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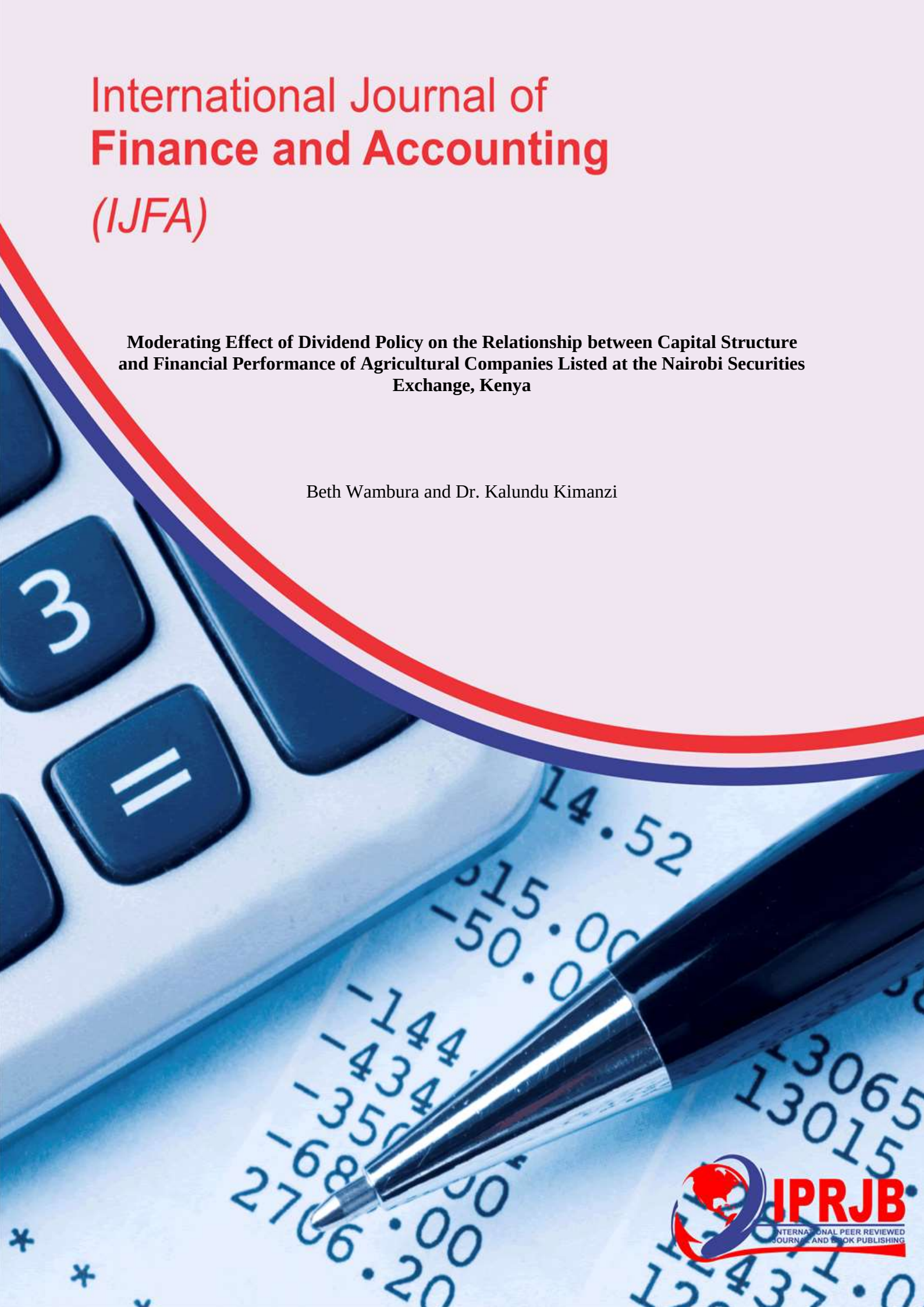

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Moderating Effect of Dividend Policy on the Relationship between Capital Structure and Financial Performance of Agricultural Companies Listed at the Nairobi Securities Exchange, Kenya

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Abstract

Purpose: The objective of the study was to investigate the moderating effect of dividend policy on the relationship between capital structure and financial performance of agricultural firms listed at the NSE, Kenya.

