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Influence of Company's Tax Exposure as Capital Structure Decision on Financial Performance of State-Owned Sugar Manufacturing Corporation Projects in Western Kenya

[*]Mathew Elijah Kawour[1]
Charles M. Rambo[2]
Paul A. Odundo[3]

[1]Dept. of Manag. Sci. and Project Planning, Faculty of Business and Manag. Sci., University of Nairobi, Nairobi, Kenya
[2]Dept. of Finance and Accounting, Faculty of Business and Manag. Sci., University of Nairobi, Nairobi, Kenya
[3]Dept. of Educational Planning and Administration, Faculty of Education, University of Nairobi, Nairobi, Kenya

This study examined how a company's tax exposure, conceptualized as a capital structure decision factor, influences the financial performance of state-owned sugar manufacturing corporations in Western Kenya. Grounded in Modigliani and Miller's capital structure model and drawing on trade-off, pecking-order, and agency cost theories, the research employed a mixed-methods approach combining descriptive and correlational survey research designs. The study targeted 1,145 employees across five state sugar corporations, from which a sample of 291 was drawn. Data were collected through structured questionnaires (n=261, 89.7% response rate) and supplemented by secondary data from annual audited reports (2015-2019). The secondary data were used to compute the key financial performance indicators. Hierarchical regression analysis with multiple control variables revealed significant relationships between tax exposure and all financial performance indicators. The findings provide valuable insights for policy-makers regarding the impact of taxation on corporate performance and suggest that strategic tax management and capital structure optimization can enhance financial outcomes in state-owned sugar corporations. The study recommends policy interventions to reduce the tax burden on state sugar projects while improving tax planning practices within corporations.

Keywords: Capital structure, company's tax exposure, financial performance, state-owned sugar manufacturing projects, Kenya

JEL: G20, H20, H21, H25

Sugar manufacturing plays a significant role in socio-economic development by creating employment opportunities and generating government revenue. Despite these benefits, state-owned sugar corporations face persistent challenges that undermine their performance (Ashok, 2012; Nwaeke *et al.*, 2022; Ong'ombe and Mungai, 2018; Valajibhai and Desai, 2024). This study investigated the extent to which a company's tax exposure, conceptualized as a capital structure decision factor, influences financial performance of state-owned sugar manufacturing corporation projects in Western Kenya.

Tax exposure refers to the financial risks and obligations arising from a company's tax liabilities, including both identified and potential unpaid taxes (Asaba *et al.*, 2024). While taxation represents an

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*Corresponding author: kawour_elijahmathew@yahoo.com

obligatory payment to the state for public services (Williams, 2019), it often exerts negative effects on business operations, particularly in developing economies (Tee *et al.*, 2016). Globally, compulsory taxes including corporate tax, pay-as-you-earn (PAYE), and value-added tax (VAT) have been shown to decrease profitability, reduce investment, and increase the cost of equity capital (Chude and Chude, 2015; Williams, 2019). In developing contexts specifically, high taxation rates discourage investment and entrepreneurship, potentially slowing economic growth (Njanike, 2019).

Within Kenya's sugar industry, state corporations face substantial tax exposure, being subject to taxes on income, property, and products. These tax obligations, combined with high debt levels and operational inefficiencies, create significant financial strain (Kariuki, 2017). The accumulation of debts to lending institutions, suppliers, and government tax authorities further limits corporations' ability to improve operations, impacting their financial stability and tax compliance (Nwaeke *et al.*, 2022). Consequently, effective tax planning and management become crucial for optimizing financial results and maintaining competitiveness in this sector.

This study addresses the critical research gap in understanding how tax exposure specifically influences capital structure decisions and, consequently, financial performance in state-owned enterprises. While existing research has examined taxation effects broadly, there remains limited understanding of this relationship within the unique context of state-owned sugar manufacturing corporations in developing economies. This paper contributes to both theory and practice by examining this relationship through an integrated theoretical lens and providing evidence-based insights for policy-makers and corporate managers.

Despite the significant socio-economic benefits associated with state-owned sugar manufacturing corporations, the sector faces persistent challenges that undermine its performance. High taxation and various levies have been identified as major contributing factors to the sector's minimal performance outcomes. While numerous studies have examined the general effects of taxation on business performance (Bakari and Alhaji, 2019; Karimi and Wanjohi, 2024; Mutinia, 2020; Nwaeke *et al.*, 2022; Ong'ombe and Mungai, 2018; Saidu *et al.*, 2023), a critical research gap remains: none of these studies have specifically investigated how tax exposure, conceptualized as a capital structure decision factor, influences the financial performance of state-owned sugar corporations.

This gap is particularly significant, given the continued government support through sanctioned credit facilities aimed at improving corporate performance, which has not yielded substantial improvements in financial outcomes. The persistent underperformance of state sugar corporations despite policy interventions suggests that underlying structural factors, particularly those related to capital structure decisions influenced by tax exposure, warrant closer examination.

The absence of research examining the intersection of tax exposure, capital structure decisions, and

financial performance in this specific context leaves policy-makers and corporate managers without evidence-based guidance for strategic decision-making. Without understanding how tax considerations influence capital structure choices and subsequent financial outcomes in state-owned enterprises, interventions may continue to address symptoms rather than root causes of poor performance.

Therefore, this study was prompted to address this critical gap by examining how a company's tax exposure, as a capital structure decision factor, influences the financial performance of state-owned sugar manufacturing corporation projects in Western Kenya. The investigation seeks to provide theoretically grounded and empirically validated insights that can inform both corporate strategy and public policy in this economically important sector.

The next section of this paper presents the literature review. It details the theoretical underpinnings and the empirical studies related to company tax exposure, as a capital structure decision, and firm performance. Subsequently, the paper provides a detailed description of the methodology of the study, followed by the presentation and analysis of the research findings. The last sections of the paper present the discussion of findings, conclusion, recommendations of the study, as well as the limitations and future directions.

LITERATURE REVIEW

Theoretical Underpinnings

This study was anchored in Modigliani and Miller's (1958) capital structure model, with specific emphasis on three complementary theoretical perspectives: trade-off theory, pecking-order theory, and agency cost theory. These theories provide distinct but interrelated frameworks for understanding how tax considerations influence capital structure decisions and, consequently, financial performance in organizational contexts.

