0.017905)	(0.031500)	(0.039029)
EQT	[0.8037]	[0.6213]	[0.6338]
	0.181917	0.188593	0.198390
	(0.032015)	(0.032735)	(0.015122)
C	[0.0000]	[0.0000]	[0.0000]
Observations	**100**	**100**	**100**
R^2	0.016235	0.016506	0.297006
Adj. R^2	-0.003944	-0.003668	0.162300
F-Statistic	0.804533	0.818194	2.204851
Prob. (F-Stat.)	0.523612	0.514945	0.000678
Hausman Test {P-value}	13.6525 (0.000)		
Normality Test	2.7873 (1.48072)		

Source: Authors' computation (2023)

4.1.1 Model Interpretation
The Hausman test for random effects check if the random effect model is significant otherwise fixed effect model will be used. The results is presented in lower portion of Table 1. From the Table, the insignificant value of the test results [chi= 13.6525 P–value 0.0003] indicate

that fixed effect model is significant and appropriate for the study. In column (3) of Table 1, Adjusted R^2 = 0.1623 indicated the explanatory strength of the model. This means that the independent variables (Short term debt (STD) Long term debts (LTD), Total debt (TD)and Total equity (EQT) explained about 16.23% variation in return on asset. These are reliable evidences that the model are weak. The F-statistics = 2.205 and P - value = 0.001 indicated a statistically significant model at 5% level. This indicated that the Proportion of Short term debt (STD), Long term debts (LTD), Total debt (TD) and Total equity (EQT) on Return on asset are jointly statistically significant.

From the result in column (3) of Table 1, Short term debt (STD) showed a negative and significant effect on return on assets (coefficient = -0.0014; p–value = 0.027). This suggested that a unit increase in STD brings about a decrease of 0.0014% on return on asset. Moreso, Long term debts (LTD) have a negative and statistically significant at 5% level [β = -0.013; P–value =0.000]. The result indicated that a unit increase in LTD brings about a decrease of 0.013% in return on asset. On the contrary, LTD is statistically significant to influence return on asset. Furthermore, Total debt (TD) have a positive but not statistically significant at 5% level [β = 0.010; P–value =0.680]. The result indicated that a unit increase in TD brings about an increase of 0.010% in return on asset. However, TD is not statistically significant to influence return on asset. Lastly, Total equity (EQT) have a negative but not statistically significant at 5% level [β = -0.0186; P–value =0.634]. The result indicated that a unit increase in EQT brings about a decrease of 0.019% in return on asset. However, EQT is not statistically significant to influence return on asset.

4.2 Capital Structure and Financial Performance (Return on Equity)
Table 2: Capital structure and Return on Equity

Variable	Pooled	Random	Fixed
	Coeff.	Coeff.	Coeff.
	Std. Dev. ( )	Std. Dev. ( )	Std. Dev. ( )
	Prob.[ ]	Prob.[ ]	Prob.[ ]
	-0.002118	-0.001037	-0.000804
	(0.001186)	(0.001879)	(0.000681)
STD	[0.0756]	[0.5818]	[0.2396]
	0.025139	0.007031	0.009641
	(0.032470)	(0.020243)	(0.009641)
LTD	[0.4397]	[0.7287]	[0.1952]
	-0.139992	-0.051304	-0.056813
	(0.090257)	(0.055378)	(-0.056813)
TD	[0.1225]	[0.3554]	[0.0012]
	0.106315	0.064503	0.101731
	(0.084056)	(0.051629)	(0.101731)
EQT	[0.2074]	[0.2130]	[0.0001]
	1.342432	1.335872	1.316218
	(0.064710)	(0.149694)	(1.316218)
C	[0.0000]	[0.0000]	[0.0000]
Observations	**100**	**100**	**100**
R^2	0.028638	0.010210	0.768033
Adj. R^2	0.008713	-0.010094	0.723316
F-Statistic	1.437282	0.502864	17.17557
Prob. (F-Stat.)	0.223120	0.733665	0.000000
Hausman Test {P-value}	9.9477 (0.000)		
Normality Test	4.224 (0.079123742)		

Source: Authors' computation (2023)

4.2.1 Model Interpretation
The Hausman test for random effects check if the random effect model is significant otherwise fixed effect model will be used. The results is presented in lower portion of Table 2.

From the Table, the insignificant value of the test results [chi= 9.9477 P–value 0.000] indicate that fixed effect model is significant and appropriate for the study. In column (3) of Table 2, Adjusted R^2 = 0.7233 indicated the explanatory strength of the model. This means that the independent variables (Short term debt (STD) Long term debts (LTD), Total debt (TD)and Total equity (EQT) explained about 72.33% variation in return on equity. These are reliable evidences that the model is strong. The F-statistics = 17.176 and P - value = 0.000 indicated a statistically significant model at 5% level. This indicated that the Proportion of Short term debt (STD), Long term debts (LTD), Total debt (TD)and Total equity (EQT) on Return on equity are jointly statistically significant.

