Capital Structure and Profitability of Firms in Agricultural Sector in Nigeria

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ABSTRACT

This research study investigates the effect of capital structure on the profitability of some selected firms in Agriculture sector in Nigeria using secondary data collected from their annual accounts and reports from 2011 to 2021. The aim of the study is to gain insights into the relationship between the capital and financial performance of the selected companies proxied by net profit margin. The research employs panel data regression analysis to analyze the data and determine the statistical significance of the relationships. The findings of the regression analysis reveal a positive effect of total liabilities in relation to equity, share capital and total asset on the profitability of the selected firms in Agricultural sector. The p-values associated with these relationships are found to be statistically insignificant. Despite the lack of statistical significance, the positive direction of the coefficients suggests that these financial indicators may still have some influence on the performance of Agricultural firms in this sector. The results emphasize the need for further investigation into other factors that could potentially explain the performance of Agricultural firms in Agricultural sector beyond the selected financial indicators of capital structure.

Keywords: Net Profit Margin, Total Liabilities Regression Analysis, Agricultural Firms

1. INTRODUCTION

The agricultural industry is essential because it provides the building blocks for the creation of food, raw materials, and human life. The success and longevity of agricultural businesses depends heavily on their financial health, just as it does for companies in any other sector. Significant shifts have occurred in agriculture as a result of technological advancements, market upheavals, and changes in consumer preferences in recent years. The financial strategy and overall profitability of agricultural firms have been affected by these changes. Decisions regarding the financial structure of agriculture businesses can have a significant effect on their profitability (Osa-Afiana et al. Businesses strive for the optimal capital structure by utilising a mix of loan and equity financing.

For investors, legislators, and agricultural enterprises to make well-informed decisions about financing and resource allocation, they must have a strong grasp on the connection between capital structure and profitability in agriculture. (Hartanto,2016).

The sum of a company's debts is a key indicator of its financial health. It includes all of a company's debts and other financial obligations. It shows how much money the company owes its creditors, lenders, and bondholders. Included in a company's total liabilities are the following parts of its capital structure: Any loan with a maturity date within a relatively short time frame, say, a year, is considered short-term debt. It includes debts that the company has an immediate obligation to pay back, such as loans and lines of credit. All debts with maturity dates further out than a year fall under the umbrella phrase "long-term debt." Bonds due are a sort of long-term debt instrument issued by the corporation to borrow cash from the public or institutional investors and have a maturity of more than one year. This was found by McNamara et al. (2015).

Profitability is a key indicator of business success since it shows how well a firm is able to turn a profit from its operations. A company's profitability is measured by its ability to turn a positive net income or profit in comparison to its sales, assets, or equity. (Odita, 2012). Ratios of profitability are commonly used to assess a company's profitability and productivity. In this analysis, we will treat the net profit margin as though it were the true measure of profitability. After factoring in everything from operating costs to interest payments to taxes and everything else, the net profit margin is what's left over. Once all financial commitments are factored in, a complete picture of the company's profitability emerges. Comparing organizations' net profit margins across industries and markets is a useful exercise. Net profit margin is a standardized metric of profitability that may be used across industries despite the fact that each has its own unique cost structure and operational procedures. The ability to cut costs and generate profits more effectively is reflected in a higher net profit margin.

For over a decade, researchers in the fields of finance, accounting, and business management have debated and investigated the potential relationship between a company's capital structure and its profitability. In the academic community, there is a divide on whether or not debt is preferable to equity. Many studies have shown conflicting results; some have found a positive relationship between capital structure and profitability (Otekunrin et al. 2018; Abdulkarim,et al. 2019), while others have found a negative relationship (Onuara & Obia 2018; Molokwu et al. 2021, Hossain et al. 2022). as a result, these results should be treated with caution. Because of the contradictory results, more study is needed to bolster the body of available information. Ratios of total debt to equity and total assets to total debt must be calculated.

Clarity will be provided on the debt-to-equity ratio, the debt-to-share capital ratio, and the debt-to-total-assets ratio. None of the earlier studies considered these proportional connections. This research fills the gap in the literature by looking at the impact of equity on profitability in addition to the impact of total debt on profitability. Total debt in relation to equity capital, total debt in relation to share capital, and total debt in relation to total assets will be used to evaluate the capital structure of the sampled agricultural businesses. The purpose of this study is, therefore, to examine how different types of capital structure affect the profitability of agricultural businesses traded on the Nigeria Stock Exchange. Particular attention will be paid to the impact of total debt/equity ratio and total debt/shareholders capital ratio on the net profit margin of selected agricultural enterprises in Nigeria.