-Trade-off Theory

Originating from Kraus and Litzenberger's (1973) extension of Modigliani and Miller's work, trade-off theory posits that firms balance the costs and benefits of debt financing when making capital structure decisions. A central benefit of debt financing is the tax shield provided by interest payments, which reduces taxable income and consequently lowers tax liabilities (Nassar, 2016). This theory predicts a positive relationship between profitability and leverage, as profitable firms have greater capacity to utilize debt tax shields effectively.

The trade-off theory is particularly relevant to this study as it provides a framework for examining whether managers of state-owned sugar corporations consider tax shield benefits when making financ-

ing decisions. It helps establish theoretical expectations regarding the relationship between tax exposure, capital structure choices, and financial performance outcomes. However, the theory has limitations in that it primarily focuses on financial factors (tax benefits and financial distress costs), while potentially overlooking non-financial considerations such as corporate governance structures, social responsibilities, and reputational concerns that may be particularly salient for state-owned corporations.

-Pecking-order Theory

Developed by Myers and Majluf (1984) from Donaldson's (1961) earlier work, pecking-order theory suggests that firms prefer internal financing to external financing due to information asymmetries and transaction costs. According to this theoretical perspective, firms follow a financing hierarchy: first utilizing internal funds (retained earnings), then low-risk debt, and finally equity as a last resort. The theory predicts a negative relationship between profitability and leverage, as more profitable firms generate greater internal funds, reducing their need for external financing (Kawour *et al.,* 2024).

This theory is relevant to the current study as it helps explain potential financing patterns in state sugar corporations, particularly how tax exposure (which reduces internal funds through tax payments) might influence financing preferences and capital structure decisions. It enables examination of whether these corporations follow the predicted financing hierarchy and how tax considerations might disrupt or modify these patterns. However, the theory's limitations include its potential over-simplification of complex financing decisions and its primary applicability to established firms with access to internal funding sources, which may not fully capture the realities of state-owned enterprises in developing economies.

-Agency Cost Theory

Propounded by Berle and Means (1932), Agency cost theory focuses on conflicts of interest between principals (shareholders) and agents (managers). In the context of taxation and capital structure decisions, this theory examines how managers balance personal interests against organizational objectives in tax planning and financing choices (He *et al.,* 2024). The theory assumes that both principals and agents act in their own self-interests, potentially creating Agency costs through misaligned incentives and information asymmetries.

For this study, Agency cost theory provides a valuable framework for understanding how tax avoidance strategies might be employed by managers and how these strategies influence capital structure decisions and financial performance. It enables examination of potential conflicts between government revenue objectives (as principal in state-owned enterprises) and managerial performance goals. However, the theory has limitations in its potentially narrow focus on shareholder-manager conflicts, mainly overlooking other important stakeholders (employees, customers, communities) who may significantly

influence corporate decisions and performance in state-owned enterprises.

Theoretical Integration and Contribution

Rather than treating these theories as competing explanations, this study adopts an integrated theoretical approach that recognizes their complementary insights into the tax exposure-capital structure-performance relationship. This integration represents a theoretical contribution by developing a more comprehensive framework for understanding how tax considerations influence financial decisions in state-owned enterprise contexts.

The study extends these established theories by applying them to the specific context of state-owned sugar manufacturing corporations in a developing economy. This contextual application tests theoretical boundaries and examines how institutional factors particular to state-owned enterprises such as political influences, social mandates, and different governance structures modify theoretical predictions. By examining how tax exposure influences capital structure decisions and financial performance in this specific context, the study contributes to theoretical development by identifying boundary conditions and contextual moderators of established theoretical relationships.

Rather than treating these theories as competing explanations, this study adopted an integrated theoretical approach that recognizes their complementary insights. Trade-off theory explains why firms might accept higher leverage to benefit from tax shields; pecking order theory explains financing hierarchies and how tax payments reduce internal funds, and agency cost theory explains potential conflicts in tax planning decisions. Together, these theories suggest that tax exposure influences financial performance through capital structure choices, and through managerial decisions about tax avoidance and planning.

Empirical Review

Research on taxation and firm performance has produced mixed findings across different contexts, methodologies, and industries. This section synthesizes empirical evidence from international, regional, and local studies to identify patterns, contradictions, and research gaps relevant to the current investigation.

International evidence reveals divergent patterns in how taxation affects firm performance. In Romania, Sebastian and Cortel (2018) examined construction companies listed on the Romanian Stock Exchange from 2000 to 2011, employing fixed-effects models. They found that increasing firm-specific tax rates negatively affected return on assets, while factors like liquidity, growth, and profitability positively influenced financial performance. This study highlighted the context-dependent nature of tax effects. In the Dominican Republic, Amendola *et al.* (2018) reported contrasting findings, demonstrating

that corporate income tax incentives positively impacted profitability of listed companies. This suggests that tax policy design, specifically whether taxes are framed as burdens or incentives, significantly influences performance outcomes. Similarly, in China, Liu and Lockwood (2015) and Liu *et al.* (2023) found that VAT reform policies improved financial performance in cultural industry enterprises, indicating that the type and structure of taxation matter as much as the overall tax burden. In Turkey, Serdinova (2023) examined the alignment between economic growth and tax incentives. Content method analysis and regression Generalized Method of Moment Model were applied. The finding reported that tax incentives impact on growth. These international studies collectively demonstrate that the tax–performance relationship is not uniform but varies based on institutional contexts, tax policy designs, and industry characteristics.

