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Research Article

Determinants Of Capital Structure: Evidence From Ghanaian Small And Medium Enterprises (2016 -2020)

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ABSTRACT
This study examines capital structure determinants among Ghanaian SMEs, utilizing mixed-methods research and data gathered through face-to-face interviews from 121 SMEs across 12 regions in Ghana from 2016 to 2020. The primary data were captured and analysed using Stata. The study reveals that managerial ownership, asset structure and stakeholders' cultural backgrounds significantly influence capital structure decisions, with managerial ownership exhibiting the highest marginal impact. However, there was an inverse relationship between profitability, business location and leverage ratio. The study recommends SMEs enhance their physical asset capacity for collateral and promote employee share ownership. This study provides valuable insights for policymakers, SME owners and financial institutions, facilitating informed decisions on capital structure optimization.

Keywords: Determinants, Capital Structure, Debt-to-Equity Ratio, Small and Medium Enterprises.

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1.0 INTRODUCTION

Capital structure discussions, dating back to the 1950s, remain pivotal in corporate finance (Myers, 1984). Researchers agree that capital structure comprises total equity and long-term debt (Ang, 1991; Weston & Bringham, 1986; Hanna, 2020; Stradomski & Schmidt, 2020; Andleeb et al., 2021; Czerwonka & Jaworski, 2021; Bell et al., 2022).

Various factors influence capital structure, including profitability, firm size, asset structure, tangibility, liquidity, taxation, ownership, stakeholder culture and market conditions (Modugu & Eragbhe, 2015; Jiang et al., 2018; Dakua, 2019; Rao et al., 2019; El-Diftar, 2020; Hussain et al., 2021; Zaheer et al., 2021; Thi et al., 2020; Fakui et al., 2022).

Small and Medium Enterprises (SMEs) generate tax revenue and ensure political stability through employment (Kayanula & Quartey, 2000). However, SMEs face financing challenges (Quartey, 2003; Adjabeng & Osei, 2022). In Ghana, inadequate access to credit hampers SME growth (Association of Ghana Industries, 2022). Despite extensive research, optimal capital structure remains elusive (Sheikh & Wang, 2011; Enos et al., 2020; Nigusie, 2021). Existing theories focus on large firms (Cassar & Holmes, 2003). This study attempts to address the existing gap in the literature by asking the question:

What are the determinants of SMEs' capital structure in Ghana?

2.2 Objectives of the study

The main objective of this study is to analyze the determinants of SMEs' capital structure decisions in Ghana.

Specific objectives are:

To determine the relationship between leverage and asset structure, profitability, managerial ownership, business location, and stakeholder culture.

To offer recommendations for relevant policymakers and other stakeholders pursuing to adopt and implement policies to support SMEs in Ghana.

2.0 LITERATURE REVIEW

2.1 Definition of Small and Medium Enterprises in Ghana

In Ghana, the most commonly used definition of SMEs is the number of employees of the enterprise. The Ghana Statistical Service (GSS) (2020) defines small businesses as enterprises that employ less than ten persons, while those that use more than ten are classified as medium and large enterprises. The first official definition of SMEs was formulated and announced in 1980 by the National Board for Small-Scale Enterprises (NBSSI), now Ghana Enterprise Agency (GEA), in line with Section 4 of the NBSSI Act 434 of 1981, which mandates the institution to define SMEs for the country. The following variables define SMEs in Ghana: As indicated in Table 1.5 below, the employment size for small enterprises is between 6 and 30; for medium enterprises, employees are between 31 and 100. Enterprise turnover and assets for small enterprises are between US$25,001 and US$1,000,000; medium enterprises are between US$1,000,001 and US$3,000,000.

Table 1. 5 SMES Classification in Ghana

Enterprise Category	Employment Size (Permanent staff)	Turnover	Assets
Small	6-30	US$25,001-US$1,000,000	US$25,001-US$1,000,000
Medium	31-100	US$1,000,001-US$3,000,000	US$1,000,001-US$3,000,000

Source: Ghana Enterprise Agency (GEA),2020

The operational definition of SME for this study is one adopted by the Ghana Enterprise This definition is consistent with the situation in Ghana and allows for the extensive inclusion of many firms in the survey.