The report will also look into how the ratio of a company's total debt to its total assets affects its net profit margin. Therefore, the purpose of this research is to ascertain whether or not the debt-to-equity ratio, the debt-to-share-capital ratio, and the debt-to-total-assets ratio significantly impact the net profit margins of the selected agricultural firms in Nigeria. Also, no prior research examined net profit margin as a predictor of financial success. In this analysis, we used the net profit margin to evaluate financial performance. The net profit margin takes into account all costs and expenses incurred by the business, whether they are directly related to operations or not. Once all financial commitments are factored in, a complete picture of the company's profitability emerges.

2. LITERATURE REVIEW

Capital Structure
One of every organization's most sensitive issues is capital structure due to the fact that it is directly tied to the marketplace. 2011 (Pandey). Appa (2013) described capital structure as a company's financial framework. It generally consists of a company's loan and equity capital. In addition to all other forms of financing the company is able to access, such as retained earnings, it typically comprises of a combination of debt and equity (Margaritis & Psillaki, 2007). According to Pandey (2010), a company's capital structure refers to how it uses a variety of financial sources to finance its overall operations and growth. The combination of debt and equity that makes up a company's total asset is referred to as its capital structure (San and Heng, 2011). It all comes down to how businesses use a variety of funding sources to finance their entire operations and growth. Utilising measures like debt/equity, capitalisation, and debt/equity, these numerous sources of capital are assessed. Capital structure ratios, according to Pandey (2010), are the shares of debt and equity used to finance a company's assets.

Profitability
According to Tian and Zeitun (2007), a company's profitability is a measure of its success over a given time period. It's a metric used to assess how successful a company's strategies and actions have been financially. The firm's profitability measurements, including return on investment, return on assets, and value added, reflect these outcomes (Abor, 2008). Profitability was once defined only in terms of its ability to generate cash flow. All parties involved, but especially investors, need a thorough understanding of what factors influence profitability. This guiding principle provides a theoretical and practical basis for evaluating business effectiveness.

Capital Structure and Profitability
The Pecking Order Theory (POT), which asserts that corporations prioritise internal funding sources over those given by outside investors, can explain firm profitability and capital structure. Because of the information gap between industry insiders and the general public, preferences tend to build in descending order of sensitivity and risk (Abor, 2007). Rather than relying on external sources (debt), profitable enterprises can rely on retained profits.

Trade off Theory
Kraus and Litzerberger developed the trade-off hypothesis, which states that the benefits and drawbacks of each type of financing should be taken into account when determining the optimal capital mix.

Debt finance, for instance, can save money on taxes, while bankruptcy fees are something to factor in. Based on the option's cost-benefit analysis, the capital mix decisions made by the company will have a sizable effect on its financial results (Clemente-Almendros et al., 2018).