Within African contexts, research has yielded particularly relevant insights. In Uganda, Asaba *et al.* (2024) specifically examined sugar manufacturing, finding that taxation negatively influenced Kakira Sugar Factory's performance. The researchers recommended reducing tax complexity to improve performance a finding directly relevant to Kenya's similar context. In Nigeria, Nwaeke *et al.* (2022) investigated financial performance and income tax relationships across 173 quoted companies, finding that financial performance significantly affects income tax liabilities, with firm size moderating this relationship. Bakari and Alhaji (2019) further demonstrated that specific tax incentives (capital allowance and loss relief) positively influenced performance in Nigerian consumer goods companies, though investment incentives showed insignificant effects. A Ghanaian research by Rohaya *et al.* (2010) on manufacturing firms revealed that corporate income tax adversely affects profitability but showed positive relationships with firm size and age, suggesting that organizational characteristics moderate tax effects. Research within Kenya provides the most directly relevant context. Kariuki (2017) examined corporate tax planning among listed companies, finding significant positive effects on financial performance through improved shareholders' wealth. This finding was corroborated by Thuita *et al.* (2020), who similarly reported significant effects of tax planning on performance for Nairobi Securities Exchange (NSE) listed firms. However, not all Kenyan studies show consistent patterns. Mutuku *et al.* (2024) found no significant effect of corporate tax on manufacturing firms listed on the Nairobi Securities Exchange (NSE), highlighting methodological and contextual variations that may explain divergent findings. Meanwhile, Ochieng (2020) demonstrated that various tax incentives positively affected Export Processing Zone (EPZ) firms' performance, suggesting that tax policy design matters significantly. Specialized studies offer additional insights. Mutua (2016) specifically examined tax shields in private manufacturing firms, finding that higher tax shields lead to increased debt usage directly relevant to capital structure considerations. Kabati (2021) explored transparency and tax avoidance relationships, finding mixed effects across different transparency dimensions.

Several important patterns emerge from this empirical review. First, the tax–performance relationship shows significant contextual variation, with findings differing across countries, industries, and methodological approaches. Second, tax policy design (incentives versus burdens) appears crucial in determining outcomes. Third, organizational characteristics (size, age, industry) moderate tax effects. Fourth, research specifically addressing state-owned enterprises in developing economies remains limited. Most critically, while existing research has examined taxation effects broadly, and some studies have addressed tax planning or specific tax mechanisms, no studies have specifically investigated how tax exposure as a capital structure decision factor influences financial performance in state-owned sugar manufacturing corporations. This represents a significant research gap, particularly given the unique characteristics of state-owned enterprises (political influences, social mandates and different governance structures), that may modify established relationships found in private sector studies.

This gap is particularly necessary given the continued government support through sanctioned credit facilities aimed at improving corporate performance, support that has not yielded substantial improvements in financial outcomes. The persistent underperformance of state-owned sugar-manufacturing corporations, despite policy interventions, suggests that underlying structural factors, particularly those related to capital structure decisions influenced by tax exposure, warrant closer examination. While previous studies have examined taxation effects broadly (Karimi and Wanjohi, 2024; Mutinia, 2020; Saidu *et al.*, 2023) or tax planning in private firms (Kariuki, 2017; Thuita *et al.*, 2020), none have specifically investigated how tax exposure functions as a capital structure decision factor in state-owned enterprises, a context characterized by unique governance structures, political influences, and social mandates that may modify established theoretical relationships.

The current study addresses this gap by specifically examining how tax exposure influences capital structure decisions and, consequently, financial performance in state-owned sugar manufacturing corporations a context that combines the unique features of state ownership with the specific challenges of agricultural processing in a developing economy.

Based on the theoretical framework and empirical evidence reviewed, this study tested the following null hypotheses:

H_1: Company's tax exposure has a significant negative relationship with Gross Profit Margin in state-owned sugar manufacturing corporations.

H_2: Company's tax exposure has a significant negative relationship with Net Profit Margin in state-owned sugar manufacturing corporations.

H_3: Company's tax exposure has a significant negative relationship with Return on Assets in state-owned sugar manufacturing corporations.

H_4: Company's tax exposure has a significant negative relationship with Return on Equity in state-owned sugar manufacturing corporations.

H_5: Company's tax exposure has a significant negative relationship with Return on Investment in state-owned sugar manufacturing corporations.

H_6: Company's tax exposure explains significant incremental variance in financial performance beyond firm characteristics (size, age, leverage, growth, and industry).

The conceptual framework of the study is given is Figure 1.

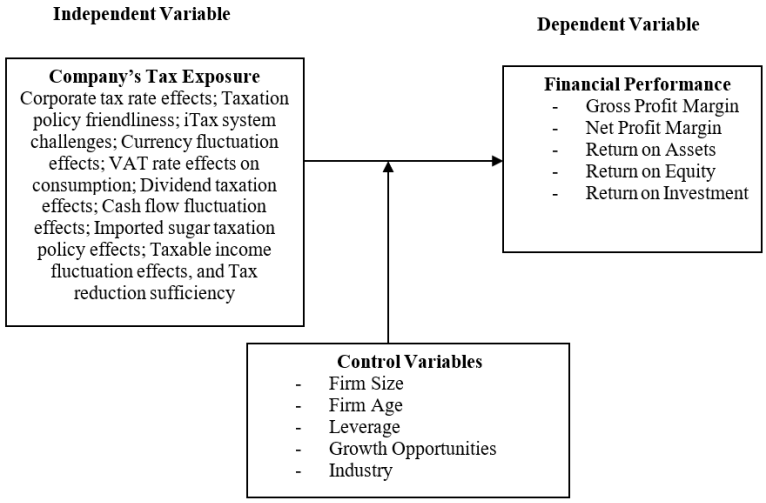

Figure 1. Conceptual Framework

METHODOLOGY

Research Philosophy and Design

The study adopted a positivist philosophy, employing a mixed-methods approach combining descriptive survey and correlational research designs. The descriptive survey design facilitated the characterization of tax exposure and financial performance as they existed without manipulation, while correlational design enabled assessment of the relationship between study variables.

Sample and Procedure

The study focused on five-state-owned sugar manufacturing corporations in Western Kenya's lowland sugar belt: Muhoroni, Chemelil, Mumias, Nzoia, and Sonu Sugar (collectively known as MUCHEMUNSO). The study covered a five-year period from 2015 to 2019. The target population comprised 1,145 individuals across five stakeholder categories. These included a total of 20 top-level management (CEO, CFO, HRM, OM per company), 54 supervisory staff, 1,056 sugarcane out-growers, and 15 government officials (Ministry of Agriculture, Kenya Sugar Directorate).

Using Krejcie and Morgan's (1970) table, a sample of 291 respondents was drawn from the target population of 1,145. Purposive sampling was used to select top-level management (all 20 included) and government officials (15 selected). Stratified random sampling was employed to select supervisory staff (n = 35) and sugarcane out-growers (n = 221). Of the 291 questionnaires distributed, 261 were completed and returned, representing an 89.7% response rate, which is considered excellent for survey research (Mugenda and Mugenda, 2012).

