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*Effect of Capital Structure on Financial Performance of  
Agricultural Firms in Kenya*

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## Effect of Capital Structure on Financial Performance of Agricultural Firms in Kenya

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### **Abstract**

*As corporate entities expand and evolve, fresh possibilities emerge that present an opportunity and a potential of economic expansion and enhanced financial outcomes for companies. Consequently, the financial framework of a company plays a pivotal role in determining how it secures the necessary funds to sustain its operations and investments. The objective of the study was to determine effect of Capital Structure on Financial Performance of Agricultural Firms in Kenya. The period of the study takes a timespan of five years, ranging from 2018 to 2022, which encompasses the pre- and post-global pandemic crisis period, facilitating an investigation into how agricultural firms have adjusted and navigated economic conditions following the worldwide COVID 19 Pandemic. The research initially aimed to obtain data from 32 agricultural enterprises that were shortlisted by KEPSA and NSE. However, data was collected from 30 businesses in the sector. The data collected underwent a systematic and consistent examination, encoding, and summarization process driven by SPSS computation. The researcher employed the non-standardized coefficients in column B to formulate the mathematical model. Subsequently, the data underscores that, while maintaining all other variables constant, the influence of the predictor variables on financial performance totals 0.299. Furthermore, the discoveries disclose that liquidity has a positive yet statistically non-significant impact on agricultural financial performance ( $\beta=0.003$ ;  $p=0.562 > 0.05$ ). In addition, a thorough investigation exposes the intricate effect of the capital structure on agricultural firm's financial performance, unveiling a substantial positive connection ( $\beta=0.086$ ;  $p=0.000 < 0.05$ ). Furthermore, as the analysis progressed, the focus shifted to the impact of asset growth on business performance. The outcomes solidly ascertain an unfavorable yet noteworthy relationship ( $\beta=-0.135$ ;  $p=0.000 < 0.05$ ). The association between agricultural firm's size and financial performance was scrutinized, revealing an unfavorable yet statistically substantial relationship ( $\beta=-0.001$ ;  $p=0.000 < 0.05$ ). The researchers recommend that agricultural firms should optimize their financial performance for comprehensive stability. The research advocates for continual surveillance and assessment of financial factors, in conjunction with judicious financial structure management, liquidity oversight, and growth strategy appraisal, as being imperative for their financial triumph. Policymakers and financial specialists should also heed these findings when formulating policies and offering counsel to the agricultural sector.*

**Keywords:** Capital Structure, Financial framework, financial performance, Agricultural Firms in Kenya

### **1. Introduction**

Globalization has facilitated industries' growth and transformation, leading to new opportunities that drive economic progress and improve businesses' financial outcomes. As a result, the capital structure of a firm becomes pivotal in determining how it acquires the essential resources to sustain its operations and investments (Fitrianingrum, Suhendro, & Masitoh, 2020). Whether the firm opts for debt, equity, or a blend of both, its capital structure reflects the financing decisions made to fulfill its financial requirements. In the absence of an appropriate capital structure, the company may encounter challenges in obtaining sufficient

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funds to collect working capital needs and invest in fixed assets. This inadequacy of funds can impede the seamless functioning of business operations and restrict opportunities for growth. According to Kim, Jung and Kim (2023), capital structure, asset growth, and financial performance are key focal points for firms in today's progressive and globalized world. These factors serve as driving forces that shape the success and competitiveness of businesses.

This research is supported by several theories that illuminated on the interconnection binding capital structure, asset growth, and fiscal performance. The Pecking Order Concept, formulated by Donaldson (1961), is among the notable theories in the realm of finance, which proposes a hierarchy in the sources of financing for firms. According to this hypothesis, managers prefer to utilize cheaper sources of funds first. Another influential theory is Trade-off Theory developed by Modigliani and Miller (1963), which suggests there's an ideal degree of debt that maximizes the value of a company. This optimal degree is realized whenever the marginal benefits of borrowing are equivalent to the prevailing marginal expenses of servicing debt. Additionally, Agency Theory is pivotal, put forth by Jensen and Meckling (1976), focuses on the interrelationship confining principals and agents in the context of capital structure, asset growth, and FP. It highlights the potential conflicts of interest that can arise between these parties and the impact it can have on the firm's decisions and outcomes.