2.2 Determinants of Capital Structure of Businesses

Theoretically, many propositions have been proposed regarding the determinants of a firm's capital structure. The literature on the determinants of capital structure dates back to earlier proponents of the irrelevance theory, Modigliani and Miller (1958), who asserted that in a perfect capital market, rational investors can use equity and debt to finance their investments at the same cost and there are no taxes and transaction costs; hence, there is no need for financing decisions. Following critiques of the idealistic and unrealistic assumptions of a perfect market, Modigliani and Miller (1963) modified their assertion to include tax and interest rates deductively.

Durand (1952), also assumed that a change in financial leverage (debt) results in a change in capital costs. He concludes that given that debt is a cheaper source of funds, it can be used effectively to increase the value of the firm by decreasing the overall cost of capital. The trade-off theory by Myers (1984) also concludes that an optimal capital structure is determined by substituting equity for debt and vice versa until the value of the firm is maximized. In their traditional theory, Brealey and Myers (1991) opined that shareholders want management to increase the firm's value.

By contrast, pecking order theory states that information asymmetries would lead firms to always prefer to finance their operations with retained earnings, and when there are no more benefits from internal funding debt issuance, they would choose to issue new equity as a last option (Myers and Majluf, 1984). Following agency cost theory, it also assumes that capital structure decisions are determined by the interplay of the different interests of managers and shareholders, making debt play a critical role in monitoring conflicts between shareholders and managers (Jensen, 1986).

Several studies have been conducted in the area of determinants of capital structure after the advancement of these theories.

Yakubu et. al, (2021) revealed that the financing decisions of Ghanaian firms adhere to the pecking order theory, given the established relationship between leverage and profitability, firm age, as well as firm size. The study further showed that tax does not matter for corporate leverage, departing from the tax proposition of the traditional trade-off theory.

Chen et al, (2021), examined the determinants of the capital structure of SMEs in the Brazilian context and concluded that the age and profitability of the company are negatively correlated with debt. However, asset tangibility, growth and size have a positive relationship with debt.

Ahmed and Sabah, (2021 found that capital structure has a positive significant relationship with the size and tangibility, negative with profitability, and significant with growth in sales, market-to-book value, and price-earnings ratio.

Agyei et al, (2020) revealed that both the pecking order theory and trade-off theory apply and were relevant to Ghanaian SMEs in their capital structure decisions. The result further indicated that profitability, age, liquidity, growth, size, and tangibility of assets have a significant impact on SMEs' capital structure.

2.2 Hypothesis

2.2.1 Asset Structure

Firms with assets that have greater liquidation value have easier access to finance at lower costs, leading to higher debt or outside financing in their capital structure (Balios et al.,2016). Doan's (2019) studies contradict previous results; current studies find that debt is negatively related to tangibility in the Indian steel industry. The most commonly used measure for tangibility is the ratio of fixed assets to total assets.

Hypothesis 1: Assets structure is positively related to leverage.

2.2.2 Profitability

Profitability is an entity's financial performance over a while. The relationship between firms' profitability and capital structure can be explained by the pecking order theory. Firms with high profits maintain relatively lower debt ratios because they can generate such funds internally (Bhattacharjee and Dash 2021).

Hypothesis 2: Profitability is negatively related to leverage

2.2.3 Managerial Ownership

Managerial ownership is the ratio of shares owned by all employees to the total share of a firm at a particular period. Bokpin and Arko (2009) conclude that managerial shareholding significantly and positively influences the choice of long-term debt over equity. However, Gharaibeh and AL-Tahat (2020) reveal a negative but insignificant relationship between the ownership structure of firms and the debt ratio.

Hypothesis 3: Managerial ownership is positively related to leverage. The percentage of institutional ownership (PIO) adopted by Tong and Ning (2004) was used as an indicator of managerial ownership.

2.2.4 Culture of Stakeholders

Hofstede (2001) defines culture as the collective programming of the mind; it manifests itself not only in values, but in more superficial ways: in symbols, heroes, and rituals. The dimensions of masculinity, uncertainty avoidance, and social trust are significant determinants of leverage (Mogha and Williams 2021).

Hypothesis 4: The culture of stakeholders is positively related to leverage

2.2.5 Business Location

The geographical area, where a firm is located in the proximity of banks is also believed to influence a firm's ability to gain external finance (Abor,2008).