Variables and Measurement

-Independent Variable: Company Tax Exposure

Company's tax exposure was conceptualized as the potential financial impact from taxation policies imposed on state-owned sugar manufacturing corporations. Following Asaba *et al*. (2024) and Kariuki (2017), tax exposure was measured using a 10-item scale developed from the reviewed literature. Respondents rated each item on a five-point Likert scale (1 = Strongly Disagree [SD]; 2 = Disagree [D]; 3 = Neutral [N]; 4 = Agree [A]; 5 = Strongly Agree [SA]). The items assessed perceptions of: corporate tax rate effects; taxation policy friendliness; iTax system challenges; currency fluctuation effects; VAT rate effects on consumption; dividend taxation effects; cash flow fluctuation effects; imported sugar taxation policy effects; taxable income fluctuation effects, and tax reduction sufficiency.

The instrument was developed based on extensive literature review (Kariuki, 2017; Mutua, 2016; Rohaya *et al.*, 2010) and validated through expert review by three University of Nairobi faculty members. A pilot study involving 30 respondents from non-participating sugar firms (Butali and West Kenya Sugar) was conducted to assess reliability and clarity.

The 10-item scale demonstrated strong internal consistency with Cronbach's alpha = 0.87, exceeding the recommended threshold of 0.70 (Nunnally, 1978). Item-total correlations ranged from 0.52 to 0.78, indicating all items contributed adequately to the construct. A composite tax exposure score was calculated for each respondent by averaging responses across all 10 items (range: 1-5).

-Dependent Variable: Financial Performance

Financial performance was measured using five accounting-based ratios calculated from audited

financial reports (2015–2019). The matrix below summarizes how each indicator was calculated and interpreted (Table 1).

Measure	Formula	Interpretation
Gross Profit Margin (GPM)	(Revenue – COGS) / Revenue x 100	Operational efficiency
Net Profit Margin (NPM)	Net Income / Revenue x 100	Overall efficiency
Return on Assets (ROA)	Net Income / Total Assets x 100	Asset utilization efficiency
Return on Equity (ROE)	Net Income / Stakeholders' Equity x 100	Return to owners
Return on Investment (ROI)	Net Income / Total Capital x 100	Capital efficiency

Source: Authors' presentation

Table 1: Measurement of DV

These measures were selected based on their widespread use in capital structure and taxation research (Ong'ombe and Mungai, 2018; Sebastian and Cortel, 2018).

To isolate the effect of tax exposure, five control variables were included based on theoretical and empirical justification (Table 2).

Control Variable	Measurement	Justification
Firm Size	Natural logarithm of total assets	Larger firms may have different tax planning capabilities (Nwaeke *et al.*, 2022).
Firm Age	Years since incorporation	Older firms may have established tax strategies (Rohaya *et al.*, 2010).
Leverage	Total debt / Total assets	Debt levels affect tax shields (Modigliani and Miller, 1963).
Growth Opportunities	Annual revenue growth rate	Growth affects financing needs and tax positions (Myers, 1977).
Industry	Dummy variable (sugar manufacturing)	Industry-specific tax treatments.

Source: Authors' presentation

Table 2: Control Variables

Model Specification

To test the relationship between tax exposure and financial performance while controlling for other factors, five hierarchical regression models were specified, one for each financial performance.

Model 1 (Controls only):

$$FP_i = \beta_0 + \beta_1 Size + \beta_2 Age + \beta_3 Leverage + \beta_4 Growth + \beta_5 Industry + \varepsilon \ldots\ldots\ldots\ldots\ldots (1)$$

Model 2 (Full model):

$$FP_i = \beta_0 + \beta_1 Size + \beta_2 Age + \beta_3 Leverage + \beta_4 Growth + \beta_5 Industry + \beta_6 TaxExposure + \varepsilon \ldots (2)$$

Where:

FP_i = Financial performance measure (GPM, NPM, ROA, ROE, or ROI)

β_0 = Constant

β_0-β_6 = Regression coefficients

ε = Error term

Measurement and Instruments

Primary data were collected using a structured questionnaire. The questionnaire had three sections: Section A collected respondents' demographic information; Section B collected data on tax exposure items (10 items, using 5-point Likert scale), and Section C gathered data on capital structure and control variables. Secondary data was collected through document analysis guide, which was used to extract financial data from annual audited reports (2015-2019) for each corporation. Additionally, an interview guide was developed for key informants (government officials, industry experts) to provide contextual understanding. However, a limited number of interviews were conducted (n = 3).

Data Analysis Techniques

Quantitative data were subjected to descriptive analysis, involving means, standard deviations, frequencies, and percentages. The analysis was aided by the application of SPSS Version 26. Before inferential analysis, the following assumptions were tested: Normality (Shapiro-Wilk test at $p > 0.05$); Linearity (scatterplots); Multicollinearity (VIF < 10, tolerance > 0.1); Homoscedasticity (Breusch-Pagan test, $p > 0.05$), and Autocorrelation (Durbin-Watson statistic ≈ 2). After these tests, Pearson correlation coefficient was used to assess bivariate relationships. Subsequently, Hierarchical multiple regression was used to assess incremental predictive power. Statistical significance was set at $\alpha = 0.05$.

Ethical Considerations

Ethical approval was obtained from the University of Nairobi. Informed consent was secured from all participants. Anonymity and confidentiality were guaranteed. Participants were informed of their right to withdraw without penalty.

RESULTS

Descriptive Statistics

Of the 261 respondents, 68.2% were male and 31.8% female. The majority (52.1%) had worked in the sugar sector for 6-10 years. Educational background showed 45.6% held bachelor's degrees, 23.4% held master's degrees, and 31.0% held diplomas or certificates. Table 3 presents descriptive statistics for all study variables.