The contemporary debate surrounding structure of capital and how it influences a company's pecuniary performance touches upon critical issues that pose challenges within the agricultural sector Wabwoba (2022). These issues include determining the appropriate equilibrium between borrowing and equity funding to avoid financial instability in the face of unpredictable factors such as weather and market fluctuations. Additionally, agricultural businesses must grapple with the trade-off between risk and return, considering the inherent risks in the sector and how different capital structures can either exacerbate or mitigate those risks. Interest rate fluctuations, access to affordable capital for smaller enterprises, regulatory changes, and environmental concerns further complicate capital structure decisions. According to Xu, Sun, and Shang (2021) highlights that agricultural firms listed in China act as game changers, positively impacting overall economic performance. Moreover, the integration of technology and the need for sustainable practices require agricultural businesses to reassess their financing needs and strategies. Navigating these complexities is essential for the agricultural sector to optimize its financial performance while addressing its unique challenges. Despite the study in Indonesia by Diannisa, Lukytawati, and Koes

(2019); In Nigeria by Uremadu and Onyekachi (2018) Kiyeng (2022) in Kenya, agricultural firms in Kenya have received minimal attention.

### **1.1 Capital Structure and Financial Performance**

A well-structured capital mix can improve financial performance and enhance the overall value of agribusiness firms. Fitrianingrum, Suhendro and Masitoh (2020) found that current ratio in addition to firm size positively strikes the capital structure of businesses. As a result, this suggests that as the current ratio and firm size increase, businesses tend to rely more on debt financing, which can have positive implications for their financial performance. Diannisa, Lukytawati and Koes (2019) also reported a significantly substantial effect of Debt-Equity Ratio (DER) and firm fiscal productiveness (ROA & ROE) on agribusiness firm value.

On the other hand, Nelson and Peter (2019) portrayed a movement in separate direction and insignificant immaterial in the midst of DER and ROE. Similarly, Ngoc, Tien & Thu (2021) reported that DER posted an inverse impact on the ROA of firms. Xu, Sun, and Shang (2021) revealed that Total Debt (TD) ratio and Short-Term Debt Ratio have an inverse on the Financial Performance (FP) of Chinese agricultural quoted businesses. These results suggest that an excessive reliance on debt financing might lead to reduced profitability and pecuniary performance in certain contexts.

### **1.2 Research Problem**

Comprehending the connection between a company's capital structure choices, its capacity for asset growth, and its overall financial performance is essential for making well-informed strategic decisions and fostering enduring business expansion in a highly interconnected and competitive market. According to Darina, Azam, and Bayu (2020), higher debt usage increases financial risk for a company, underscoring the importance of effective financial performance management. Susanti, Rachmawati, and Harfudin (2023) found that asset structure had no instrumental impact on capital structure (CS), while sales developing posted a substantive impact. As a consequence, liquidity, on the other hand, did not materially influence capital structure, but asset growth did. Simultaneously, all four factors, namely liquidity, sales growth, asset structure as well as asset growth, recorded a noteworthy repercussion on capital structure. Boshnak (2023) highlighted that current debt, longevity debt, aggregate debt in addition DER possessed a significant inverse impact on entities ROA. Furthermore, longevity debt, aggregate debt, on top of DER also affected firm's FP. In addition, Opoku-Asante, Winful, Sharifzadeh, and Neubert (2022) insinuated a weighty inverse

interconnection in the midst of capital structure comprehensively compared with financial performance, with debt maturity not affecting this correlation.

In the context of analyzing the interrelationship bounded by capital structure in reference to financial performance, the evidence from different studies shed light on the varying impacts. Xu, Sun, and Shang (2021) discovered that aggregate debt ratio and existing current borrowings posted a detrimental effect on the FP of agricultural quoted entities. However, they found no significant impact of long-range debt ratio on ROA and ROE. Conversely, Diannisa, Lukytawati, and Koes (2019) unveiled movement to the same direction which is significant interconnection appertaining to capital structure, operationalized by the DER, and ROA and ROE (FPs) of agribusiness firms. Meanwhile, Uremadu and Onyekachi (2018) observed an inverse and statistically none substantive influence of CS on the corporate performance. This assessment concentrated on the consumer goods business sector in Nigeria. These findings emphasize the need for further research and highlight the complex nature of the association connecting CS and financial performance in different contexts.

It is worthwhile emphasizing that agricultural sector plays a vital mantle in propulsive economic transformation, as evidenced by research undertaken in dissimilar regions. Xu, Sun, and Shang (2021) highlighted the transformative influence of listed agricultural firms in China, emphasizing their contribution to overall economic growth. Similarly, Diannisa, Lukytawati, and Koes (2019) found that agribusiness firms in Indonesia attract investments and contribute to the country's transformation efforts. Kusuma and Panji (2018) spearheaded a study revealing the significant impacts of liquidity, growth, and CS on the sector's performance, while asset structure failed to showcase a meaningful effect on profitability in Indonesian context. Singh, Misra, Kumar, and Tiwari (2019) provided empirical evidence of the negative connection in the midst of firm size and profitability, emphasizing the importance of growth and capital intensity. On a regional level, Uremadu and Onyekachi (2018) stressed the need for prudent decision-making regarding debts and equity to optimize performance within Nigeria's agricultural sector. Collectively, these studies underscore the crucial role of the agricultural sector in driving economic transformation and shed light on the multifaceted factors that shape its performance and contribution to overall growth.