Methodology: A correlation research design was applied. A census survey on six agricultural firms listed at the Nairobi Securities Exchange from the year 2013 to 2022. The study used secondary data collected from audited financial statements of listed agricultural companies at the NSE. The empirical data was coded and analyzed using R-Studio, to establish the relationship between the variables of the study. The moderating effect of dividend policy was tested using the stepwise regression technique by employing a Three-step approach by Baron and Kenny (1986).

Findings: The results of the study revealed that 21% and 23% of the changes in the dependent variable can be well explained by the predictor variables without moderating variable and with moderating variable respectively. From the study, Debt has a negative and not significant effect on ROE. Share Capital has a negative and significant effect on ROE and Retained Earnings has a positive and significant effect on ROE. The moderating variable (dividend decisions) had a negative a not significant effect on the relationship between capital structure and ROE. It was concluded that the moderating variable has no significant effect on the relationship between capital structure and financial performance of agricultural firms listed at the NSE.

Unique Contribution to Theory, Practice and Policy: The study provides empirical evidence from the agricultural sector in Kenya, which is underrepresented in financial literature. It challenges the universality of some theoretical assumptions, especially regarding the role of dividend in capital structure-performance dynamics.

Keywords: *Capital Structure, Dividend Policy, Financial Performance, Moderator*

JEL Codes of Classification: *G35, G32, L25*

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INTRODUCTION

Capital structure theories and their relationship with firm's profitability and firms' value have been a puzzling issue since the seminar paper of Modigliani and Miller (1958) where he stated that, in absence of corporate taxes, information asymmetry, bankruptcy cost, transaction costs and in an efficient market, the value of the firm is immaterial to the financing decision adopted. (Jermias, 2008) stated that debt capital can decrease the tax paid, so the optimal capital structure of company should totally be made up of debt capital. Since then, numerous theories have come up to explain the capital structure of a firm, which includes the Pecking order theory, the Trade-off theory and the theory of agency cost. The decision about where the source of capital comes from is vital and affects competitiveness with other peers in the same industry. Therefore, the company should choose the right financial mix that maximizes the financial performance (Abor, 2007). Agriculture is primarily considered to be the most critical sector in the Kenyan economy; this sector is considered to contributing roughly 35% of the Gross Domestic Product, employing 75% of the Kenyan state workforce. Over 80% of the Kenyan people live in the rural areas and get their livelihoods, directly or indirectly from farming. In financial theory an argument about the irrelevance of corporate dividend policies in perfect capital markets has been very important but there is much. The presence of information asymmetry, agency problems, taxes and transaction costs all make dividend policy matter. Dividend policy regulates the distribution of profits in the company, which is the right of shareholders, which is usually done if the company's profits increase. The firm's ability to pay dividends can reflect the financial performance of the firm.

Statement of the Problem

The concept of capital structure and financial performance of organizations has continued to stimulate debates across centuries; with some scholars pointing at the existence of a significant relationship while others showing the lack of any direct association between the variables. In the financial growth life cycle theory, for instance, Berger and Udell, 1998 shows that firms are likely to improve in performance as they access different forms of financing in their growth cycle. Their position runs contrary to Modigliani and Miller's 1958 theory, which claimed that an organization's capital structure had no bearing on its worth. In their proposal, Miller and Modigliani viewed organizational value as a function of risk and magnitude of cash flows generated by capital assets in a perfect market scenario. Listing of institutions on Securities Exchanges globally has been providing ease of raising equity while at the same time allowing firms to enjoy high bargaining power for loans, an aspect that could imply more capital and high performance under good management.

Debates on the most suitable capital structure to follow still exists in the management of agricultural firms globally; with some institutions preferring more debt to equity while others maintaining an equal weighing. In China, the situation could be slightly different amongst listed agricultural firms, as most prefer more equity to debt in their capital structure (Xu et al, 2021). In Kenya, with the likes of Kakuzi Plc and Sasini Ltd having an all-equity capital structure is a likely preference of equity amongst the agricultural firms to debt (Masavi et al, 2017). Dividends are a tool that can be an essential source of information for investors or other stakeholders as it contains information that can provide a signal about the company's prospects (dividend signaling theory).

