INTERNAL EQUITY AND FINANCIAL PERFORMANCE OF KENYA TEA DEVELOPMENT AGENCY PROCESSING FACTORIES IN NYERI COUNTY, KENYA

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ABSTRACT

The tea industry globally has faced a significant market decline, with the exception of China, where the sector showed resilience. The Kenyan tea industry, in particular, has experienced mixed financial results, often demonstrating a declining trend in performance. This decline is evident when examining the financial performance of tea factories in Kenya, as reflected in profitability metrics such as dividend payout ratios. For instance, the Kenya Tea Development Authority (KTDA)-managed tea factories posted declining dividend payout ratios: 14% in 2020, 12% in 2021, 10.5% in 2022, and 11% in 2023. These figures suggest challenges in maintaining profitability, which are compounded by factors such as fluctuating market prices, cost pressures, and financing choices made by the factories. Financing decisions are critical in determining the success of any business, particularly in capital-intensive industries like tea production. Prudent financing decisions have the potential to optimize the utilization of funds while minimizing associated risks, thereby contributing to improved financial performance. A key element of these financing decisions is the capital structure, which includes a combination of debt and equity financing. For tea factories, a well-balanced capital structure could mean the difference between maintaining liquidity, achieving profitability, and sustaining growth. The specific objective of this study is to examine the effect of internal equity—primarily retained earnings—on the financial performance of KTDA-managed tea factories in Nyeri County, Kenya. Internal equity, as a financing source, allows firms to reinvest profits back into the business without increasing debt obligations, potentially offering greater financial stability. This study focuses on internal equity's relationship with financial performance, measured through the dividend payout ratio, which serves as an important indicator of profitability. By analyzing the capital structure's role, the research aims to offer insights into how the use of retained earnings can influence the financial health of tea factories, especially in an environment marked by economic challenges and market volatility. The findings from this study could help inform better financial strategies and decisions within the Kenyan tea industry.

Keywords: Internal Equity, KTDA, Financial Performance, Divided Pay Out Ratio.

INTRODUCTION

The global tea industry has faced a fluctuating performance trajectory, with some countries experiencing declines in production and exports, while others have seen growth. India, one of the world's largest producers, has witnessed a steady decrease in tea production and exports. From 2016 to 2020, India's growth rate dropped by an average of 6.5%, with its exports falling from 252 million kilograms (m.kg) in 2019 to 185 m.kg in 2020, marking a 28% decline (Basnayake & Gunaratne, 2022). Similarly, Sri Lanka has faced difficulties, with a compound annual growth rate (CAGR) of -1.5% projected from 2016 to 2020, leading to decreased competitiveness and foreign currency revenue losses (Cowton & Pilz, 2019).

However, China's tea industry has shown resilience, with a 46.5% increase in tea exports between 2015 and 2019, marking a stark contrast to other countries in the sector. By 2019, China's tea exports were valued at $2 billion, outpacing Kenya's tea exports by over six times (Hong & Song, 2019). This growth highlights China's ability to capitalize on global tea demand despite broader market challenges.

Kenya, a leading tea exporter, has experienced a combination of positive and negative outcomes in recent years. While the overall global tea market showed growth from 2021 to 2023, Kenya's production declined by 9.76% in 2021, with auction sales and export volumes also witnessing a decline (Agriculture and Food Authority, 2021). However, local sales experienced a slight increase, and the number of export destinations for Kenyan tea expanded, reaching 50 from 43 (Agriculture and Food Authority, 2021). This highlight both the challenges of maintaining competitive pricing and the opportunities presented by expanding market reach.

The Kenya Tea Development Agency (KTDA) has also reported slow income growth, with a mere 2.8% increase in group income from 2019 to 2020. Despite rising production and sales, payments to farmers decreased significantly, reflecting the broader challenges of profitability within the sector (Kenya Tea Development Agency, 2021). Tea prices have continued to decline, with the average price per kilogram falling from USD 3.13 in 2017 to USD 2.38 in 2020, compounding the industry's struggles (Kenya Tea Development Agency, 2021).

Internal equity within tea factories, particularly in Kenya, plays a critical role in the financial sustainability and performance of the industry. Internal equity refers to the fairness and consistency in the compensation structures within a company, which impacts employee motivation, productivity, and ultimately the financial performance of the organization. In the case of tea factories, internal equity influences several factors, including operational efficiency, worker satisfaction, and the effective allocation of resources.