Locally, Omollo, Muturi, and Wanjare (2018) undertook a thorough assessment to explore the impact of different debt configurations, namely shorter-term, longer-term, and aggregate debt, on FP of quoted

businesses in Kenya. Their analysis delved into; measuring the effects through ROA and ROE. In consequence, evidence unearthed that regardless of the estimation method employed, all three debt measures aggregate, long-term, short-term posted an inverse and statistically significant impact on ROA. However, these debt configurations did not exhibit significant effects on returns on equity across all estimation methods. In a similar vein, Mukumbi, Eugene, and Jinghong (2020) delved into the interdependence in-between CS and monetary performance for businesses quoted at the NSE. Their research unveiled a direct repercussions of capital structure with respect to fiscal performance of these institutions. Notably, the findings indicated that as debt changes within the capital structure increased, there was a positive correlation with enhanced business performance in the companies.

This scrutiny endeavors to furnish to the contemporary corpus of knowledge by venturing the interrelationships between asset growth, CS, and profitability, which have not been extensively investigated in previous empirical studies. The duty of asset growth in shaping the capital structure and financial performance is crucial, as it represents operational activities that generate income and can have a significant impact on both factors. This research offers a unique perspective by offering empirical analysis on the implication of asset development, capital structure, and FP. For these reasons, it seeks to deepen sound judgment of the pivotal objective of asset utilization in ascertaining the capital structure, which in turn can enhance financial performance. By addressing these research gaps, whether methodological, conceptual, contextual, or a combination of all, this research intends to offer perspectives and responses to the main query: How does the capital structure impact the fiscal performance of agricultural companies in Kenya?

### **1.3 Research Objectives**

To assess the impact of the capital structure on the financial performance of agricultural companies in Kenya.

## **2. Literature Review**

### **2.1 Theoretical Framework**

This research draws on diverse hypothesis that provide insights into the interrelationship in the midst of capital structure, asset growth, and fiscal performance. One such theory is the Pecking Order Theory, initially contemplated by Donaldson (1961), which postulates a hierarchical precedence for financing

sources based on their cost. According to this concept, managers tend to prioritize cheaper sources of funds before considering more expensive options.

Another influential theory is Trade-off principle augmented by Modigliani and Miller (1963), which posits that entities are optimally run by debt to maximize their value. This optimal degree is accomplished whenever the marginal gains of borrowing are commensurate to the marginal costs of servicing debt.

Furthermore, the Agency Theory, introduced via the works of Jensen and Meckling (1976), examines the association binding principals and agents in the context of CS, asset growth, and financial performance. It emphasizes the potential conflicts of interest between these parties and their impact on the firm's decision-making and outcomes. By considering these theories, this research aims to deepen our understanding of the complex dynamics of these variables.

## **2.2 Empirical Review**

Fitrianingrum, Suhendro and Masitoh (2020) carried out an evaluation the impacts of fiscal performance, growth of asset and firm's size on CS. The assessment targeted property and real estate firms' catalogue on Indonesian Stock Exchange betwixt 2016 and 2018. The study used purposive sampling technique. Further, a total number of 31 companies were selected from a sum of 93 companies over the 3-year period. Moreover, the investigation applied multiple regression analysis utilizing SPSS. The study established that Return on Asset and Growth of Assets partially affects the CS. Whereas, Current Ratio and the firm size affects the CS. This investigation aimed at property and real estate institutions in Indonesia whereas the present assessment targets agricultural companies in Kenya.

Boshnak (2023) Checked impact of CS on performance of an enterprises registered in Saudi Stock Exchange. Consequently, evaluation maximized panel of 350 company-year observation for a total number of 70 non-financial firms from 2016 to 2020. Further, the investigation optimized Generalized Method of Moments estimation to gauge model to allow hypothesis testing. Resulting evidence shows that short-run debts, TD, DER and longevity debt has important negative influence on the enterprise's operational performance, whereas TD, DER and longevity debt portrays such an influence on the organizational financial performance as well as market performance. This appraisalment was limited to non-financial corporation in Saudi Stock Exchange. Thus, the current survey targets the agricultural firms in Kenya.