Based on the review, certain studies indicate capital structure and financial success have a significant positive correlation while others showed adverse correlation between the variables

and others showed insignificant effect. Therefore, the current study aimed at closing a thorough contemporary evaluation of the ideas on capital structure and financial performance of agricultural companies listed at the Nairobi Securities Exchange using dividend policy as the moderator. This issue has remained relatively untouched.

LITERATURE REVIEW

Theoretical Framework

Dividend Irrelevance Theory

This theory emanated from Modigliani & Miller (1961). It states that dividend policy used by a firm has no effect on the firm's value. MM argues that the firm's value is dependent on earnings of the firm that results from the firm's investment policy. As such, payment of dividends to shareholders has no consequence (Olang et al., 2015). Miller & Modigliani (1961) explained that dividend policy is irrelevant as far as the value of the firm is concerned, especially in a perfect market situation where investment is constant. MM theory is premised on the argument that payment of dividends to shareholders has no impact on firm's value. Miller & Modigliani's (1961) supported the dividend irrelevance theory on the assumption that the amount of dividends which is given to the firm's shareholders is usually equal or greater than free cash flow which is generated by a fixed investment policy (Salih, 2010). The MM irrelevance theory also argues with a firm's optimal investment policy; a choice of a firm's dividend policy has no impact on the wealth of the firm's shareholders. This is meant to affirm that dividend policy is irrelevant (Modoran & Obreja, 2013). According to this theory, dividend policy only affects the amount of external financing which is required in financing future projects. It means that any dollar that is given to shareholders as dividend represents a dollar loss of capital (Salih, 2010). The Dividend Irrelevance Theory does not hold in Kenya's agricultural sector due to market imperfections, such as limited access to capital, information asymmetry, and high transaction costs, which make dividends a crucial signal of firm performance. Additionally, tax implications, agency problems, and investor preferences for stable income further enhance the relevance of dividend policy in this context.

Pecking Order Theory

Pecking Order theory was developed by Myers and Majluf in 1984. According to pecking order theory, organizations have a particular preference order for capital used to finance their activities (Chen & Chen, 2011). The financing order is guided by the information differences between the company and the potential investors. The market information asymmetries imply that the organization will prefer the retained earnings to debt. Retained earnings are an available source of financing plucked from the company's net profits. Moreover, debts will be preferred to equity finance. Debt financing has the component of a tax shield that makes it less expensive than equity finance (De Jong, Verbeek, & Verwijmeren, 2011). As suggested by pecking order theory, firms can enhance their financial performance through use of retained earnings which have very low cost as the priority. Secondly, debt can be used since it's less expensive than equity financing that is last in the pecking order. Retained earnings being the portion of net income that is not distributed as dividends but reinvested in the company, reflecting the company's ability to self-finance its operations and growth (Fernando, 2024), therefore high dividends reduce retained earnings altering the pecking order. However, these financing decisions ought to be made in consideration for the prevailing economic and financial conditions. In Kenya, Kakuzi Plc and Sasini Ltd have an all-equity capital structure hence they do not follow the pecking order theory.

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Trade-Off Theory

The theory advances Modigliani and Miller's (1958) irrelevancy theory by accounting for tax advantages and financial distress costs. Myers (1984) observed that tradeoffs theory posits that the organization obtains credit up to the position where its marginal value of tax shield on additional debts equal to the rise in present value of bankruptcy. The firm perceived as adjusting the interest tax value against monetary distress. The firm should use debt instead of equity up to the point where it maximizes its value. The total value of the levered entity is equivalent to the values of unlevered entity and the present values of interest tax shields less present values of financial distress costs. Financial distress is a state whereby a firm is in trouble meeting their debt obligations and it can also lead to bankruptcy. In the agricultural firms, however, they do not operate with a 100 percent credit financing due to financial distress, bankruptcy and agency costs hence the need to match the cost and benefit.

Conceptual Framework

The conceptual framework is a breakdown of the variables of the problem under study. There are two main variables in the study. Financial performance as the dependent variable and capital structure as the independent variable. The capital structure was analyzed using Debt, Share Capital and Retained Earnings. Dividend policy was the moderator while ROE was sufficiently used to measure financial performance.