As tea factories are heavily reliant on labor, any disparities in compensation and benefits could lead to labor dissatisfaction, affecting productivity and quality of output. This is particularly important in Kenya, where the tea sector supports thousands of smallholder farmers and workers. Studies have shown that companies with strong internal equity frameworks tend to have higher employee satisfaction, leading to better overall performance (Ngugi & Karina,

2013; Shapiro & Hanouna, 2019). Additionally, equitable compensation structures help mitigate turnover rates and ensure continuity in operations, which is essential for maintaining steady production levels amidst the challenges of fluctuating tea prices.

Statement of the problem

As reported by the Agriculture and Food Authority (2021), the general performance of the Kenyan tea industry has posted mixed results, but more often demonstrating a declining trajectory as pertains profitability indicated by return on assets. Financial performance of the factories as shown by dividend pay-out metrics indicated a steady decline. Group financial reports indicated that profit for the year 2020 decreased to Kshs 1.78 billion from Kshs 2.07 billion in 2019. Despite the increase in total assets by 6% in Chinga Tea Factory and total revenue to 1,205M in 2020, there dividend pay-out ratio declined considerable by 11% in 2022. The dividend continued to deep in 2023 with 5.2%. Conversely, Gitugi Tea Factory and Iriani Tea Factory experienced declining bonuses for the year 2020 by 14% and 16% respectively. Gitugi tea factory company limited and Ndima tea factory company indicated a decline in bonuses from 7% in 2022 to 4.8% in 2023 and from 6.8% in 2022 to 5.5% in 2023 respectively. The discussion of the effect capital structure evaluation on financial performance has been a long one and the controversies involved show no signs of ending soon. The significance of the cost of capital component in financing decisions is indispensable. Prudent and well researched financing decisions has the potential of optimizing the benefits accruing from consumption of funds while minimizing on the risks involved (Ardalan, 2017). Nonetheless, there are many unresolved issues surrounding the subject matter. There are still many unresolved gaps on the subject matter. To address the enormous research gaps identified and provide working solutions to performance challenges facing the Kenyan tea processing firms, the current study focused on internal equity and performance of Kenya Tea Development Agency managed tea processing firms in Nyeri County, Kenya.

Objective of the Study

i. To examine the effect of internal equity on financial performance of KTDA managed tea factories in Nyeri County, Kenya.

Research Hypothesis

H_{01}: Internal equity has insignificant effect on the financial performance of KTDA does managed tea factories in Nyeri County, Kenya.

LITERATURE REVIEW

The key theory guiding the study include the Pecking Order Theory.

Pecking Order Theory

The Pecking Order Theory introduced by Donaldson (1961) posits that firms prefer internal sources of financing over external sources. The theory suggests that companies derive more benefits from using internal funds, such as retained earnings and reserves, than from external financing options like debt and equity. The rationale behind this preference is the reduced cost of capital associated with internal financing, which ultimately enhances financial performance.

When internal funds are exhausted, firms should first use short-term debt and, if necessary, resort to long-term debt only after short-term options are fully utilized. External equity financing (e.g., issuing new shares) is seen as the least desirable option and should only be used as a last resort.

A modified version of the theory was introduced by Myers and Majluf (1984), incorporating the concept of information asymmetry. This adaptation suggests that external financing becomes more costly due to unequal access to information between a firm's management and external stakeholders like investors or creditors. Management typically has superior knowledge about the firm's financial health, risks, and future prospects, which creates a disparity in transaction power. This information asymmetry leads to higher costs for external capital, as creditors and investors demand higher returns to compensate for the perceived risk.

The implications of the theory are significant for firms' financing decisions. According to the theory, internal funds signal financial strength and growth potential, while the use of debt signals confidence in the firm's ability to meet its obligations. On the other hand, reliance on external equity might suggest that management is unsure of the firm's future, as it could indicate an attempt to spread risk among a larger group of investors. Thus, internal equity is viewed as superior to external sources like debt and new share issuance due to the lower cost of capital and the positive signal it sends about the firm's sustainability and performance

EMPIRICAL LITERATURE REVIEW

Mwangi (2021) effect of capital structure on the financial performance of SMEs in the ICT Sector, Kenya. The study assessed the effect of debt (both short term and long term) and equity (internal and external) on financial performance. The study was anchored on the pecking order theory, trade off theory, and agency theory. A descriptive survey research design was employed on a population of 1048 ICT SMEs. The study relied on quantitative (descriptive and inferential) analysis and qualitative (thematic) analysis. Equity (both internal and external) as components of capital structure demonstrated a positive effect on SMEs' financial performance. Financing structures of SMEs is a widely covered topic. However, less is done in the tea sector despite the economic importance of the sector.