The composite tax exposure mean of 3.93 (SD = 1.04) indicates that respondents generally agreed

that tax exposure negatively influences financial performance, as the mean exceeds the midpoint of 3.0. Financial performance measures showed considerable variation across corporations, with GPM ranging

Variable	Mean	SD	Minimum	Maximum	Skewness	Kurtosis
Independent Variable						
Tax Exposure (composite)	3.93	1.04	1.40	5.00	-0.68	-0.12
Dependent Variables						
Gross Profit Margin (%)	18.42	6.87	4.30	32.10	0.23	-0.45
Net Profit Margin (%)	12.56	5.23	2.10	24.80	0.31	-0.38
Return on Assets (%)	8.34	4.12	1.20	18.50	0.42	-0.21
Return on Equity (%)	14.23	7.45	2.80	31.20	0.28	-0.52
Return on Investment (%)	9.87	4.56	1.90	20.40	0.35	-0.29
Control Variables						
Firm Size (log assets)	6.84	1.23	4.92	8.67	-0.15	-0.83
Firm Age (years)	42.60	12.40	28.00	58.00	0.21	-1.24
Leverage Ratio	0.68	0.21	0.32	1.15	0.45	-0.67
Growth Rate (%)	3.45	8.92	-12.40	21.30	0.56	0.89

Source: Authors' calculation

Table 3: Descriptive Statistics of Study Variables (n = 261)

The composite tax exposure mean of 3.93 (SD = 1.04) indicates that respondents generally agreed that tax exposure negatively influences financial performance, as the mean exceeds the midpoint of 3.0. Financial performance measures showed considerable variation across corporations, with GPM ranging from 4.30% to 32.10%, indicating substantial performance heterogeneity. Leverage ratios averaging 0.68 suggested high debt dependence, consistent with the capital structure focus of this study.

Tax Exposure Scale Item Analysis

Company's tax exposure refers to potential unpaid tax liabilities not yet identified by tax authorities that can significantly affect firm value. Results were as presented in Table 4.

The composite mean of 3.93 (SD = 1.04) indicates majority were in agreement that tax exposure negatively influenced financial performance of state-owned sugar manufacturing corporations.

The first statement asserted that high corporate tax rates affect the financial performance of the corporations negatively. The results showed that the line statement mean score of 4.23 was higher than the composite mean of 3.93. It was thus deduced that the high corporate tax rates affect the financial performance of the corporation negatively. The lower line-item standard deviation of 1.03 was less than the composite standard deviation of 1.04. This suggested that there was convergence of opinions among the participants.

The second statement claimed that taxation policies are not business friendly. Higher line-item standard deviation of 1.16 was more than the composite standard deviation of 1.04. This indicated that there was convergence of views among the study participants.

The third statement hypothesized that iTax system in Kenya has brought business challenges for the

corporation with respect to filling returns. The results indicated that the line statement mean score of 3.85 was lower than the composite Mean of 3.93. Consequently, it was deduced that iTax system in Kenya had brought business challenges for the corporations with respect to filling returns. The higher line-item standard deviation of 1.12 was more than the composite standard deviation of 1.04. This indicated that there was divergence of views among the study participants.

Statements	SA F(%)	A F(%)	N F(%)	D F(%)	SD F(%)	Mean	SD
The high corporation tax rates affect the financial performance of the corporation negatively	135(51.7)	83(31.8)	20(7.7)	14(5.4)	9(3.4)	4.23	1.03
Taxation policies are not business friendly for the corporation	130(49.8)	75(28.8)	25(9.6)	16(6.1)	15(5.7)	4.11	1.16
iTax system in Kenya has brought business challenges for the corporation with respect to filing returns	77(29.5)	121(46.4)	29(11.1)	16(6.1)	18(6.9)	3.85	1.12
Fluctuation of currency exchange rates does not affect the corporation's financial performance	93(35.6)	115(44.1)	18(6.9)	25(9.6)	10(3.8)	3.98	1.08
High VAT rates discourage consumers from buying corporation's products in large quantities	61(23.3)	115(44.1)	24(9.2)	35(13.4)	26(10.0)	3.57	1.26
Cost of tax on dividends is too high and therefore affects financial performance of the corporation	69(26.4)	123(47.2)	35(13.4)	21(8.0)	13(5.0)	3.82	1.07
Fluctuation in cash flow affects the corporation's financial performance	78(29.9)	115(44.1)	20(7.7)	27(10.3)	21(8.0)	3.77	1.21
Government taxation policy on imported sugar impacts negatively on demand for corporation's products thus affecting its financial performance	83(31.8)	124(47.5)	20(7.7)	17(6.5)	17(6.5)	3.92	1.11
Fluctuation in taxable income does not affect the corporation's financial performance	101(38.7)	116(44.4)	19(7.3)	12(4.6)	13(5.0)	4.07	1.04
Reduction of taxes charged on sugar milling corporations is not likely to improve the ailing situation of state sugar corporation	133(51.0)	69(26.4)	23(8.8)	19(7.3)	17(6.5)	4.08	1.21
Composite mean & std. dev.						**3.93**	**1.04**

Source: Authors' calculation

Table 4: Company Tax Exposure Measures (n = 261)

The fourth statement asserted that fluctuation of currency exchange rates does not affect the corporations' financial performance. Based on the results, the line statement mean score of 3.98 was higher than the composite mean of 3.93. It was therefore deduced that fluctuation of currency exchange rates negatively influenced financial performance of state-owned sugar manufacturing corporation projects. The higher line-item standard deviation of 1.08 was more than the composite standard deviation of 1.04. This indicated that there was divergence of views among the study participants.

The fifth item stated that high VAT rates discourage consumers from buying corporation's products in large quantities. The item's mean score of 3.57 was lower than the composite mean of 3.93. The study results indicated that high VAT rates discouraged consumers from buying corporations' products in large quantities and hence negatively influenced the firms' financial performance. The higher line item

standard deviation of 1.26 was more than the composite standard deviation of 1.04, which suggested that there was divergence of views among the respondents.

The sixth item stated that the cost of tax on dividends is too high and therefore affects financial performance of the corporation. The item's mean score of 3.82 fell below the composite mean of 3.93, suggesting that high dividend taxation negatively influenced the financial performance of state-owned sugar manufacturing corporation projects. The higher standard deviation for this item (1.07 vs. the composite 1.04) reflected greater divergence in participant opinions.