Hypothesis 5: Business location is positively related to leverage

In light of these theories and the literature, there are merits and demerits regarding debt and equity financing. The benefits attached to debt financing are that firms can retain maximum control over their business, and the interest in debt financing is tax deductible. Moreover, equity financing appears to be easy because it involves no debt, and there is no need to consider repayment. However, a company can lose its complete control and autonomy.

Based on the literature review, many determinants have been identified that influence capital structure. This study is common among them and also adopts the asset structure, profitability, managerial ownership, and culture of stakeholders and business location (Khan and Ghayas, 2020).

3.0 RESEARCH METHODOLOGY

3.1 Research Design

Given the cross-cutting nature of the problem under study, a mixed-method approach was adopted, employing both qualitative and quantitative approaches to provide the best understanding of the research problem. It helps produce high technical quality, comprehensive, and jargon-free policy research (Creswell, 1999).

3.2 Population and Sampling Technique

3.2.1 Study Population

The target population of the study constitutes the total number of SMEs (78,679) registered with the National Board for Small-Scale Industries. The reason for this is that all the companies registered were active in business, which makes the findings of the research more meaningful.

3.2.2 Sample Size

The sample size for this study was obtained using the technique employed by (Nwani, 1981). If the population is a few hundred, a 40% or more sample will do; if many hundred, a 20% sample will do; if a few thousand, a 10% sample will do; and if several thousand, a 5% or less sample will do. Since the population for the study was several thousand, a sample size of 0.154% was adopted for the study.

3.2.3 Sampling Technique

Probability sampling, involving random selection, was employed in this study. Using this technique, all businesses had an equal chance of being selected and interviewed.

The study specifically employed the stratified sample technique, where the sample size was divided into strata concerning the sector the businesses belong to and further divided into small and medium-scale sizes.

3.2.7 Data Collection Instruments

Data collection was carried out through face-to-face interviews using both closed and open-ended structured questionnaires with businesses represented by at least one key management staff member. This method was adopted to ensure the timely collection of data as well as accurate information needed for the study.

3.3 Data Analysis

3.3.1 Quantitative Data Analysis

Quantitative data analysis aimed to make inferences and generalize the results. The primary data were entered into Microsoft Excel and Stata for analysis. Frequencies and cross-tabulations were generated using simple descriptive statistics. Categorical data were presented as graphs, charts, frequencies, and percentages. The correlation or association between capital structure decisions was assessed using cross-tabulations.

3.3.2 Econometric model

Following the theoretical and empirical literature, the following theoretical models are formulated to illustrate the determinants of SMEs' capital structure decisions in Ghana.

$$Capital\ Structure\ Decision\ (Y) = f(Assets\ Structure(X_1);\ Profitability(X_2);\ Managerial\ Ownership(X_3);\ Culture\ of\ Stakeholders(X_4);\ Location(X_5)) \ldots\ldots\ldots \ldots\ldots\ldots\ldots\ldots\ldots \quad (3.1)$$

In linear form, the Capital Structure-function to be estimated is expressed as follows:

$$Y_i = \beta_0 + \sum_{j=1}^{5} \beta_j X_{ij} + \varepsilon_i \quad , \quad i = 1,2 \ldots.n; \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (3.2)$$

Where the left-hand variable Y_i represents the dependent variable in the model, which is the firms' leverage ratio; the X_j represents the set of explanatory (independent) variables in the estimation model; β_j represents the parameters to be estimated; and ε_i is the error term. i represents the ith observation (business) and n represents the number of observations (businesses). The coefficient in this model represents the respective elasticities showing the degree of responsiveness of capital structure decisions (leverage ratio) to changes in any of the independent variables, ceteris paribus.

To estimate equation (3.2), we employed the ordinary least squares (OLS) model to analyze the determinants of capital structure decisions. The OLS model is a linear regression model with a dependent variable that assumes a continuous value. The ordinary least squares method is attributed to Carl Friedrich Gauss, a German mathematician (Gujarati & Porter, 2009; Greene, 2012). The OLS estimator enables the researcher to estimate the Population Regression Function using a Sample Regression Function. OLS estimators are expressed solely in terms of observable (i.e., sample) quantities (i.e., X and Y). Therefore, they can be computed easily. These are point estimators, which implies that given the sample, each estimator will provide only a single (point) value of the relevant population parameter (Gujarati & Porter, 2009). These properties make it suitable for this study given the nature of the data.