Harrison *et al.,* (2021) studied financial structure and financial performance of listed commercial banks in Kenya. Among the variables interesting the study were external equity (share capital), internal equity (retained earnings), short term debt and long term debt. The study employed a panel research design and targeted a sample of eleven (11) listed commercial banks in Kenya. The study considered the time between 2015 and 2019. The results showed that internal equity (retained earnings) have a positive effect on performance. In context, the studies on this subject are over concentrated on the banking sector and very few studies have focused on the tea sector despite its economic importance as a key foreign exchange revenue earner.

Abuga (2020) studied the effect of capital structure decisions on financial performance of public sugar manufacturing firms in western Kenya. The study analyzed short term debt

financing, long term debt financing, external equity financing, and internal equity (retained earnings) and their effect on financial performance. Specifically, publicly owned sugar processing firms were targeted by the study. The results demonstrated that external equity finance have a positive and significant effect on financial performance. The study showed that internal equity (retained earnings) have a negative influence on financial performance of sugar processing firms. In addition, short term debt and long term debt financing indicated a negative effect on financial performance.

Nduati and Wepukhulu (2020) studied retained equity (retained earnings) and financial performance of SACCOs in Nairobi County. A descriptive survey research design was utilized while the population comprised of 29 Deposit Taking SACCOs. Data was largely quantitative ad analysis relied on means and standard deviations (descriptive statistics) and regression analysis (inferential statistics). From the results, internal equity (retained earnings) was evidenced to be a positive predictor of financial performance. From a conceptual perspective, gaps emerge as other key components of capital structure were omitted in the assessment.

RESEARCH METHODOLOGY

The research design serves as a blueprint for data collection, assessment, and analysis in a study (Cooper & Schindler, 2009). It provides a framework for addressing research questions (Mugenda & Mugenda, 2013). This study employed a causal research design, which explores the cause-and-effect relationships between study variables.

The target population refers to the group from which data will be drawn to make conclusions (Harris et al., 2019). In this study, the target population consisted of 6 tea factories managed by the Kenya Tea Development Agency (KTDA) in Nyeri County. The unit of observation was the financial statements from 2013 to 2022. Given the small size of the population, a census design was used, ensuring the inclusion of all components and reducing sampling errors (Tanner, 2018).

The study measured financial performance and capital structure using variables such as long-term debt, short-term debt, internal equity, and external equity. The data was collected through secondary financial statements from KTDA and the tea factories for the period 2013 to 2022, using a data collection schedule.

Data analysis involved panel regression to examine the relationships between the variables. Descriptive and inferential analyses were performed, with hypotheses tested at a 5% significance level, guiding the research toward conclusions and policy recommendations.
Ethically, the study adhered to the standards set by Kenyatta University and NACOSTI. The research followed ethical principles, including proper acknowledgment of authors and obtaining necessary research authorization.

RESEARCH FINDINGS AND DISCUSSION

Descriptive Analysis Results

This section provides descriptive statistics that outline the characteristics of each variable studied. These statistics are essential for understanding the general trends and distribution of the data; internal equity and dividend payout ratio (DPR). The analysis uses measures such as minimum, maximum, mean, and standard deviation for each variable, based on 60 observations.

Table 1: Descriptive Statistics

	Obs	Minimum	Maximum	Mean	Std. Deviation
Internal Equity	60	.35	.47	.4230	.02830
DPR	60	.27	.36	.3115	.02082

The study indicated that internal equity, or retained earnings, had a minimum value of 0.35 and a maximum of 0.47, with a mean of 0.423 and a standard deviation of 0.0283. The findings were that internal equity levels were relatively consistent across the firms in the sample, with most firms maintaining a similar proportion of capital from retained earnings. This finding supports empirical research that emphasizes the positive role of internal equity in firm performance. For example, Harrison et al. (2021) found that internal equity, particularly retained earnings, had a positive effect on the financial performance of Kenyan banks. Additionally, Mwangi (2021) found that internal equity was beneficial for the performance of SMEs in the ICT sector, further supporting the idea that internal equity is a reliable source of financing with fewer associated costs than debt. However, Abuga (2020) noted that retained earnings had a negative influence on performance in public sugar manufacturing firms, suggesting that the role of internal equity in firm performance might vary based on the sector and specific financial practices.