Habibniya et. al, (2022) assessed the influence of CS on level of profitability. The study utilized information from telecom enterprises between 2012 and 2020 in USA. Engaging unhinged cross-sectional dataset consisting 421 company-yearly observations for seventy-two (72) enterprises were evaluated utilizing pooled panel regression, correlations, mono-variate as well as descriptive computation approaches. The study discovered that leverage has great material ramifications on ROA. This study took place in advanced state whereas the current assessment is on the context of developing country hence resulting in contextual gap.

Opoku-Asante, Winful, Shaerifzadeh and Neubert (2022) conducted an evaluation to establish association amid CS and financial gain of entities for both Ghana and Nigeria. The study engaged 425 cross-sectional company-annual highlights from companies in Nigeria and Ghana under temporal range of 2014-2019. Furthermore, study used sectorial analysis to delve deeply into prevailing trends. The findings showed significant negative association amid capital structure and pecuniary performance. Over and above, maturity of debt portrayed no interconnection in the midst of capital structure versus fiscal performance. Still, industry affects direction of the association amid CS and pecuniary performance. Accordingly, assessment took place on West Africa countries whereas the current study assessed agricultural firms in East Africa country with key objective of providing updated findings and bridging contextual gaps.

Akinrinola, Tomori and Audu (2023) assessed CS with financial performance of quoted manufacturing companies in Nigerian set-up. Successively, assessment sought to explore association in the middle of CS and pecuniary performance. Resultantly, evaluation gathered secondary info from 14 sampled firms' financial report between 2011 and 2020. In addition, the collected data was the analyzed by panel least square multiple regression. From the scrutiny, it was ascertained that there no binary significant connect amid TD to TE and ROA of manufacturing institutions in Nigeria. However, the investigation's result suggested existence of substantial connection amid CS and ROA of manufacturing entities in Nigeria. The findings in this investigation cannot be fully engaged due to different geographical locations as well as economic state of the countries.

Omollo, Muturi and Wamjare (2018) carried out assessment on debt as financing option and it influence on financial performance. In consequence, study targeted companies quoted on NSE, Kenya. In addition,



inquiry maximized pooled-ordinary squares, random effects as well as fixed effects to scrutinize the influence of debts on pecuniary performance. The investigation examined 40 non-pecuniary entities catalogue at NSE from 2009 to 2015. Therefore, assessment revealed that long-run, short-run and TD has inverse and numerically important influence on the ROA. Nevertheless, these debts exhibited no material influence on ROE throughout all estimation approaches. The exploration place five years ago therefore there is need of another current assessment in regards to the same subject to established current findings. Moreover, research focused on debt as financing option while focuses on CS on agriculture firms in Kenya. Mukumbi, Eugene and Jinghong (2020) examined the impact of CS on the monetary performance. Hence, this assessment targeted non-pecuniary entities listed at the NSE, Kenya. Choosing if to fund a firm with borrowing or equity option has result to unending capital structure. An examination on this was conducted on 16 entities that were conducting business from 2013 and 2017 and quoted on NSE. The evaluation engages secondary data that was sourced from audited pecuniary statements originated from firm's website and also from NSE handbook. The assessors further used correlation with regression analysis to analyze gathered data with assistance from STATA. The study unveiled that CS has direct impact on monetary performance of entities quoted at NSE. As a result, outcomes showed that pecuniary of entities rises with the rise in debt in CS. This scrutiny focused on non-financial firms whereas the current assessment aimed at agricultural firms hence closing the gap.

Akeem, Terer, Kiyanjui and Kayode (2014) carried out research on effects of CS on entity's performance. On the ground of this, the timeframe ranged from 2003-2012, additionally, the assessment targeted Manufacturing Corporation in Nigerian set-up. In other respects, descriptive and regression approach was engaged to explore the influence of some crucial elements like ROA, ROE among others on entity performance. Additionally, secondary data was used utilizing data sourced from 10 manufacturing enterprises. The investigation uncovers that capital structure approaches has adverse link with organization performance. The study recommends used of equity to finance activities of the firms. However, agricultural sector is very dynamic hence there is need for the updated study.

### **2.3 Conceptual Framework**

This fundamental structure serves as a visual representation and diagrammatic illustration that elucidates the linkages among the variables under scrutiny. It provides a clear and concise depiction of the interconnections between the regressed and regressors variables.