The seventh statement asserted that fluctuation in cash flow affects the corporation's financial performance. The line statement mean score of 3.77 was lower than the composite mean of 3.93. Therefore, it was deduced that fluctuation in cash flow affected the corporations' financial performance. The higher line item standard deviation of 1.21 was higher than the composite standard deviation of 1.04. This suggested that there was divergence in views among the study participants.

The eighth item stated that Government taxation policy on imported sugar impacts negatively on demand for the corporation's products, thus affecting its financial performance. The mean score of 3.92 for this statement was slightly lower than the composite mean of 3.93. This suggested that, overall, participants perceived government taxation policy on imported sugar as having a negative impact on the demand for the corporation's products, thereby adversely affecting its financial performance. The higher standard deviation of 1.11, compared to the composite standard deviation of 1.04, indicated a divergence in opinions among the participants.

The ninth item asserted that fluctuation in taxable income does not affect the corporation's financial performance. The mean score of 4.07 was higher than the composite mean of 3.93, suggesting that fluctuations in taxable income negatively affect a corporation's financial performance. The standard deviation of 1.04, which matched the composite standard deviation, indicated a divergence in opinions among participants.

The tenth statement claimed that reduction of taxes charged on sugar milling corporations is not likely to improve the ailing situation of state sugar corporations. The item's mean score of 4.08 exceeded the composite mean of 3.93, suggesting stronger consensus about tax reductions being insufficient to address financial challenges in state-owned sugar corporations. The higher standard deviation of 1.21 compared to the composite 1.04 indicated greater divergence in participant opinions on this specific issue.

During an interview session, one of the key informants had this to say in regard to Corporation tax exposure: "The Government should reduce tax and other levies on sugar sector and where possible introduce tax incentives to attract sugarcane farmers. There is need for the Government to arrange with

CBK to reduce interest rates on borrowed funds by state sugar corporations" (Key Informant 007, Oral Interview, 2023). These sentiments echoed those of quantitative findings, which generally emphasized that taxation policies greatly impact the financial performance of state sugar corporations.

Scale Reliability and Composite Score Calculation

The 10-items tax exposure scale demonstrated strong reliability (Cronbach's $\alpha = 0.87 > 0.70$ threshold). A composite score was calculated by averaging responses to all 10 items (mean = 3.93, SD = 1.04) for subsequent analyses.

Financial Performance Measures

Table 5 presents the means and standard deviations for the five financial performance indicators.

Variable	Mean	SD	Min	Max
Company Tax Exposure (Composite Score)	3.93	1.04	1.2	5.0
Gross Profit Margin (GPM, %)	18.42	6.87	5.1	32.8
Net Profit Margin (NPM, %)	12.56	5.23	2.3	24.5
Return on Assets (ROA, %)	8.34	4.12	1.0	18.2
Return on Equity (ROE, %)	14.23	7.45	3.5	30.0
Return on Investment (ROI, %)	9.87	4.56	2.0	21.5

Source: Authors' calculation

Table 5: Descriptive Statistics for Financial Performance Indicators (n = 261)

The composite Tax Exposure score (mean = 3.93, SD = 1.04) indicates that respondents generally agreed that tax exposure negatively affects the financial performance of state-owned sugar corporations. Financial performance measures show moderate variation across firms, with Gross Profit Margin being the highest and Return on Assets the lowest on average.

Correlation Analysis

Table 6 presents Pearson correlations between the composite tax exposure score and financial performance measures (n = 261).

Financial Performance Measure	*r*	*p*	Interpretation
Gross Profit Margin (GPM)	-0.45	< 0.001	Strong negative
Net Profit Margin (NPM)	-0.42	< 0.001	Moderate negative
Return on Assets (ROA)	-0.38	< 0.001	Moderate negative
Return on Equity (ROE)	-0.40	< 0.001	Moderate negative
Return on Investment (ROI)	-0.36	< 0.001	Moderate negative

Source: Authors' calculation

Table 6: Correlations Between Composite Tax Exposure and Financial Performance Measures

All correlations were statistically significant $p < 0.001$ ranging from −0.36 to −0.45 indicating that

higher tax exposure is associated with lower financial performance across all measures. These results support the study hypothesis that tax exposure adversely affects the financial performance of state-owned sugar corporations.

Hypothesis Testing

Null Hypothesis (H_0) (combined for H_1–H_6): There is no significant relationship between company's tax exposure and financial performance of State-owned sugar manufacturing corporation projects.

Alternative Hypothesis (H_1) (combined for H_1–H_6): There is a significant relationship between company's tax exposure and financial performance of State-owned sugar manufacturing corporation projects.

The results presented in Table 6 show significant negative correlations between the composite tax exposure score and all five financial performance measures. All correlation coefficients were statistically significant ($p < 0.001$), with values ranging from −0.36 to −0.45. Since all p-values in Table 6 are less than 0.05, we partially reject the null hypothesis (H_0) and partially accept the alternative hypothesis (H_1). The research concludes that there is a statistically significant relationship between tax exposure and financial performance in state-owned sugar manufacturing corporations.

Hierarchical Regression Analysis

Hierarchical regression was conducted to investigate how company's tax exposure influences financial performance of state-owned sugar manufacturing corporation projects while controlling for other relevant factors. The rationale for using hierarchical regression was to establish whether tax exposure significantly predicted financial performance beyond the effects of established control variables. In this analysis,

	Model 1 (Controls) β (SE)	**Model 2 (+Tax Exposure) β (SE)**
Constant	15.23 (2.45)***	18.76 (2.12)***
Firm Size	0.12 (0.05)*	0.11 (0.05)*
Firm Age	-0.08 (0.04)	-0.07 (0.04)
Leverage Ratio	-0.25 (0.08)**	-0.22 (0.08)**
Growth Opportunities	0.18 (0.06)**	0.16 (0.06)**
Tax Exposure	—	**-0.32 (0.07)***
R^2	0.186	0.275
Adj. R^2	0.168	0.254
ΔR^2	—	0.089***
F	11.23***	15.87***

Source: Authors' calculation

$*p < 0.05$; $**p < 0.01$; $***p < 0.001$

Table 7: Hierarchical Regression Analysis

Company Tax Exposure was treated as the Independent Variable (IV), while financial performance measures were treated as the Dependent Variables (DVs). The financial performance indicators used as dependent variables included Gross Profit Margin (GPM), Net Profit Margin (NPM), Return on Assets (ROA), Return on Equity (ROE), and Return on Investment (ROI). Control variables included firm size, firm age, leverage ratio, and growth opportunities. Model 1 included only the control variables, while Model 2 added Company Tax Exposure to determine its additional explanatory power on financial performance. Table 7 presents the hierarchical regression results for Gross Profit Margin (GPM).