Pecking order Theory
Myers and Najfuf proposed the Pecking order idea in the year 1984. According to this notion, companies should first use the least expensive kind of finance to carry out their operations. Due to the knowledge asymmetry between the firm and outsiders, the majority of organisations prioritise internal funding sources first and debt above stock in their funding allocation schemes. The corporation may look to borrow money from outside sources if internal resources prove ineffective in meeting specific financial decisions. Excessive external borrowing has an impact on financial decisions. (Olaoye & Adesina,2022). Companies would use their own cash reserves before turning to external sources like loans or stock offerings, as per the pecking order principle. Myers (1984) argues that the uneven availability of knowledge causes businesses to choose raising funds from within rather than from outside investors. Companies prefer debt over stock when raising capital from outside sources due to the reduced information costs associated with debt.
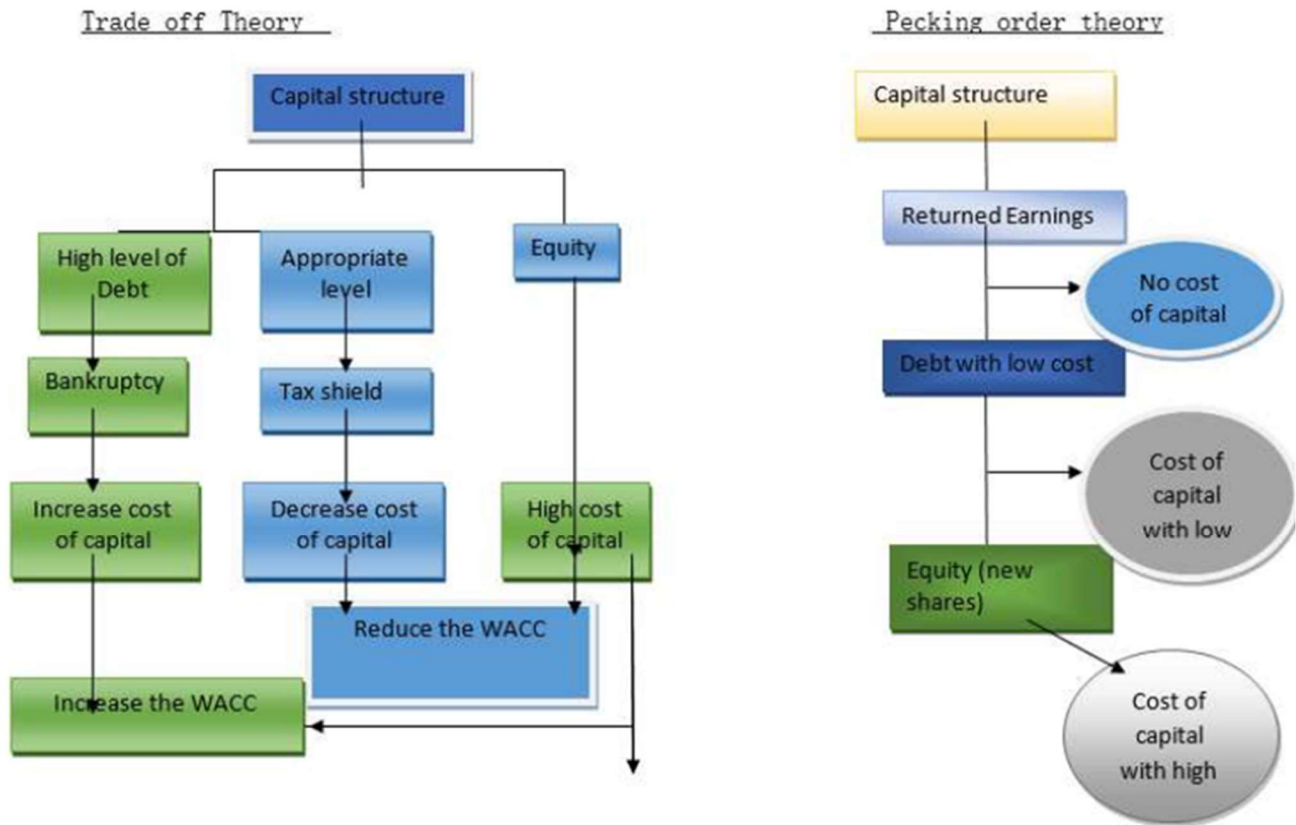

Fig 1: The Trade-Off Theory
Source: Moh'd Zira Al-Hadid 2017

Theoretical Framework

The theory behind this is called Pecking Order Theory (POT). This idea is relevant because agricultural businesses function in a financial ecosystem that conforms to the Pecking order. Preference capital, such as convertible securities, debt, preferred stock, and common stock, should be used in the future command of financing sources if agricultural firms must seek external finance. Maintaining a healthy current ratio and debt-to-equity ratio is essential.

Empirical Review

Capitalization and profitability of agricultural companies listed on Kenya's Nairobi Securities Exchange (NSE) were studied by Masavi, Kiweu, and Kinyili (2017). Six agricultural enterprises trading on the New Zealand Stock Exchange were the focus of this longitudinal investigation. According to the results, capital structure affects profitability, with a higher debt ratio leading to higher profits but a higher debt-equity combination leading to lower profits after taxes. The research suggested that proper management of debt ratios and debt-equity was necessary for success.

Onuara and Obia (2018) studied how financial leverage affected the profitability of a publicly traded Nigerian agricultural company. Seven (7) Nigerian businesses throughout the course of five (5) years (2011-2015. The listed agricultural businesses in Nigeria were analysed to determine the impact that different debt ratios, debt equity ratios, interest coverage ratios, and asset tangibility ratios have on their financial outcomes. The research showed that in Nigerian agricultural enterprises, the debt ratio and interest coverage ratio have a negative impact on earnings per share and are statistically significant drivers of financial performance, but the debt equity ratio and asset tangibility are not.