From the result in column (3) of Table 2, Short term debt (STD) showed a negative but not statistically significant effect on return on equity (coefficient = -0.0008; p–value = 0.240). This suggested that a unit increase in STD brings about a decrease of 0.0014% on return on equity. Moreso, Long term debts (LTD) have a positive but not statistically significant at 5% level [β = 0.0096; P–value =0.1952]. The result indicated that a unit increase in LTD brings about an increase of 0.009% in return on equity. However, LTD is not statistically significant to influence return on equity. Furthermore, Total debt (TD) have a negative and statistically significant at 5% level [β = -0.05681; P–value =0.0012]. The result indicated that a unit increase in TD brings about an increase of 0.057% in return on equity. TD is statistically significant to influence return on equity. Lastly, Total equity (EQT) have a positive effect and statistically significant at 5% level [β = 0.102; P–value =0.000]. The result indicated that a unit increase in EQT brings about an increase of 0.102% in return on equity. More so, EQT is statistically significant to influence return on assets of a Consumer goods of manufacturing companies in Nigeria.

4.3   Capital Structure and Financial Performance (Economic Value Added)
Table 3: Capital Structure and Economic Value Added

Variable	Pooled Coeff. Std. Dev. ( ) Prob.[ ]	Random Coeff. Std. Dev. ( ) Prob.[ ]	Fixed Coeff. Std. Dev. ( ) Prob.[ ]
STD	-0.001392 (0.000395) [0.0005]	-0.001809 (0.000614) [0.0036]	-0.005690 (0.002739) [0.0393]
LTD	0.005404 (0.009042) [0.5508]	0.004421 (0.004906) [0.3686]	0.010157 (0.008193) [0.2168]
TD	0.149641 (0.117147) [0.2030]	0.165228 (0.125546) [0.1897]	0.170812 (0.131182) [0.1947]
EQT	0.754976 (0.152047) [0.0000]	0.742791 (0.163453) [0.0000]	0.765914 (0.161623) [0.0000]
C	0.085590 (0.065924) [0.1957]	0.091605 (0.068754) [0.1843]	0.118846 (0.066181) [0.0743]
Observations	100	100	100
R^2	0.582205	0.010210	0.681361
Adj. R^2	0.573634	-0.010094	0.620304
F-Statistic	67.93390	0.502864	11.15950
Prob. (F-Stat.)	0.000000	0.733665	0.000000
Hausman Test {P-value}	8.04842 (0.009)		
Normality Test	2.706 (1.648)		

Source: Authors' Computation (2023)

4.3.1 Model Interpretation

The Hausman test for random effects check if the random effect model is significant otherwise fixed effect model will be used. The results is presented in lower portion of Table 3. From the table, the insignificant value of the test results [chi= 8.048 P–value 0.009] indicate that fixed effect model is significant and appropriate for the study. In column (3) of Table 3, Adjusted R^2 = 0.62030 indicated the explanatory strength of the model. This means that the independent variables (Short term debt (STD) Long term debts (LTD), Total debt (TD)and Total equity (EQT) explained about 72.33% variation in Economic value added. These are reliable evidences that the model is strong. The F-statistics = 11.160 and P - value = 0.000 indicating a statistically significant model at 5% level. This indicated that the Proportion of Short term debt (STD) Long term debts (LTD), Total debt (TD) and Total equity (EQT) on Economic value added are jointly statistically significant.

From the result in column (3) of Table 3, Short term debt (STD) showed a negative and statistically significant effect on Economic value added (coefficient = -0.006; p–value = 0.039). This suggested that a unit increase in STD brings about a decrease of 0.039% on Economic value added of a Consumer goods of manufacturing companies in Nigeria. Moreso, Long term debts (LTD) have a positive but not statistically significant at 5% level [β = 0.010; P–value =0.217]. The result indicated that a unit increase in LTD brings about an increase of 0.009% in Economic value added. However, LTD is not statistically significant to influence Economic value added. Furthermore, Total debt (TD) have a positive but not statistically significant at 5% level [β = -0.171; P–value =0.195]. The result indicated that a unit increase in TD brings about an increase of 0.171% in Economic value added. However, TD is statistically significant to influence Economic value added. Lastly, Total equity (EQT) have a positive but not statistically significant at 5% level [β = 0.119; P–value =0.074]. The result indicated that a unit increase in EQT brings about an increase of 0.119% in Economic value added. However, EQT is not statistically significant to influence Economic value added