3.3.3 Diagnostic Tests

To ensure that the coefficients or estimators are unbiased and that the findings are reliable for accurate inferences and generalizations, relevant post-estimation techniques were carried out. This study tested for multicollinearity using a Variance Inflation Test. This ensured that independent variables were not linearly correlated. The heteroscedasticity test was also performed using the Breusch-Pagan test. This ensured that the variance of the error term was constant for hypothesis testing. In the presence of heteroskedasticity, robust standard errors were applied to correct heteroskedasticity. The linearity of the model and normality of the residuals were also tested.

3.3.4 Variables

The dependent and independent variables employed in the estimation of the capital structure decision function are as follows. It also includes the expected results and assumptions based on the reviewed theoretical and empirical literature.

Leverage Ratio: In the study, the dependent variable is the leverage ratio, which measures the debt-equity ratio as follows:

$$Leverage\ ratio\ (Debt\ Equity\ Ratio) = \frac{Total\ Debt}{Total\ Debt + Book\ Value\ of\ Equity} \quad \ldots\ldots\ldots. (3.4)$$

The components of their capital structure which is defined as "the mix of debt and equity maintained by the firm" (Gitman and Zutter, 2012).

Culture of Stakeholders: The dummy variable shows whether the Stakeholders are Christians. It was observed that Christians do not have a strong dislike for loans as compared to other religions such as Muslims. Stakeholder culture is positively related to leverage.

Location: This study tested the effect of location on the capital structure decisions of businesses. In Ghana, Ashanti and Greater Accra regions are the main commercial hubs, and the study expects that businesses in these regions would have more financing options to explore than businesses in other regions. Therefore, the proxy for this variable indicates whether the business is located in the Ashanti or Greater Accra regions.

3.4 Ethical Issues

Ethical considerations are important in social science research. Ethics is a standard of conduct that differentiates between conventional and unacceptable behaviour(Creswell & Creswell, 2017). As part of the ethical considerations, respondents were made to understand the purpose of the study and, assured that the information gathered from them was purposely for the research.

4.0 RESULT AND DISCUSSION

4.1 Descriptive Analysis

4.1.1 Size and Geographic Distribution of Businesses

The study involved 121 small and medium-scale businesses across 12 out of the 16 regions in Ghana. Out of the total 95 of them representing 78.5 percent are small-scale businesses while 26 representing 21.5 percent are medium-scale businesses. A greater percentage of them (19.0%) are located in the Greater Accra region. Similarly, a greater percentage (46.2%) of the Medium-Scale business were located in the same region. The majority of the Small-Scale enterprises are located in the Northern region, Greater Accra region, Bono region, and Ashanti region and together contain about 46.3 percent of the businesses involved in the survey.

Table 4. 1.1 Size and Geographic Distribution of Businesses

Region	Small Scale Business (No.)	%	Medium Scale Business (No.)	%	Grand Total	%
Ashanti Region	10	10.5		0.0	10	8.3
Bono East	9	9.5	1	3.8	10	8.3
Bono Region	11	11.6	1	3.8	12	9.9
Central Region	6	6.3	1	3.8	7	5.8
Eastern Region	3	3.2	2	7.7	5	4.1
Greater Accra	11	11.6	12	46.2	23	19.0
Northern Region	12	12.6		0.0	12	9.9
Upper East	6	6.3	3	11.5	9	7.4
Upper West	9	9.5	3	11.5	12	9.9
Volta Region	4	4.2	1	3.8	5	4.1
Western North	4	4.2	1	3.8	5	4.1
Western Region	10	10.5	1	3.8	11	9.1
Grand Total	**95**	**100.0%**	**26**	**100.0%**	**121**	**100.0%**

Source: Field Survey, 2023

4.1.2 Sectoral Distribution of Business

The businesses were sub-categorized into sectors; manufacturing, Service, and Trading. Out of the 121 businesses, 47.9 percent are in the manufacturing sector, 38 percent are in the Service sector and 14.1 percent are in the Trading sector. Moreover, the majority of both the small and medium-scale businesses interviewed are into manufacturing and service-related economic activities. The majority, about 86.3 percent and 84.6 percent of the small-scale and medium-scale businesses respectively, are in the manufacturing and service sectors. On the contrary, about 13.7 percent and 15.4 percent of them are in the trading sector.