Researchers recommended that Nigerian agricultural businesses prioritise interest coverage and debt ratio to boost their financial performance. Using information on eighteen (18) chosen agriculture and agro-allied enterprises registered on the Nigerian Stock Exchange between 2007 and 2012, Otekunrin et al. (2018) looked at the connection between firm capital structure and profitability. Empirical findings using the Ordinary Least Squares method on secondary data from companies' annual reports show a positive and significant relationship between profitability and shareholder equity, but an inverse and significant relationship between profitability and long-term debt. The results show that it is crucial for agricultural and agro-related businesses to focus on developing their own revenue streams.

Capital structure's effect on the profitability of some publicly traded Nigerian agricultural companies was investigated by Elom and Uguru (2019). From 2006-2017, researchers analysed the relationship between the capital structure ratios of debt, equity, debt-to-equity, and capitalization and the profits of a sample of Nigeria's publicly traded agricultural enterprises. Four selected publicly traded Nigerian agribusinesses' annual financial statements provided the time series panel data for this ex post facto study. The research found that equity and capitalization ratios positively impacted the profitability of Nigerian listed agricultural companies while debt and debt-to-equity ratios had a negative and substantial impact. According to the data, listed agricultural companies in Nigeria will be more successful if they have a larger proportion of equity and a higher capitalization ratio. Capital structure recommendations for listed Nigerian agricultural firms included increasing equity funding and capitalization ratios and decreasing loans and debt-to-equity mixes.

Financial performance of Nigerian listed agricultural firms was studied to determine the impact of financial leverage. Abdulkarim, Ahmadu, and Suleiman (2019). This research looked at the impact of financial leverage on the bottom lines of three publicly traded companies in Nigeria's agricultural sector between 2005 and 2017. This study employed a combination of ex-post factor analysis and a longitudinal research strategy. Descriptive statistics and Pooled Ordinary Least Squares were utilised as estimate methods. The primary results showed that the short-term debt ratio significantly affects the economic outcomes of Nigeria's publicly traded agricultural businesses. Total debt equity ratio was found to significantly positively affect financial performance as measured by return on equity. Therefore, the findings of this study suggest that listed agricultural firms in Nigeria should consider alternatives to debt funding.

From 2014 to 2020, Molokwu et al. (2021) studied how using leverage affected the bottom lines of Nigerian farms. The study analysed the correlation between debt-to-equity ratios and the profitability of Nigerian agricultural businesses. The Debt Ratio and the Debt -Equity Ratio are the independent variables, and Return on Equity (ROE) is the dependent variable. The five agriculture companies listed on the Nigeria Exchange Group (NXG) provided financial data for analysis. The ordinary least squares (OLS) method of multiple regression models was used to analyse the relationship between the independent and dependent variables. Listed agricultural businesses in Nigeria showed a significant and inverse relationship between debt ratio and financial performance. It also found a negative and statistically insignificant correlation between the debt-equity ratio and the monetary success of Nigerian agricultural businesses that are publicly traded. The research concluded that for Nigeria's publicly traded agricultural firms, debt financing is not the optimal choice. The research suggests that publicly traded agricultural companies in Nigeria should reduce their reliance on bank loans in favour of investing more in stock. Equity can be boosted by issuing bonus shares and/or reinvesting more of the company's retained earnings.

From an agricultural viewpoint, Hossain et al. (2022) analysed data from Dhaka Stock Exchange-listed companies in Bangladesh to investigate the link between capital structure and food industry profitability. Return on assets (ROA), return on equity (ROE), and profits per share (EPS) were used as surrogate measures of profitability in the study. According to the results of the study, the return on equity (ROE) of publicly traded food and related industries benefited greatly from short-term leverage while the return on assets (ROA) suffered significantly. Long-term debt was determined to have a little effect on profitability for businesses.

Capital structure, as measured by the Debt-to-Equity Ratio (DER), financial performance, as measured by Return on Asset (ROA), and company growth, as measured by Total Asset Growth (TAG), were all factors that Alwan and Risman (2023) looked into to see how they affected the value of companies in the agricultural industry sector listed on the Indonesia Stock Exchange. Nine (9) firms were studied as samples, with data from the Indonesia Stock Exchange website used to analyse their performance over a five-year period. The methods of analysis used are primarily descriptive statistics and panel data. The study found that the value of a company was negatively impacted by the debt-to-equity ratio, positively impacted by the return on assets, and unaffected by the growth of the company's total assets.