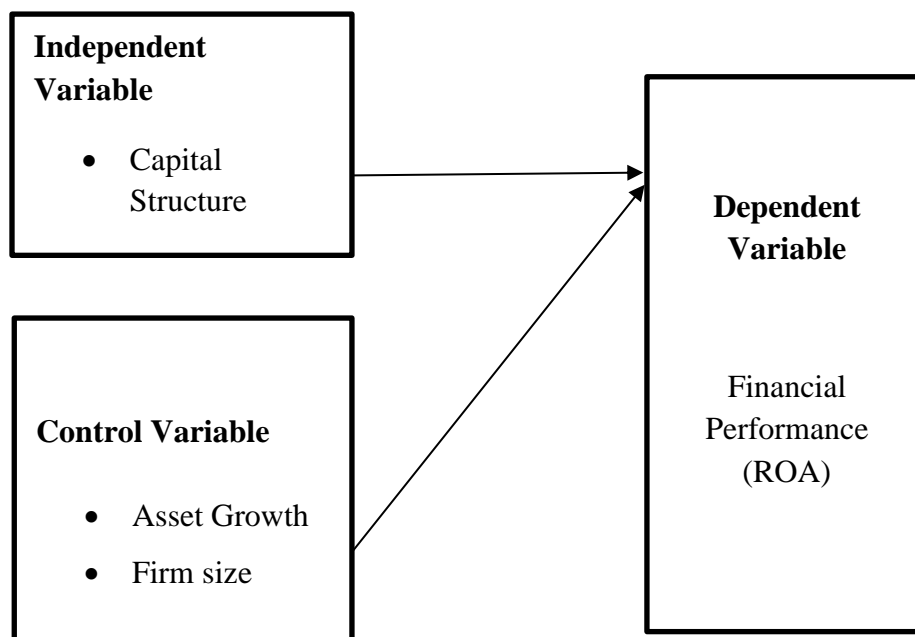


Figure 2.1 Conceptual Model

### 3. Research Methodology

#### 3.1 Research Design

The selection of an appropriate research design plays a pivotal role in establishing a framework and roadmap for generating comprehensive and significant findings. The chosen research design must align with the research topic, target population, and analytical approach, providing a well-structured plan for the study. It facilitates the integration and organization of various strategies and methods, ensuring a logical and systematic process in addressing the research problem. According to Salkind (2010), the purpose of research design is to enhance the analysis process by minimizing potential challenges.

In the context of this research, the population of interest is comprised of 32 agricultural entities that are listed at KEPSA and NSE from the period of 2018 to 2022. The specific list of these companies can be found in the appendices section of this research. The audited financial statements (AFS) of these firms serve as a crucial source of raw data for this study. These statements provide reliable and comprehensive information about the fiscal performance and position of the companies, allowing for a thorough analysis. Research collected and compiled raw data from various sources. The secondary data sourcing method was used to gather a comprehensive dataset. The primary source of historical dataset emanated from the Published Audited Financial Statements (PAFS). Quantitative data assumed an integral part in the scrutiny and computation of assessment outcomes. The investigation takes a timespan of five years, ranging from 2018 to 2022. The choice of the timeframe spanning from 2018 to 2022 in this research serves several crucial objectives.

### 3.2 Analytical Model

The study utilized SPSS to enhance the quality of analysis, presentation, and interpretation. Multiple regression analysis was employed to illustrate the correlations among the variables. Descriptive and inferential statistics received significant emphasis in the study. The utilization of an analytical model yielded dependable findings through substantive tests and analysis. This model was effectively compressed, quantified, and computed data, employing mathematical associations to present a coherent depiction of correlations. Rensik (2023) highlights the analytical model's significance as a valuable mathematical tool for defining associations among variables.

$$Y = \alpha_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Whereby:

Y= Financial Performance (ROA=Net Profit/Aggregate Assets)

$\alpha_0$ = y Regression intercept (constant variable)

$X_1$ = Liquidity (operationalized as by Current Assets/Current Liabilities)

$X_2$ = Capital Structure (operationalized as debt to equity ratio)

$X_3$ = Asset Growth [(Asset<sub>t</sub> - Asset<sub>t-1</sub>) divided by Asset<sub>t-1</sub>]

$X_4$ = Firm Size (operationalized through natural log of total Revenue)

$\varepsilon$ = error term

## **4. Findings and Discussions**

This section serves as the focal center of this research endeavor, providing the essential foundation for a comprehensive data analysis of agricultural firms in Kenya. The integration of secondary data, systematically processed through a coherent review, coding, and SPSS computation, significantly contributes to a robust and scientific substantiation of the findings. Beyond presenting data and calculations, this chapter embodies extensive discussions and interpretations, shedding light on the implications of our findings and how they relate to the overarching research goal: to investigate the impact of capital structure on the performance of agricultural firms in Kenya.