Table 4.1. 2: Size and Sectoral Distribution of Businesses

Sector	Small Scale Business (No.)	%	Medium Scale Business (No.)	%	Total	%
Manufacturing	47	49.5	11	42.3	58	47.9
Service	35	36.8	11	42.3	46	38.0
Trading	13	13.7	4	15.4	17	14.1
Total	**95**	**100.0%**	**26**	**100.0%**	**121**	**100.0%**

Source: Field Survey, 2023

4.1.3 Business Ownership by Employees

To understand the nature of business ownership among SMEs, the extent of business ownership by employees was ascertained and disaggregated into small and medium businesses. The average percentage of shares owned by employees for a typical business in the sample irrespective of size is 26.4 percent, with a minimum of zero (0) percent and a maximum of 100 percent. The average percentage of shares owned by employees in small-scale businesses is 28.7 percent while medium-scale is 18 percent.

Table 4.1. 3: Business Ownership by Employees

Type of Business	Percentage of Shares own by Employees Average	Minimum	Maximum
Small-Scale	28.7	0	100
Medium-Scale	18.0	0	100
Total	**26.4**	**0**	**100**

% of Shares own by Employees	Type of Business Small-Scale (No.)	%	Medium-Scale (No.)	%	Total (No.)	%

0	55	77.5	16	32.0	71	58.7
1-49	10	14.1	30	60.0	40	33.1
50-100	6	8.5	4	8.0	10	8.3
Total	**71**	**100.0**	**50**	**100.0**	**121**	**100.0**

Source: Field Survey, 2023

4.1.4 Annual Turnover of Businesses

The annual turnover of the businesses sampled was also obtained and is categorized as follows. The majority (92) out of the 121 businesses surveyed have an annual turnover between US$25,000-US$1,000,000, while the remaining 29 representing 24.2 percent of them have an annual turnover between US$1,000,001-US$3,000,000. The majority (85.1%) of small-scale businesses have an annual turnover between US$25,000-US$1,000,000 while a greater percentage (57.8%) of the medium-scale businesses have an annual turnover between US$1,000,001-US$3,000,000.

Table 4.1. 4 Annual Turnover

Annual Turnover	Small-Scale (No.)	%	Medium-Scale (No.)	%	Total (No.)	%
US$1,000,001-US$3,000,000	14.0	14.9%	15.0	57.8%	29.0	24.2%
US$25,000-US$1,000,000	81.0	85.1%	11.0	42.2%	92.0	75.8%
Total	**95.0**	**100.00%**	**26.0**	**100.00%**	**121.0**	**100.00%**

Source: Field Survey, 2023

4.1.5 Fixed Assets of Businesses

To understand the ability of the business to generate income and use its fixed assets for collateral in securing loans, the value of the fixed assets of the businesses was assessed. From the sample, the overall average value of fixed assets owned by a typical business irrespective of the size is GHS 9,823,054.70 with a minimum of GHS44,100.00 and a maximum is GHS420, 000,000.00. Small-scale businesses' average value of their fixed asset is GHS 852,633.80 with a minimum of GHS44,100.00 and a maximum of GHS12,732,736.00. For Medium-Scale businesses, the average value of fixed assets is GHS 42,254,576.50, and the maximum is GHS420,000,000.00. The results are shown in Table 4.1.5

Table 4.1. 5 Value of Fixed Assets of Businesses

Business	Average (GHS)	Minimum	Maximum
Small-Scale	GHS 852,633.80	GHS44,100.00	GHS12,732,736.00
Medium-Scale	GHS 42,254,576.50	GHS68,000.00	GHS420,000,000.00
Overall Average	**GHS 9,823,054.70**	**GHS44,100.00**	**GHS420,000,000.00**

Source: Field Survey, 2023

4.1.6 Total Assets of Businesses

The average value of fixed and non-fixed assets of the sampled businesses is GHS 9,313,433.29 with a minimum of GHS82,000.00 and a maximum of 546,000,000.00. For Small-Scale businesses, the average value of assets owned is GHS1,317,449.17 with a minimum of GHS82,000.00 and a maximum of GHS18,453,241.00. On the other hand, for Medium-Scale businesses, the average value of assets owned is GHS38,529,529.12 with a minimum of GHS187,000.00 and a maximum of GHS546,000,000.00. Similar to fixed assets, Medium-Scale businesses have larger assets than small-scale businesses which is expected because, Medium-Scale businesses have larger production capacity than Small-Scale businesses, ceteris paribus.