4.4 Capital Structure and Financial Performance (Earnings per Share)

Table 4: Capital structure and Earnings per Share

Variable	Pooled Coeff. Std. Dev. ( ) Prob.[ ]	Random Coeff. Std. Dev. ( ) Prob.[ ]	Fixed Coeff. Std. Dev. ( ) Prob.[ ]
	-0.007862	-0.009443	0.002890
	(0.001497)	(0.006196)	(0.001336)
STD	[0.0000]	[0.1292]	[0.0319]
	0.006648	0.011260	-0.004340
	(0.014607)	(0.025079)	(0.008676)
LTD	[0.6495]	[0.6539]	[0.6175]
	0.210702	0.269829	0.067148
	(0.470832)	(0.280115)	(0.028916)
TD	[0.6550]	[0.3366]	[0.0214]
	-0.218844	-0.283804	-0.001332
	(0.264332)	(0.238342)	(0.019697)
EQT	[0.4087]	[0.2352]	[0.9461]
	4.515266	4.687623	4.500589
	(0.230834)	(0.585073)	(0.017865)
C	[0.0000]	[0.0000]	[0.0000]
Observations	100	100	100
R^2	0.175022	0.005158	0.960439
Adj. R^2	0.158099	-0.015249	0.955269
F-Statistic	10.34246	0.252745	185.7741
Prob. (F-Stat.)	0.000000	0.907738	0.000000
Hausman Test {P-value}	12.0839 (0.000)		
Normality Test	4.179111 (0.123742)		

Source: Authors' Computation (2023)

4.4.1   Model Interpretation

The Hausman test for random effects check if the random effect model is significant otherwise fixed effect model will be used. The results is presented in lower portion of Table 4. From the Table, the insignificant value of the test results [chi= 12.084 P–value 0.000] indicate that fixed effect model is significant and appropriate for the study. In column (3) of Table 4, Adjusted R^2 = 0.62030 indicated the explanatory strength of the model. This means that the independent variables (Short term debt (STD) Long term debts (LTD), Total debt (TD)and Total equity (EQT) explained about 95.53% variation in Earnings per Share. These are reliable evidences that the model is very strong. The F-statistics = 185.77 and P - value = 0.000 indicated a statistically significant model at 5% level. This indicated that the Proportion of Short term debt (STD), Long term debts (LTD), Total debt (TD)and Total equity (EQT) on Earnings per Share are jointly statistically significant.

From the result in column (3) of Table 4, Short term debt (STD) showed a positive and statistically significant effect on Earnings per Share (coefficient = 0.00286; p–value = 0.032). This suggested that a unit increase in STD brings about an increase of 0.032% on Earnings per Share. More so Long term debts (LTD) have a negative but not statistically significant at 5% level [β = -0.004; P–value =0.618]. The result indicated that a unit increase in LTD brings about decrease of 0.618% in Earnings per Share. However, LTD is not statistically significant to influence Earnings per Share. Furthermore, Total debt (TD) have a positive and statistically significant effect at 5% level [β = 0.067; P–value =0.021]. The result indicated that a unit increase in TD brings about an increase of 0.067% in Earnings per Share. More so, TD is statistically significant to influence Earnings per Share. Lastly, Total equity (EQT) have a negative but not statistically significant at 5% level [β = -0.0013; P–value =0.946]. The result indicated that a unit increase in EQT brings about a decrease of 0.001% in Earnings per Share. However, EQT is not statistically significant to influence Earnings per Share.

5.   Conclusion and Recommendations

The study examined the effect of capital structure on financial performance of Consumer goods manufacturing companies in Nigeria. The study employed four proxies of financial performance which includes return on assets (ROA), return on equity (ROE), Economic value added (EVA) and Earnings per share (EPS) while Short term debt (STD) Long term debts (LTD), Total debt (TD) and Total equity (EQT) served as a measure of capital structure. The study concluded that while Short term debt have negative effect on return on assets, Economic value added, and return on equity. Similarly, the study concluded that Long term debt has a negative and insignificant effect on return on assets, Earnings per Share, while long term debt is positive and insignificant effect on return on equity and Economic value added. Furthermore, the study ascertained that total debt has a positive but insignificant effect on return on assets and Economic value added. Total debt has a positive and statistically significant effect on Earnings per Share. The study also ascertained that total equity has a negative but insignificant effect on return on assets and Earnings per Share. Total equity has a positive and statistically significant effect on return on equity while having a positive but not statistically significant effect on economic value added.

Based on the findings of the study, the study therefore recommended the following:

i. The consumer goods manufacturing companies should consider the use of more debt in their capital structure mix as this will reduce the overall cost of capital as a result of its tax advantage. Moreover, increase firm financial performance;

ii. The management of the firm should adopt a policy that will encourage the use of equity financing, thereby reducing the high leverage ratio. Equity financing can be enhanced

through increased retention of retained earnings without negatively affecting the amount of dividends paid to shareholders, *ceteris paribus.*

iii. The government should create an enabling business friendly environment so that businesses can thrive through the use of both fiscal and monetary incentives especially the latter through instituting macroeconomic objectives that can reduce interest rates.

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