Independent Variables **Dependent Variable**

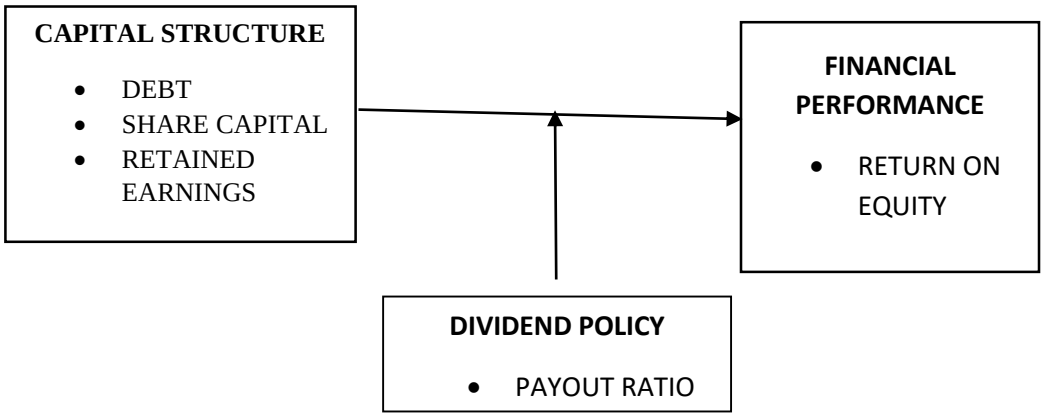

Figure 1: Conceptual Framework

Empirical Review

Masavi (2017) carried out a research project on the capital structure and financial performance of agricultural enterprises available on the Nairobi Securities Exchange. Six agricultural companies that are listed at the NSE were the target population of the research, which used a longitudinal research approach. Between 2010 to 2014, the research employed secondary data collection through desk research from published financial statements of the companies. Both descriptive and inferential statistics were used to examine the acquired data using SPSS. The results of the study demonstrated that debt ratio had a favorable impact on financial performance, whereas an increase in equity combinations resulted in a significant drop in after-tax profits. It was discovered that capital structure significantly affected the companies' financial performance.

Kimencu (2018) examined the capital structure and monetary performance of agricultural businesses listed at the NSE between 2011 to 2015. The specific objectives included determining the relationship between debt to equity ratio and ROA, the impact of debt to equity ratio on earnings yield, and the impact of debt to assets ratio on profit margin. The research employed a descriptive research design with the seven agricultural companies listed at the stock exchange: Kapchorua Tea Ltd., Eaagads Ltd., Kakuzi Ltd., Limuru Tea Ltd., Sasini Ltd., and Williamson Tea Kenya Ltd as well as Rea Vipingo Plantations Ltd as the target population. Census survey was therefore used due to the small population, with secondary data being relied upon. Utilizing descriptive and regression statistics, the acquired data was examined. Results indicated that each independent variable enlisted as debt-to-asset and debt-to-equity ratio had small insignificant effect on performance as measured using ROE, earnings yield as well as net profit margin. The analysis found that debt to assets ratio did not play a significant role in improving performance and neither did debt to equity ratio.

Research Gaps

Assessing capital structures of the agricultural firms from a global, regional, and local perspectives and the benefits of specific structures may help settle the corporate debate on the most suitable capital structure. Based on Xu et al.'s (2021) analysis of the capital structure and financial performance of listed agricultural enterprises in China, both the overall debt ratio and the short-term debt ratio had a detrimental effect on financial performance and the long-term debt ratio had little effect on ROE and ROA. Other than focusing on the Chinese market which could be slightly different from the Kenyan space in terms of macroeconomics, the study by Xu et al (2021) was limited to debt ratio and short-term debt ratio as the metrics of capital structure. In Macedonia, Ana et al (2012) had shown that agricultural firms preferred more equity to debt due to asymmetries between loan markets and national capital, highly leveraged agricultural enterprises did not have more opportunity to profit. In Kenya, the likes of Kakuzi Plc and Sasini Ltd having an all-equity capital structure is a likely preference of equity amongst the agricultural firms to debt (Masavi et al, 2017).

Therefore, there currently exists a research gap aimed at closing a thorough contemporary evaluation of the ideas on capital structure and financial performance of agricultural companies listed at the NSE using dividend policy as the moderator. This issue has remained relatively untouched in the NSE empirical studies.