Table 4. 6 Total (Fixed and Non-fixed) Assets of Businesses

Business	Average (GHS)	Minimum	Maximum
Small-Scale	GHS1,317,449.17	GHS82,000.00	GHS18,453,241.00
Medium-Scale	GHS38,529,529.12	GHS187,000.00	GHS546,000,000.00
Overall Average	**GHS 9,313,433.29**	**GHS82,000.00**	**GHS546,000,000.00**

Source: Field Survey, 2023

4.1.7 Profitability

The study found out their annual net profit. From the result, the average annual net profit of the sampled businesses is GHS1,214,321.63 with a minimum of GHS7,500.00 and a maximum of GHS78,120,000.00. For Small-Scale businesses, the average annual net profit is GHS139,508.68 with a minimum of GHS7,500.00 and a maximum of GHS2,000,000.00. On the other hand, for Medium-Scale businesses, the average annual net profit is GHS5,100,183.86 with a minimum of GHS10,000.00 and

a maximum of GHS78,120,000.00. All other things being equal, on average medium-scale businesses are 36.6 times profitable than small-scale businesses in the sample.

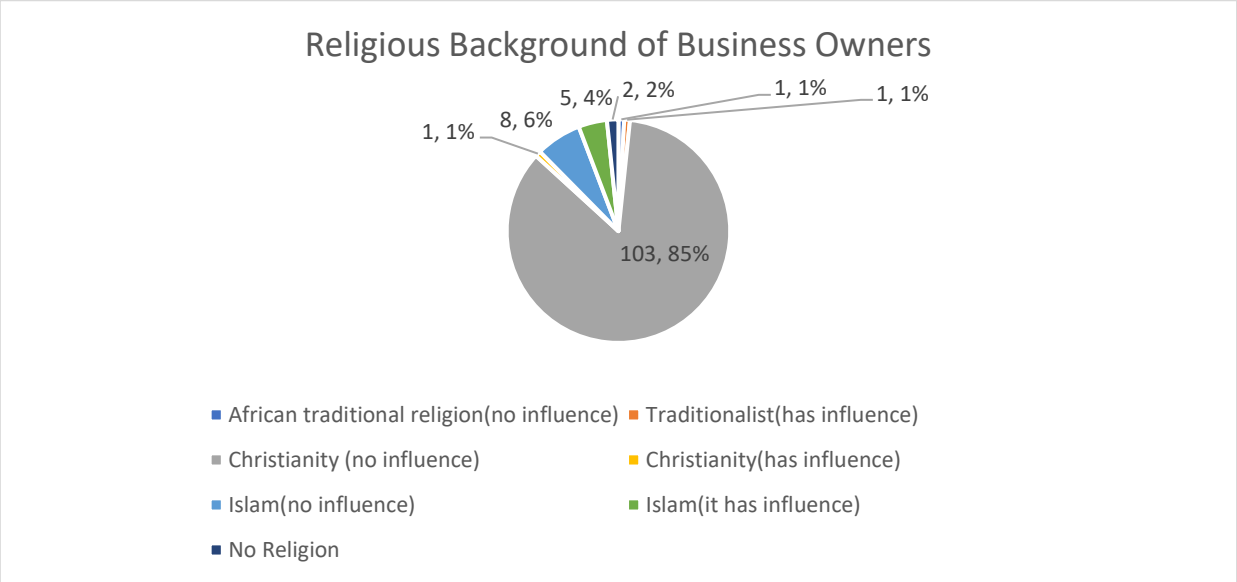
Table 4. 7 Profitability Business by Size

Business	Average (GHS)	Minimum	Maximum
Small-Scale	GHS139,508.68	GHS7,500.00	GHS2,000,000.00
Medium-Scale	GHS5,100,183.86	GHS10,000.00	GHS78,120,000.00
Overall Average	**GHS1,214,321.63**	**7,500.00**	**78,120,000.00**