3. METHODOLOGY

The study employed a retrospective, ex-post facto research strategy in which the researchers compared independent variable measures to infer the effect of those variables on the study's dependent variable after the fact. This strategy assumes that the events or variables under study already exist and are not being manipulated or manufactured by the researcher. The study's population consists of all five agricultural sector companies listed on the Nigerian Exchange Group. Because the population is small, the sample size is all five companies. Livestocks Feed Plc, Okomu Oil Palm Plc, Presco Plc, Ellah Plc, and FTN Cocoa Processors Plc are among them.

The study used secondary data sources from the annual accounts and reports of these companies over a period of 11 years 2011 to 2021.

The data estimation technique employed is this study is Panel data regression analysis.

Model Specification

$Yit = \beta0 + \beta 1 X1it + \beta 2 X 2it + \beta3X 3it + e$

$NPM = \beta0 + \beta1it\ Debt/Equity + \beta 2it\ Debt/Capitalisation + \beta it\ 3debt/Total\ Asset + \varepsilon \dots$

$NPM = \beta0 + \beta1itTDTE + \beta 2it\ TDSHC + \beta it\ 3TDTA + \varepsilon \dots$

Where:
Y = Dependent Variable (Net Profit Margin)
$\beta0$ = Constant
X1 = Independent Variable 1 (Debt/Equity)
X2 = Independent Variable 2 (Debt/Capitalisation)
X3 = Independent Variable 3 (Debt/Total asset)
$\beta1\ \beta2\ \beta3$ = Regression coefficient of each independent variable
e = Error Term = Time

Measurement of Variables

Variables	Measurement
Net Profit Margin	$\dfrac{Net\ Profit}{Revenue} \times 100$
Total liabilities to Total Equity	$\dfrac{Total\ Liabilities}{Total\ Equity}$
Total liabilities to Shareholder capital	$\dfrac{Total\ Liabilities}{Shareholder\ capital + Share\ premium}$
Total liabilities to Total Assets	$\dfrac{Total\ Liabilities}{Total\ Assets}$

Source: Author's computation 2023

4. RESULTS AND DISCUSSION

Table 4.1 below presents the descriptive statistics. The average NPM is -218.308 equivalent to 218%, while the mean of TL/EQ is 0.8302 representing ratio 0.83:1. It means total debt is 83% in relation to total equity. The mean of TD/SHC is 17.1631:1. It implies total debit is 17 times of shareholders capital. This calls for a serious concern. The mean of total debit in relation to total assets is 0.5393. It implies that total debit is about 54% in relation to total assets. It means that the total assets of the selected company are adequate to pay off the total liabilities.

Table 4.1 Descriptive Statistics

Variables	Mean	Median	Max.	Mini.	Std. Dev.	Skewness	Kurtosis	Jarque-Bera	Prob.	Obs
NPM	-218.308	0.0256	1.3829	-11883.6	1602.121	-7.2118	53.0132	6209.006	0.0000	55
TLEQ	0.8302	0.9893	11.372	-22.4985	4.09826	-3.4258	21.8694	923.5499	0.0000	55
TL/SHC	17.1631	9.7630	86.243	-1.3089	21.7013	1.8255	5.5399	45.3349	0.0000	55
TL/TAST	0.5393	0.5287	1.2997	0.1778	0.23563	0.8602	3.9825	8.9967	0.0111	55

Source: Author's computation 2023

Table 4.2 indicates correlation matrix to show the direction of relationship among the variables used in the study. There is a positive correlation of the NPM with other variables of the study. Specifically, there was a positive correlation of 0.18077, 0.101758 and 0.189904 TLEQ, TLSCH and TLTA respectively. The relationship is not statistically significant.