METHODOLOGY

A correlation research design was applied. A census of all six agricultural firms listed at the Nairobi Securities Exchange from the year 2013 to 2022 totaling to a sample size of 60. The study used secondary data. The data in the research was collected from audited financial statements obtained from company websites and NSE Handbooks. The data was retrieved for a ten-year period from 2013 to 2022. The empirical data was analyzed using R-Programming, to establish the relationship between the variables of the study. The moderating effect of dividend policy was tested using the stepwise regression technique by employing a Three-step approach by Baron and Kenny (1986). The data collected in this study was evaluated for steadiness, accuracy and comprehensiveness and organized to help coding and classification to enhance adequate analysis. The quantitative data was presented using figures and tables while analysis was done by use of a descriptive statistic of standard deviation, mean and multiple regressions using R-Programming.

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RESULTS

Descriptive Analysis

Descriptive analysis also includes the measurements of standard deviation, which further elaborates on the variability within the dataset, contributing to the understanding of the data distribution.

The financial performance of the firm measured by ROE exhibited a range from a minimum value of -3.2 to a maximum value of 22.4. The mean value for this metrics was calculated to be 3.1 and was accompanied by a standard deviation of 5.0.

Debt had a minimum of 0 and a maximum of 5.4 and an average of 0.8. The highest recorded Share Capital is 5.4 and the lowest ever recorded is 4.3 and an average of 4.8. Retained Earnings were 5.2 minimum and 6.9 maximum with a mean of 6.2.

Table 1: Descriptive Analysis

Statement	Min	Max	Mean	Std	Kurtosis	Skewness
ROE	-3.2	22.4	3.1	5.0	5.2	2.1
Debt	0.0	5.4	0.8	1.8	1.6	1.8
Share Capital	4.3	5.4	4.8	0.3	-1.0	0.4
Retained Earnings	5.2	6.9	6.2	0.5	-0.8	-0.6
Dividend Ratio	-3.6	11.1	0.2	1.7	27.6	4.2

Regression Analysis

Table 2: Regression Model Summary

Model	R-Squared	Adjusted R-Square	df	Significance	Std. Error of the estimate
1	0.25	0.21	56	0.000	0.5
2	0.32	0.23	52	0.011	0.58

Model1: Without moderator
Model2: With moderator

Adjusted R squared is coefficient of determination which tells us the variation in the dependent variable due to changes in the independent variable, from the findings in the above table the R Squared value for the model without a moderator was 0.25 with an adjusted R Square of 0.2104. This means that only 21.04% of the financial performance is explained by the capital structure, which is composed of Debt, Share Capital and Retained Earnings. The R Squared value for the model with a moderator was 0.32 with an adjusted R Square of 0.23. This means that only 23% of the financial performance is explained by the capital structure with dividend policy as the moderating variable.

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Regression Coefficients

Table 3: Regression Coefficient without Moderator

	Coefficient	Std Error	t-value	Significance
Constant	3.14	0.58	5.39	0.000
Debt "00 0"	-0.38	0.36	-1.06	0.292
Share Capital	-9.71	0.33	-2.93	0.005
Retained Earnings	9.33	0.23	4.02	0.000

$Y= 3.14- 0.38X_1- 9.71X_2+ 9.33X_3+\epsilon$

On the regression model it was noted that when all independent variables were held to constant zero ROE would be at 3.14. A unit increase in debt would reduce ROE decisions with 0.38 units. The regression coefficient is not statistically significant. A unit increase in Share Capital would lead to 9.71 units decrease in financial performance. A unit increase in Retained Earnings would lead to a 9.33 unit increase in financial performance.