### **4.1 Descriptive Statistics**

The research intended to collect data from 32 agricultural firms that were shortlisted in KEPSA and NSE; however, data was successfully obtained from 30 of these firms. The importance of this data presentation lies in the descriptive computations, which play a crucial role in revealing the characteristics of the dataset under investigation. This process involves condensing and graphically representing data related to specific variables used in the study, allowing for a clear understanding of how the data is distributed, ranging from average values to extreme outliers. Moreover, it shapes the overall structure of the dataset, providing insights into the discussion surrounding the variables central to the research. In essence, this descriptive analysis also includes the measurement of standard deviation, which further elaborates on the extent of variability within the dataset, contributing to a comprehensive understanding of the data's nuances and distribution.

Descriptive statistics were instrumental in portraying the fundamental characteristics and attributes of the dataset related to a specific variable. The data was collected from the years 2018 to 2022, as indicated in the table below. Throughout this time frame, the financial performance of the firms exhibited a range from a minimum value of 0.1888 to a maximum value of 0.3690. The mean value for this metric was calculated to be 0.2869, and it was accompanied by a standard deviation of 0.04185. These statistics indicate that, on average, the financial performance of the firms over the five-year period was 0.2869, providing a summary of the central tendency and variability of this key variable.

The findings also revealed that the minimum recorded value for liquidity stood at 0.2775, while the maximum extended to 4.2858, resulting in an average of 0.8871. Over the same time span, the capital

structure metric showed an average of 2.1206 and a standard deviation of 0.2257. This suggests that the range of asset growth during this period displayed a wide spectrum, with the highest and lowest values registered at 1.2675 and 1.7040, respectively. The Firm Size across the years 2018 to 2022 for these companies yielded an average of 18.633 and a standard deviation of 6.4458.

Following a thorough and comprehensive examination, it's worth noting that the data revealed no significant anomalies. Furthermore, a quick assessment of the standard deviation for financial performance yielded a value of 0.4185, which happened to be the lowest among the various variables. In contrast, liquidity showed a value of 0.6435, while capital structure was represented by 0.2257, asset growth was indicated at 0.08561, and finally, firm size was denoted by 6.445. When considering the standard deviation values in relation to the corresponding averages, it can be inferred that there was minimal variability present, suggesting the dataset's suitability for predictive analysis.

**Table 1.1: Descriptive Statistics**

	<b>Financial Performance</b>	<b>Liquidity</b>	<b>Capital Structure</b>	<b>Asset Growth</b>	<b>Firm Size</b>
Mean	0.286851333	0.887178667	2.120610667	1.330588667	18.63360467
Standard Error	0.003418013	0.052544623	0.018428814	0.006990024	0.526301016
Median	0.2833	0.61785	2.1085	1.29135	18.42235
Mode	0.2651	0.6286	1.8675	1.273	12.5912
Standard Deviation	0.041861943	0.643537581	0.225705955	0.085609956	6.445844705
Sample Variance	0.001752422	0.414140618	0.050943178	0.007329065	41.54891396
			-		-
Kurtosis	-0.462638058	8.293433838	0.707914875	6.41316582	0.724330005
Skewness	-0.186774586	2.377180339	0.112697682	2.361267189	0.008124666
Range	0.1802	4.0083	0.9187	0.4365	30.1508
Minimum	0.1888	0.2775	1.6396	1.2675	1.4645
Maximum	0.369	4.2858	2.5583	1.704	31.6153
Sum	43.0277	133.0768	318.0916	199.5883	2795.0407
Count	150	150	150	150	150
Confidence Level (95.0%)	0.006754039	0.103828868	0.036415579	0.013812379	1.039977744

### 4.2 Model summary

The model summary depicted below discloses an R-value of 0.656, symbolizing a noteworthy correlation of 65.6% among the variables being examined in this investigation. The R-squared statistic serves as an essential quantitative measure for evaluating the quality of regression models, comprehending the connections between variables, and facilitating informed decision-making grounded in data analysis. In this analysis, R-Square value, signifying the correlation coefficient, communicates that 43.1% of the variances observed in financial performance are accountable to liquidity, asset growth, capital structure, and firm size. Consequently, the remaining 56.9% of fluctuations in financial performance are influenced by factors not encompassed in this examination.