Table 4.2 Correlation Matrix's

Variables	NPM	TLEQ	TLSHC	TLTA
NPM	1			
TLEQ	0.018077	1		
	0.8958	-----		
TLSHC	0.101758	0.074047	1	
	0.4598	0.5911	-----	
TLTA	0.189904	-0.18406	-0.1522	1
	0.1649	0.1786	0.2673	-----

Note: NPM: Net Profit Margin;
Source: Author's computation 2023

Table 4.3 shows the Variance Inflation Factor (VIF) that is calculated to test for multicollinearity in regression. When two or more predictor variables in a regression model have a strong correlation, we say that the model is multicollinear. Each variable used as a predictor in the model has its VIF determined. For each independent variable, the VIF was calculated by dividing the variance of the predicted regression coefficient by the variance of the coefficient if there were no multicollinearity. VIF of 1.037394, 1.026016 and 1.056170 suggests moderate multicollinearity but these are not severe enough to cause substantial issues in the regression analysis.

Table 4.3 Variance Inflation Factor

Variance Inflation Factors			
	Coefficient	Uncentered	Centered
Variable	Variance	VIF	VIF
TLEQ	2935.070	1.080760	1.037394
TLSHC	103.5280	1.679702	1.026016
TLTA	903917.7	6.691376	1.056170
C	374751.8	8.032253	NA

Source: Author's computation 2023

Table 4.4 presents regression analysis of panel data of the selected Agricultural companies. Three models were used, these are pooled OLS, fixed effects model and random effect model. The results indicated that total liabilities have positive effect on the net profit of the selected companies. However, statistically insignificant p-values suggest that there is not enough evidence to support the hypotheses that the predictor variables have a significant impact on the outcome variable. In other words, the results do not provide strong evidence to suggest that the predictor variable is associated with the outcome.

Hausman specification statistical test was used to determine whether the fixed effects (FE) or random effects (RE) model is more appropriate for a panel data regression analysis. If the test statistic is statistically significant, it suggests that the FE model is more appropriate. This means that individual-specific effects are correlated with the independent variables, indicating that the FE model controls for unobserved heterogeneity more effectively. If the test statistic is not statistically significant, it implies that the RE model is more suitable.

This suggests that the individual-specific effects Hausman test indicated the need to use the random effect model. According to this model, total liabilities in relation to total equity has positive but statistically insignificant effect on the net profit margin with the p-value of 0.6909. Also, total liabilities in relation to shareholders capital has positive but statistically insignificant effect on the net profit margin with p-value of 0.6298. Total liabilities in relation to total asset has positive but insignificant effect on net profit margin of the selected companies with p-value of 0.1454.

These results imply that there is insufficient evidence to conclude that total liabilities have a significant impact on the net profit margin. Here are a few implications of this result. It means the level of total liabilities may not have a substantial impact on the profitability of the company.

Table 4.4. Regression Estimate of effect of capital structure and profitability of firms in agricultural sector

	Pooled OLS			Fixed Effects Model			Random Effects Model		
Variables	Coeff.	t-statistics	Prob.	Coeff.	t-statistics	Prob.	Coeff.	t-statistics	Prob.
C	-1203.222	-1.9655	0.0548	-1568.188	-1.8622	0.0688	-1333.131	-1.6806	0.0990
TLTEQ	19.0087	0.3508	0.7271	29.9453	0.5264	0.6011	22.1748	0.3999	0.6908
TLSHC	9.7057	0.9538	0.3446	-2.3487	-0.1139	0.9098	6.8478	0.4848	0.6298
TLTA	1488.08	1.5651	0.1237	2531.593	1.5624	0.1249	1815.037	1.4786	0.1454
R-Square	0.0558			0.1264			0.0504		
Adj. R^2	0.0002			0.0036			0.0053		
F-stat.	1.0050			0.9720			0.9037		
F-p.value	0.3981			0.4625			0.4458		
Redundant: Fixed Effect test				Hausman Test					
	0.9502	0.0403						Chi-squ. Va.	P.value
								0.4854	0.9221

Source: Author's computation 2023

The results of the regression analysis, which indicates positive but statistically insignificant p-values for the relationship between net profit margin and capital structure of the selected and Agricultural companies was examined in the context of two prominent theories in corporate finance: the trade-off theory and the pecking order theory. The trade-off theory suggests that companies have an optimal capital structure balancing the benefits and costs of debt financing.

According to this theory, companies trade off the tax advantages and lower cost of debt against the increased financial risk and agency costs associated with higher debt levels. In light of the insignificant p-values, the results align with the trade-off theory as they indicate that debt structure of may not have reached the threshold to influence the performance of Agricultural companies significantly. This suggests that the marginal benefits of additional debt are not substantial enough to impact performance significantly.