Source: Field Survey, 2023

4.1.8 Corporate Culture of Businesses

The corporate culture of businesses affects the decisions of managers and owners including the capital structure of their business (Hofstede, 1980). Given that, the study tried to understand the cultural orientations of the ownership and management of the businesses in the sample. Specifically, the study identified the religious affiliation of the ownership and management and the influence it has on their capital structure. As indicated in the figure below, the majority (103) representing 85 percent of the businesses have their owners affiliated with Christianity and their religion does not influence their capital structure decisions. About eight (8) representing 6 percent of the businesses have their owners affiliated with Islam and their religion has no influence in their capital structure decisions. Five (5) representing 4 percent and one (1) representing 1 percent of the businesses have their owners affiliated with Islam and Christianity respectively and their religion has influenced their capital structure decisions. Two (2) out of the 121 businesses in the sample have no religious affiliation. Again, only two (2) representing 2 percent of the sampled businesses have owners who are traditionalists and among these, only one (1) makes capital structure decisions with the influence of the religious affiliation of their business owners. The results in sum indicate that majority of the businesses make financial decisions without the influence of the religious affiliation of business owners.



4.2 Determinants of Capital Structure

4.2.1 Ordinary Least Square Regression Model

The research employed an OLS regression model to identify the factors influencing the sampled SMEs' capital structure decisions. The model, with the set of independent variables, exhibits a significant improvement in the goodness of fit compared to the model without independent variables. A p-value of 0.000 for the overall F-statistic of 15.14, which is lower than the alpha level of 0.01, indicates a statistically significant improvement. This implies that the study's sample provides ample evidence that the estimated regression model fits better than the model lacking independent variables. The Coefficient of Determination (R-square) of 0.06 indicates that approximately 6 percent of the variations in the dependent variable are explained by the set of independent variables in the regression model.

The results of the OLS estimates, derived from data collected from 121 businesses across 12 regions of Ghana, are presented below after testing for the presence of multicollinearity and correcting for heteroskedasticity using a robust standard error. The analysis was conducted using Stata, a robust tool used for cross-sectional data analysis.

Table 4. 2.1 Ordinary Least Square Regression Estimates

Independent variables	Measurement	Leverage Ratio
Asset Structure	The ratio of fixed assets to total assets	0.0015***
		(0.0006)
Profitability	The ratio of earnings before interest and tax (EBIT) to total assets	-0.0888
		(0.1040)
Managerial Ownership	The ratio of shares owned by employees to total number of shares	0.1136**
		(0.0470)
Culture of Stakeholders	Dummy Stakeholders are Christians equal 1 otherwise 0	0.1102*
		(0.0659)
Location	Dummy Business is located in Greater Accra or Ashanti equal 1 otherwise 0	-0.0004
		(0.0533)
Constant		0.681***
		(0.0637)
Observations		121
F-Statistic		15.14
P-value		0.000
R-squared		0.060

Robust standard errors in parentheses
***** p<0.01, ** p<0.05, * p<0.1**

Source: Stata

According to the outcomes of the OLS regression analysis, there exists a statistically significant direct causal relationship between "Asset Structure" and Leverage Ratio at a significance level of 0.01. Holding all other factors constant, the coefficient for "Asset Structure" is determined to be 0.0015, indicating that a one percent increase in the business's "Asset Structure" results in a 0.0015 unit (0.15%) increase in the Leverage Ratio. This suggests that, among the sampled businesses, an augmentation in fixed assets corresponds to a shift from relying on equity to utilizing debt. This shift manifests as an increase in the proportion of long-term and short-term debt within their overall capital structure. The practical implication of this finding is aligned with trade-off theory, which posits that tangible assets enhance a firm's liquidation value, thereby facilitating easier access to financing at a lower cost. Furthermore, these results align with those of (Balios et al.,2016), who observed that companies heavily investing in tangible assets tend to exhibit higher financial leverage. This is attributed to their ability to secure debt at more favourable interest rates when backed by such assets.