**Table 1.2: Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted Square	RStd. Error of the Estimate	Durbin-Watson
1	.656 <sup>a</sup>	.431	.415	.0320084	.567

a. Predictors: (Constant), Firm Size, Asset Growth, Capital Structure, Liquidity

### 4.3 Regression Coefficients

The researcher utilized the unstandardized coefficients in column B to formulate the mathematical model. Consequently, the findings highlight that, while keeping all other factors constant, the impact of the predictor variables on financial performance amounts to 0.299. Furthermore, the results reveal that liquidity exerts a positive yet statistically insignificant influence on firm performance ( $\beta = 0.003$ ;  $p = 0.562 > 0.05$ ). The data presented in section 4.7 also demonstrates that capital structure exhibits a positive and substantial association with financial performance, as indicated by ( $\beta = 0.086$ ;  $p = 0.000 < 0.05$ ). In contrast, asset growth displays a negative, yet statistically significant relationship with financial performance, as denoted by ( $\beta = -0.135$ ;  $p = 0.000 < 0.05$ ). Firm Size similarly has a negative but statistically significant impact on Financial performance, as evidenced by ( $\beta = -0.001$ ,  $p = 0.040 < 0.05$ ).

**Table 1.3: Regression Coefficients**

Model	Unstandardized Coefficients	Standardized Coefficients	Sig.	95.0% Confidence Interval for B	Collinearity Statistics

	<b>B</b>	<b>Std. Error</b>	<b>Beta</b>			<b>Lower Bound</b>	<b>Upper Bound</b>	<b>Tolerance</b>	<b>VIF</b>
(Constant)	.299	.066		4.508	.000	.168	.430		
Liquidity	.003	.005	.047	.582	.562	-.007	.013	.603	1.658
1 Capital Structure	.086	.014	.464	6.238	.000	.059	.113	.710	1.409
Asset Growth	-.135	.037	-.275	-3.667	.000	-.207	-.062	.696	1.438
Firm Size	-.001	.000	-.150	-2.069	.040	-.002	.000	.749	1.334

a. Dependent Variable: Financial Performance

With the above findings, researchers generated a mathematical model as

$$Y=0.299 + 0.003 X_1 + 0.086 X_2- 0.135 X_3- 0.001 X_4 +\epsilon$$

This reveals that the autonomous value is notably positive at 0.299, indicating that when all variables linked to this study remain unaltered, firm performance sees a positive shift of 0.299. Consequently, a one-unit increase in liquidity results in a 0.3% positive alteration in financial performance when all other factors are kept constant. Furthermore, a single-unit alteration in capital structure yields a substantial 8.6% improvement in financial performance, maintaining all other influencing factors as constants. Additionally, a marginal change of one unit in asset growth leads to a relatively insignificant 13.5% decline in financial performance while keeping other determinants unchanged. Finally, an isolated unitary modification in firm size corresponds to a significant 0.1% reduction in financial performance under the condition of constant facilitators. Acknowledging the profound implications of these noteworthy findings, it is crucial to emphasize that a comprehensive and unequivocal conclusion can be clearly expounded by:

$$Y=-0.299 + 0.086 X_2 - 0.135 X_3-0.001 X_4 +\epsilon$$

This is because the other one variable is insignificant

Whereby

Y= Firm Performance

A0=y intercept of the regression (constant variable)

X<sub>2</sub>= Capital Structure

X<sub>3</sub>= Asset Growth

X<sub>4</sub>= Firm Size

ε= error term

#### **4.4 Interpretation and Discussion of the Findings**

The results outlined in the model summary indicated that the four predictor variables explained 43.1% of the variability observed in the financial performance of the agricultural firms. This highlights that 56.9% of the variations in financial performance were influenced by additional factors not included in the model. Expanding on this analysis, the ANOVA test confirmed that the model had significance and utility in predicting the companies' firm performance, as demonstrated by the F-statistics of 27.428 ( $p < 0.05$ ).

Furthermore, it is worth delving deeper into the observation that liquidity emerged as a variable with dynamic characteristics, revealing a positive and statistically insignificant relationship with firm performance ( $\beta=0.003$ ;  $p=0.562 > 0.05$ ). It is essential to note, however, that Kusuma and Panji (2018) identified a significant positive correlation between liquidity and financial performance. This discrepancy suggests the need for further exploration to understand the prevailing relationship in this specific context of this study.

Furthermore, an in-depth exploration reveals the intricate impact of capital structure on firm performance, unveiling a significant positive relationship ( $\beta=0.086$ ;  $p=0.000 < 0.05$ ). This finding aligns with the conclusions of Rosario and Chavali (2019), emphasizing the pivotal role of capital structure in shaping financial performance. However, it's essential to acknowledge the contrasting perspective presented by Boshnak (2023), which suggests that long-term debt has a significant negative impact on a company's operational performance. Additionally, TD, DER, and long-term debt appear to exert a similar influence on the organization's financial and market performance, as highlighted by Habibniya et al. (2022). Their study uncovered that leverage has substantial consequences on ROA. Balancing these divergent viewpoints, Opoku-Asante, Winful, Shaerifzadeh, and Neubert (2022) suggest that the maturity of debt exhibits no significant association between capital structure and financial performance.