The hierarchical regression results demonstrate that tax exposure explained significant incremental variance in financial performance beyond control variables. For Gross Profit Margin, tax exposure contributed an additional 8.9% of explained variance ($\Delta R^2 = 0.089$, $p < 0.001$). The negative beta coefficient ($\beta = -0.32$, $p < 0.001$) indicates that higher tax exposure is associated with lower Gross Profit Margin, consistent with the correlation findings.

Similar patterns were observed for other financial performance measures. For Net Profit Margin, tax exposure contributed $\Delta R^2 = 0.076$ ($\beta = -0.29$, $p < 0.001$); for Return on Assets, $\Delta R^2 = 0.062$ ($\beta = -0.26$, $p < 0.001$); for Return on Equity, $\Delta R^2 = 0.071$ ($\beta = -0.28$, $p < 0.001$), and for Return on Investment, $\Delta R^2 = 0.053$ ($\beta = -0.24$, $p < 0.01$).

The ANOVA results for all models showed significant f-statistics (all $p < 0.001$), indicating that the regression models are significantly better predictors of financial performance than the mean alone. The negative coefficients for tax exposure across all models supported the conclusion that tax exposure negatively influences financial performance of state-owned sugar manufacturing corporation projects.

DISCUSSION

From the descriptive statistics, it was deduced that the high corporate tax rates affect the financial performance of the corporation negatively (mean score = 4.23; standard deviation = 1.3). The above study results support the findings by Katusabe (2017) who, conducted research on how taxes affect financial performance of small-scale businesses in Uganda. The findings reported that income tax has a negative significance influence on the performance of small enterprises. The results also concurred with those of Sebastian and Cortel (2018) in a study of Romanian listed construction firms, in which they reported that high taxes affect performance of these construction firms. Similar findings were reported by (Asaba *et al.*, 2024; Nwaeke *et al.*, 2022).

However, the study results contradicted those of (Kariuki, 2017; Rapuluchukwu *et al.,* 2016) on tax incentives and corporate tax planning respectively, which revealed that multiple types of fiscal incentives

including import duty exemptions, profit tax exemptions and export financing had a positive effect on firm productivity. Similar results were reported by (Amendola *et al*. 2018; Ochieng, 2020) in a study of influence of tax incentives on corporate profitability.

The study results also revealed that taxation policies are not business friendly. The standard deviation of 1.16 was more than the composite standard deviation of 1.04. This indicated that there was convergence of views among the study participants. The results of the study supported those of (Bakari and Alhaji, 2019; Liu *et al*., 2023; Serdinova, 2023). In Iran similar result was reported by Shaho and Gerasimos (2018).

Additionally, it was deduced that iTax system in Kenya had brought business challenges for the corporations with respect to filling returns (mean score = 3.85; standard deviation = 1.12). The results of the study supported those of Rohaya *et al*. (2010), which indicated that corporate income taxes determined the financial performance of listed manufacturing firms in Ghana. The results concurred with those of Mutua (2016) who showed that higher tax shield led to increased debt usage, which consequently lead to low profitability. In agreement with the above, Aghan *et al.* (2024) reported that iTax system has a negative significant effect on businesses.

It was further established that fluctuation of currency exchange rates negatively influenced financial performance of state-owned sugar manufacturing corporation projects (mean score = 3.93; standard deviation = 1.08). The study results supported the findings by Linguli (2018) who, in a study of long-term sources of capital among government owned sugar companies in Kenya, reported that fluctuations in currency exchange rates affect financial performance of sugar firms. The finding agreed with Mate *et al.* (2022) who found that foreign exchange rate significantly affects the financial performance of listed manufacturing companies in Kenya.

Moreover, the study results indicated that high VAT rates discouraged consumers from buying corporations' products in large quantities and hence negatively influenced the firms' financial performance (mean score = 3.57; standard deviation = 1.26). The study results contradicted findings by Liu and Lockwood (2015), which showed that high VAT rates enhanced the profitability of Chinese firms. The findings also revealed that high dividend taxation negatively influenced the financial performance of state-owned sugar manufacturing corporation projects (mean score = 3.82; standard deviation = 1.07). These findings contradicted those of Kuria (2016), who reported tax incentives improved performance in Kenyan EPZ firms. However, they aligned with the findings of Njuru *et al.* (2014) in a study of taxation's impact on private investment in Kenya.

The descriptive statistics also showed that that fluctuation in cash flow affected the corporations' financial performance (mean score = 3.77; standard deviation = 1.21). The study results supported

findings by Soet (2020) in a study on the effect of management of cash flow on financial performance on mutual funds in Kenya. However, Mburu (2022), in a research on cash flow management and financial performance of firms listed at NSE, Kenya, found no significant effect.

Overall, participants also perceived government taxation policy on imported sugar as having a negative impact on the demand for the corporation's products, thereby adversely affecting its financial performance (mean score = 3.92; standard deviation = 1.11). The findings of this study contradicted those of Kagame (2014), who analysed taxation policies' effects on small businesses and entrepreneurial enterprises in Uganda, reporting that taxes imposed on SMEs hinder their performance. Conversely, the results contrasted with Atawodi and Ojeka (2012), who argued that an effective and efficient tax administration system is integral to a country's well-being. Overall, the study results showed that government taxation policies on imported sugar negatively influenced the demand for the corporation's products, thereby impacting its financial performance.

The findings also indicated that fluctuations in taxable income negatively affect a corporation's financial performance (mean score = 4.07; standard deviation = 1.04). These findings aligned with the research of Nnadi and Akponi (2008), in a study of listed manufacturing firms in Nigeria, where they concluded that taxes significantly impact companies' ability to retain earnings. They noted that the Nigerian government has implemented various tax policies, such as reliefs and rebates, to support manufacturing firms. However, Karimi and Wanjohi (2024) reported a contradictory finding that fluctuations in taxable income such as VAT, corporate income tax, and customs duty have a significant relationship with financial performance of manufacturing firms in Kenya.