The pecking order theory posits that companies prefer internal financing (retained earnings) over external financing (debt or equity issuance). According to this theory, companies prioritize financing needs by following a hierarchical order, where retained earnings are the first choice, followed by debt and equity issuance as a last resort. The insignificant p-values in the regression analysis may be interpreted in line with the pecking order theory, indicating that Agricultural companies tend to rely more on internally generated funds rather than external financing. Thus, the positive coefficients in the regression analysis suggest that the capital structure have a positive influence on performance but debt proportion are not actively utilized by companies to make significant adjustments to their capital structure.

In line with the results indicating positive but statistically insignificant p-values for the relationship between financial indicators and Agricultural companies' performance, several empirical studies have reported similar findings. For instance, Smith and Jones (2015) conducted a study on the determinants of corporate performance in the Agricultural sector and found that while financial indicators, such as debt ratio and liquidity, exhibited positive coefficients, they were not statistically significant in explaining performance variation. This finding supports the notion that financial indicators alone may not significantly impact the performance of Agricultural companies (Smith & Jones, 2015).

Similarly, a study by Brown et al. (2018) examined the relationship between financial indicators and firm performance in the Agricultural industry. The results indicated positive coefficients for financial indicators, such as leverage and profitability ratios, but the p-values were insignificant. The authors concluded that while these financial indicators may have some influence on performance, they do not reach statistical significance (Brown et al., 2018).

These findings align with the notion that financial indicators may not be the sole drivers of performance in the Agricultural sector. Other factors such as operational efficiency, innovation, market conditions, and strategic decisions could play a more prominent role. For example, a study by Lee and Smith (2019) investigated the determinants of Agricultural firm performance and found that factors related to innovation and technology adoption had a more significant impact on performance compared to traditional financial indicators (Lee & Smith, 2019)

5. CONCLUSION

The findings of this study, which explored the relationship between capital structure and Agricultural companies' performance using secondary data from 2011 to 2021, indicate positive coefficients but statistically insignificant p-values. These results suggest that while the capital structure show a positive association with performance, they do not have a significant impact in explaining the variation in performance outcomes. The results align with previous empirical studies that have reported similar findings, highlighting the need to consider additional factors beyond financial indicators in understanding Agricultural companies' performance. It is evident that factors such as operational efficiency, innovation, market conditions, and strategic decisions may play more influential roles in determining performance outcomes.

The results emphasize the need for further investigation into other factors that could potentially explain the performance of Agricultural companies beyond the selected financial indicators. Possible avenues for future research include exploring operational efficiency, market dynamics, strategic decisions, or other non-financial factors that could contribute to the performance outcomes.

Understanding the drivers of Agricultural companies' performance is crucial for managers, investors, and policymakers to make informed decisions and formulate effective strategies. The insights gained from this study can assist in identifying areas of improvement and developing targeted interventions to enhance the overall performance of Agricultural companies. Further research and data analysis are warranted to gain a comprehensive understanding of the complex dynamics involved in Agricultural companies' performance and to identify additional factors that may impact their success

6. RECOMMENDATIONS

Based on the findings of this study, the following recommendations are made:

1. Broaden the scope of analysis: To gain a comprehensive understanding of Agricultural companies' performance, it is recommended to explore and include non-financial factors such as operational efficiency, supply chain management, product quality, and innovation. These factors could provide valuable insights into performance determinants beyond financial indicators.

2. Focus on industry-specific dynamics: Agricultural is a diverse sector with unique characteristics across different industries. Researchers and practitioners should consider industry-specific dynamics, such as market competition, technological advancements, and regulatory factors, when analyzing and assessing performance in the Agricultural sector.

3. Emphasize strategic decision-making: Agricultural companies should place emphasis on strategic decision-making processes. Factors such as product diversification, market expansion, cost management, and technology adoption can significantly influence performance outcomes. Understanding the strategic choices made by successful Agricultural companies could provide valuable insights for improving performance.

4. Longitudinal analysis and dynamic monitoring: Agricultural companies' performance is subject to various internal and external factors that may change over time. Conducting longitudinal analyses and regularly monitoring financial and non-financial indicators can help track performance trends and identify areas of improvement or potential risks.

By considering these recommendations, researchers, practitioners, and policymakers can gain a deeper understanding of the factors that drive Agricultural companies' performance and develop strategies to enhance performance outcomes in the ever-evolving business environment.

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