Furthermore, as the analysis progressed, attention shifted to the impact of asset growth on firm performance. The findings unequivocally confirmed a negative yet statistically significant correlation ( $\beta=-0.135$ ;  $p=0.000 < 0.05$ ). In a study spearheaded by Susanti, Rachmawati, and Harfudin (2023), their assessment unveiled the pivotal and substantial role of asset growth in shaping the capital structure of an organization. In a similar context, Silvia and Meti (2020) aimed to investigate the mediating relationship between asset



growth and capital structure, particularly in the Food and Beverages sector. However, their research yielded dissimilar results, suggesting that asset growth does not exert a positive influence on capital structure. Conversely, Amin (2021) posited that asset growth enhances a company's financial robustness and stability. A larger asset base serves as a buffer against financial risks and uncertainties, enhances the company's borrowing capacity, and equips it to better withstand economic downturns.

Finally, the correlation between firm size and financial performance was analyzed, uncovering a negative yet statistically significant relationship ( $\beta=-0.001$ ;  $p=0.000<0.05$ ). In a study by Sulajman, Mijinywa, and Isa (2019), they conducted an investigation into the implications of financial performance, firm size, and capital structure, and their findings indicated that firm size plays a pivotal role in financial performance. Timilsina's (2020) study similarly revealed a movement in the same direction for bank size and DER, with a negative correlation observed between bank size and the DER ratio. However, firm size exhibited an insignificant influence on Tobin's Q, a measure of financial performance. Fitrianingrum, Suhendro, and Masitoh (2020) argued that firm size influences capital structure, and their focus differed from the current study.

## **5. Conclusion and Recommendations**

The research focused on assessing how capital structure influences the financial performance of agricultural firms in Kenya, specifically those listed by KEPSA and NSE. The study examined the relationships between various key variables liquidity, capital structure, asset growth, and firm size with the goal of understanding their collective impact on financial outcomes.

The findings revealed that the combined effect of these variables on financial performance was significant, with a quantified impact of 0.299. This indicates that, when considered together, these factors contribute positively to the financial health of agricultural firms. This insight underscores the importance of these variables in shaping a firm's financial stability.

Upon closer analysis, the study highlighted the relationship between liquidity and financial performance. Although liquidity showed a positive connection with financial performance, this relationship was statistically insignificant. While liquidity is essential for maintaining a firm's financial health, its direct

influence on performance may not be as pronounced as other factors, pointing to the need for more in-depth exploration of this variable.

The study also uncovered a significant positive correlation between capital structure and financial performance. This finding emphasizes the critical role that managing debt and equity plays in determining a firm's financial stability and overall health. However, the research also acknowledged the complexity of this relationship, noting the existence of varied perspectives in the literature.

Asset growth was another crucial area of investigation, and the results indicated a negative yet statistically significant correlation with financial performance. This suggests that while asset growth is generally seen as a sign of expansion, it may actually hinder financial performance if not managed carefully. Firms are advised to strategically evaluate the efficiency and profitability of new investments to ensure they align with financial goals.

Additionally, the analysis revealed a negative yet statistically significant relationship between firm size and financial performance. This suggests that as firms grow larger, they may experience a decline in financial performance. This finding adds to the complexity of understanding how firm size impacts financial outcomes, indicating that larger firms may face unique challenges that smaller firms do not.

Based on these findings, the study offers several key recommendations. First, agricultural firms should carefully manage their capital structure, balancing debt and equity in a way that supports both operational needs and long-term financial goals. Prudent capital management is crucial for maintaining stability and ensuring sustainable growth.

Secondly, despite the inconclusive statistical significance, effective liquidity management remains vital. Firms must maintain robust liquidity levels to meet short-term obligations and capitalize on new opportunities, even if liquidity is not the primary driver of financial performance.

Lastly, firms should approach asset growth with caution. It is essential to strategize growth initiatives in a way that considers the potential negative impact on financial performance. By thoroughly evaluating new

investments, firms can better align their growth strategies with their financial objectives, ensuring that expansion contributes to overall stability and success.

These insights provide valuable guidance for policymakers and financial experts who are involved in shaping the agricultural sector. Continuous monitoring and analysis of financial variables, combined with strategic capital structure management, effective liquidity control, and careful evaluation of growth strategies, are crucial for ensuring the financial prosperity of agricultural enterprises.

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