Table 4: Regression Coefficient with moderator

	Coefficient	Std Error	t-value	Significance
Constant	3.42	0.61	5.32	0.000
Debt	-0.19	0.39	-1.37	0.175
Share Capital	-11.05	0.55	-3.20	0.002
Retained Earnings	9.68	0.57	4.21	0.000
Dividend Ratio	-0.48	0.62	0.29	0.771
Debt: Dividend Ratio	0.71	0.55	-1.35	0.184
Share Capital: Dividend Ratio	-5.63	0.74	-1.23	0.224
Retained Earnings: Dividend Ratio	1.35	0.92	1.47	0.147

$Y=3.42-0.19X_1-11.05X_2+9.68X_3-0.48M+0.71X_5-5.63X_6 + 1.35X_7+ \epsilon$

Constant has a Coefficient of 3.418, T-Value of 5.32 and P-Value of 0.0000. The constant term is statistically significant ($p < 0.05$) and positive, indicating the baseline value of the dependent variable when all other variables are zero. Debt has a Coefficient of -0.198 and P-Value of 0.175. The negative coefficient suggests that as Debt increases, the dependent variable decreases. This relationship is not statistically significant ($p > 0.05$). Share Capital has a Coefficient of -11.05 and a P-Value of 0.003. The negative coefficient suggests that as Share Capital increases, the dependent variable decreases. This relationship is statistically significant ($p < 0.05$). Retained Earnings has a Coefficient of 9.681 and a P-Value of 0.0001. The positive coefficient suggests that as Retained Earnings increases, the dependent variable increases. This relationship is statistically significant ($p < 0.05$). Dividend payout has a Coefficient of -0.478 and P-Value of 0.7710. The negative coefficient suggests that as Dividend payout increases, the dependent variable decreases. This relationship is not statistically significant ($p > 0.05$). The interaction between debt and dividend payout has a Coefficient of 0.706 and P-Value of 0.1835. The positive coefficient suggests that as the interaction increases, the dependent variable increases. This relationship is not statistically significant ($p > 0.05$). The interaction between Share Capital and dividend payout has a Coefficient of -5.633 and P-Value of 0.2235.

The negative coefficient suggests that as the interaction increases, the dependent variable decreases. This relationship is not statistically significant ($p > 0.05$). The interaction between Retained Earnings and dividend payout has a Coefficient of 1.350 and P-Value of 0.1471. The positive coefficient suggests that as the interaction increases, the dependent variable increases. This relationship is not statistically significant ($p > 0.05$).

ANOVA

Table 5: ANOVA without Moderating Variable

Model	Sum of Squares	df	Mean Squares	F	Significance
Regression	409.74	3	136.58	6.88	0.0001
Residuals	1111.38	56	19.85		
Totals	**1521.12**				
$F_{(3,56)}$=2.769					

From the above ANOVA table, the P- value for the model was 0.0001 which means that the model was statistically significant since the P-value was less than 0.005. F-Statistic (6.88)> F-critical (2.769), this indicates that there is a statistically significant difference between the means of the groups being tested at the 0.05 significance level.

Table 5: ANOVA with Moderating Variable

Model	Sum of Squares	df	Mean Squares	F	Significance
Regression	489.07	7	69.87	3.52	0.0002
Residuals	1032.05	52	19.85		
Totals	**1521.12**				
$F_{(7,52)}$=2.192					

From the above ANOVA table, the P- value for the model was 0.002 which means that the model was statistically significant since the P-value was less than 0.005. F-Statistic (3.52)> F-critical (2.192), this indicates that there is a statistically significant difference between the means of the groups being tested at the 0.05 significance level.

SUMMARY, CONCLUSION AND RECOMMENDATIONS

Summary

The study specifically sought to establish the moderating effect of dividend policy on the relationship between capital structure and financial performance**.** Capital structure was measured using Debt, Share Capital and Retained Earnings. Financial performance was measured using Return on Equity which was the dependent variable.

Conclusion

The study concludes that dividend decision negatively affects the performance of listed firms although the effect is not significant to mean that when a firm increases its dividend payout ratio, it negatively but insignificantly affects its financial performance. When a firm considers giving out dividends, there is a need to consider other factors so as to realize a significant improvement in its financial performance.

Recommendations

This study recommends that agricultural firm management should utilize the Retained Earnings which is also the cheapest source of capital and most convenient.

High levels of debt was found to reduce financial performance of listed agricultural firms from the findings of this study and so the study recommends firm managers to maintain debt in levels that do not impact negatively on financial performance to ensure the goal of maximizing shareholders' wealth is attained.

The study suggests that although Share Capital was significant to the performance of a firm, it had a negative impact on the financial performance of the firm. Therefore, this study recommended that agricultural firms use equity to maximize the shareholders' value but not to use it as the only source of funding.

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