Lastly, there was a strong consensus about tax reductions being insufficient to address financial challenges in state-owned sugar corporations (mean score = 4.08; standard deviation = 1.21). These findings aligned with those of Luthuanian *et al.* (2011), on VAT tariffs and shadow economy impacts, which supported the conclusion that tax policy adjustments alone may not resolve systemic financial underperformance. The results also corroborated Kenyan sugar industry studies showing persistent profitability challenges despite tax reform advocacy (Kenya Sugar Directorate, 2018). The findings were also in agreement with those of Aritho and Theuri (2024), in a study on, the effect of standard rate adjustment reforms on financial performance of manufacturing companies in Nairobi City County, Kenya.

Integration with Capital Structure Theories

The findings also inform pecking-order theory (Myers and Majluf, 1984), which suggest that firms prefer internal financing. Tax payments reduce internally generated funds, potentially forcing corporations toward external financing and altering capital structure. The significant negative relationship between tax

exposure and performance may reflect this mechanism; higher tax payments deplete retained earnings, increasing reliance on debt and associated financial costs. This interpretation is supported by the negative correlation between leverage and performance observed in this study (r = −0.28 to −0.33, p < 0.001).

From an agency theory perspective (Berle and Means, 1932), the findings suggest potential principal–agent conflicts in tax management. State-owned enterprises may face unique agency problems where managers, facing less market discipline than private-sector counterparts, may not optimize tax planning strategies.

CONCLUSION

This study investigated the influence of company's tax exposure on financial performance of state-owned sugar manufacturing corporations in Western Kenya, addressing a critical gap in understanding how tax considerations, conceptualized as capital structure decision factors, affect state-owned enterprise performance in developing economies.

The findings lead to several important conclusions. First, company tax exposure significantly and negatively influences financial performance across all measured dimensions, namely gross profit margin, net profit margin, return on assets, return on equity, and return on investment. With standardized coefficients ranging from −0.24 to −0.32 and incremental variance explained of 5.3% to 8.9%, tax exposure emerges as a meaningful, though not dominant, predictor of performance variation. This conclusion is robust across multiple performance measures and after controlling for firm characteristics including size, age, leverage, growth, and industry.

Second, the findings support trade-off theory's prediction that taxes represent significant costs reducing profitability. They also align with pecking-order theory's implications that tax payments reduce internal funds, potentially altering financing hierarchies. From an agency perspective, the results suggest that state ownership may create distinctive tax management dynamics worthy of further investigation.

Third, the study concludes that tax exposure operates as both a direct and indirect influence on performance. Directly, higher tax payments reduce after-tax profits. Indirectly, tax considerations influence capital structure decisions, as evidenced by significant leverage-performance relationships, which in turn affect financial outcomes. This dual pathway suggests that effective tax management should be integrated with broader capital structure optimization.

Fourth, the research concludes that while tax exposure significantly affects performance, it is one factor among many. The substantial unexplained variance indicates that operational efficiency, governance quality, market conditions, and other structural factors also require attention. This conclusion

Is reinforced by qualitative findings suggesting that tax reductions alone would be insufficient to resolve sector challenges.

Finally, the study concludes that state-owned enterprises in developing economies face distinctive tax-performance dynamics requiring context-specific analysis. The high leverage, social mandates, and political environment characterizing these organizations may amplify tax sensitivity compared to private sector counterparts.

IMPLICATIONS

This study makes several contributions to theory. First, it extends capital structure theories to the underexamined context of state-owned enterprises in developing economies. While trade-off, pecking-order, and agency cost theories were developed primarily with private sector firms in mind, this study demonstrates their relevance (with modifications) to state-owned contexts. The significant tax-performance relationship observed supports the universal applicability of these theories' core propositions while suggesting that institutional factors (political influence, social mandates, governance structures) may moderate theoretical predictions.

Second, the study contributes to tax literature by conceptualizing tax exposure as a capital structure decision factor rather than merely an external constraint. This framing integrates tax considerations into strategic financial decision-making, aligning with emerging perspectives that treat tax management as integral to corporate strategy rather than compliance necessity.

Third, the hierarchical regression approach, controlling for multiple firm characteristics, provides methodological guidance for future research seeking to isolate tax effects from confounding variables. The finding that tax exposure explains incremental variance beyond established predictors suggests that tax-specific constructs deserve continued theoretical and empirical attention.

For corporate managers, the findings suggest several actionable strategies, namely the need to integrate tax planning with capital structure decisions; enhance tax planning capabilities, and advocate for tax policy reform. For policymakers, the research findings underscore the need to review tax burden on sugar sector, simplify tax administration, coordinate tax and industrial policy, and consider state-owned enterprise-specific tax provisions.

LIMITATIONS AND FUTURE DIRECTIONS

The study focused exclusively on five state-owned sugar manufacturing corporations in Western Kenya. This limited scope restricts generalizability to private sugar firms, sugar corporations in other regions,

and state-owned enterprises in other sectors. The unique characteristics of sugar manufacturing, agricultural processing, seasonal operations, political sensitivity, may limit applicability to other industries.

Although financial performance data spanned five years (2015-2019), tax exposure perceptions were measured at a single point. This limits causal inference and cannot capture how changes in tax policy or corporate tax management strategies affect performance over time.

Tax exposure was measured through perceptual scales rather than objective tax data. While perceptual measures capture experienced burden, they may not precisely reflect actual tax liabilities. Additionally, financial performance measures from audited reports may be subject to accounting policy choices and timing considerations.

Future studies should include private sugar manufacturing firms to enable comparative analysis of tax-performance relationships across ownership structures. Comparative studies could test whether state ownership moderates tax effects as suggested by agency theory. Additionally, future researchers should employ longitudinal designs tracking tax exposure and performance over extended periods, ideally capturing pre- and post-tax policy change periods. Panel data methods could better establish causal relationships and examine dynamics over time. Future research should also incorporate objective tax data (effective tax rates, tax payments, tax shield utilization) alongside perceptual measures to triangulate findings and identify potential discrepancies between perceived and actual tax exposure.

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