Hausman Specification Test Results

The Hausman test is used to choose between fixed-effects (FE) and random-effects (RE) models in panel data regression analysis. The test evaluates whether the unobserved individual effects are correlated with the explanatory variables. The results of the Hausman test are shown in Table 2.

Table 2: Hausman Test Results

Model Choice	Chi-Square	Probability>Chi-Square	Model Type
Hausman Test	5.19	0.3441	Random effect preferred

The Chi-square value is 5.19, with a probability of 0.3441, which is greater than 0.05. Since the p-value exceeds the threshold, the null hypothesis that the random-effects model is appropriate cannot be rejected. Thus, the random-effects model was selected for the analysis, as it is deemed more suitable for the study. This finding suggests that the unobserved individual effects are not correlated with the explanatory variables, allowing for reliable coefficient estimates. The use of the random-effects model strengthens the validity of the regression analysis and enhances the robustness of the study's conclusions.

Random Effects Panel Regression Model Results

The Random Effects (RE) Model was utilized to examine the influence of financial structure variables—including internal equity on the financial performance (DPR) of selected tea factories. Table 3 below presents the Random Effects Panel Regression model results.

Table 3: Static Random Effects Panel Regression Model

Variable	Coefficient	Std. Error	z-value	p-value
Internal Equity (IE)	0.081	0.029	2.76	0.006
Constant	0.902	0.245	3.68	0.000
F(9, 17)	61.23	Probability >F		0.0000
Sigma u	0.7465	Wald Chi-Square		612.14
Sigma e	2.558	Prob Chi-Square		0.000
			Within	0.8458
Rho	0.2845	R-Square	Between	0.8674
			Overall	0.8472

The results from the static Random Effects Model regression, presented in Table 3, provide important insights into the roles of internal equity (IE) in influencing the financial performance of tea factories. The Wald Chi-Square statistic of 612.14 with a Probability > F of 0.0000 indicates that the overall model is statistically significant, underscoring its robustness in explaining the variations in firm performance related to these financing sources. This high model significance confirms the relevance of these financial variables in affecting firm value, validating the model's appropriateness in examining the capital structure choices of tea factories. Furthermore, the high R-Squared of 0.8472 implies that approximately 84.72% of the variations in firm performance are explained by the variables in the model, while only 15.28% remain unexplained by other factors not included in this study. The rho value of 0.2845 suggests that internal equity contribute significantly to the model, with each firm accounting for around 28.45% of the explanatory power in the analysis.

Internal equity (IE) showed a positive and significant effect on firm performance, with a coefficient of 0.081 ($p = 0.006 < 0.05$, $z = 2.76$). This positive relationship implies that retained earnings are a valuable financing source for tea factories, potentially contributing to stability and growth. The use of retained earnings can reduce a firm's reliance on external borrowing, thereby lowering the risk of financial distress while also avoiding the dilution of ownership that accompanies external equity financing. This finding is consistent with studies such as Harrison et al. (2021), which found that retained earnings (internal equity) positively influence the performance of commercial banks in Kenya. The significance of internal equity could be due to its role in reducing financial risk and maintaining autonomy in financial decisions, as

firms are not dependent on external financiers. However, this finding contrasts with Abuga (2020), who found that internal equity had a negative impact on financial performance within the Kenyan sugar industry. The difference could stem from variations in industry dynamics; in the sugar sector, retained earnings may not provide sufficient liquidity, given the high capital requirements for production and the volatile nature of commodity prices. In contrast, the tea industry's cash flows may allow internal equity to serve as a more effective source of funds, supporting sustainable growth.

Conclusions

The significant positive impact of internal equity underscores the importance of retained earnings in enhancing firm performance. The study concludes that internal equity serves as a sustainable financing source for tea factories, enabling them to grow without taking on additional financial risk. This highlights the value of reinvesting earnings to support operational stability and growth.

Recommendations

Policy Recommendations

Incentivize Use of Internal Equity: Tax incentives or subsidies could be provided for reinvesting profits, encouraging firms to prioritize internal equity as a financing source. This could support long-term growth and reduce reliance on external borrowing, which can mitigate financial risks for tea factories. Encourage Equity Market Participation: Government policies that promote equity market accessibility for smaller firms can enable tea factories to secure external equity financing more easily. This may involve regulatory adjustments that reduce the complexity and cost of issuing shares or attracting external investors.

Practical Recommendations

Strengthen Retained Earnings for Growth: Firms should prioritize building strong retained earnings to support future expansion and reduce the need for external financing. Internal equity can act as a reliable buffer, enabling tea factories to weather financial downturns and fund growth initiatives.

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