Similarly, "Managerial Ownership," assessed by the ratio of shares owned by employees to the total number of shares, exhibits a statistically significant positive causal relationship with the leverage ratio at a significance level of 0.05. This suggests that an increase in the percentage of shares owned by employees in the sampled businesses corresponds to an increase in the proportion of debt in the capital structure. The coefficient of 0.1136 indicates that, ceteris paribus, a one percent increase in the ratio of shares owned by employees to the total number of shares results in an 11.36% increase in the share of long-term and short-term debt in the overall capital structure. Compared to "Asset Structure," Managerial Ownership demonstrates a higher marginal effect on the leverage ratio. This observation aligns with the findings of (Bokpin and Arko,2009), who find a significant positive impact of managerial shareholding on the preference for long-term debt over equity. This result is consistent with the anticipated results of this study.

The "Culture of Stakeholders" is also identified as having a direct causal relationship with the leverage ratio at a statistically significant level of 0.1. Represented as a dummy variable capturing the religious affiliation of the stakeholders of the firm, a positive coefficient of 0.1102 indicates that, holding all other factors constant, businesses with stakeholders who are Christians exhibit a

leverage ratio that is 0.1102 units or 11.02% higher than businesses with non-Christian stakeholders. Within the sample businesses, non-Christian stakeholders were identified as Muslims and traditionalists. This finding aligns with Hofstede's (2001) proposition that the collective mindset that distinguishes one group from another influences the corporate culture of a firm, subsequently impacting managerial decisions. In the context of this study, this assertion could be grounded in the conservative cultural tendencies of Christians, particularly regarding matters of loans and interest compared to other religions.

In contrast, there is an inverse causal relationship between profitability and the leverage ratio. The coefficient for "Profitability" is calculated to be -0.0888, indicating that a one percent change in profitability, measured by the ratio of earnings before interest and tax (EBIT) to total assets, leads to a reduction of 0.0888 units (or 8.88%) in the leverage ratio. This finding aligns with the tenets of pecking order theory and aligns with the conclusions of Yousef (2019), who similarly identified a significant negative impact of profitability on debt. However, in this model, and within the sampled SMEs, the relationship is not statistically significant. This discrepancy could be attributed to the fact that approximately 89.2% of the businesses in the sample generate similar annual net profits, reaching at most GHS1,000,000 despite having varying amounts of debt.

The study incorporated a locational variable into the model because of the skewed distribution of commercial activities in Ghana to the Greater Accra and Ashanti regions. This variable is a dummy, taking the value of 1 for businesses located in Greater Accra or Ashanti and otherwise. A coefficient of -0.0004 indicates an inverse causal relationship between the location and leverage ratio. Essentially, all other things being equal, businesses situated in the Greater Accra and Ashanti regions have a leverage ratio that is 0.0004 units (or 0.04%) lower than that of businesses located elsewhere. This result runs counter to the expectations of this study, possibly because operating in these regions is more profitable, leading businesses to prefer reliance on equity rather than debt. However, this difference was not statistically significant.

The constant coefficient in the model was estimated to be 0.681 and was statistically significant at a significance level of 0.01. This suggests that, under the condition that all other independent variables in the model have zero values simultaneously, the leverage ratio is 0.681 units (or 68.1%). Therefore, according to the model, the inherent or autonomous proportion of long-term and short-term debt in the total capital structure was 68.1 percent. This indicates that based on the sampled businesses, approximately 68 percent of the debt used to finance their operations is not contingent on factors such as asset structure, stakeholder culture, profitability, managerial ownership, and business location included in the model.

4.2.2 Test for Heteroskedasticity

The study carried out a test for heteroskedasticity using the Breusch-Pagan test. Heteroskedasticity was found in the model at an alpha level of 0.1 percent. To correct for heteroskedasticity, this study employed a robust standard error. The results of the test are presented in the table below, while the model without a robust standard error is reported in the appendix.

Table 4.2.2 Breusch-Pagan test for heteroskedasticity

Null Hypothesis	**Constant variance**
Variables	fitted values of the leverage ratio
chi2(1)	2.71
Prob > chi2	0.0995

4.2.3 Test for Multicollinearity

The study employed the Variance Inflation Factor (VIF) test to test for the presence of linear correlations between the independent variables, as this presence inflates the standard errors of OLS estimators and affects inference (Greene, 2012). Given that the VIF factor is 1.12, which is less than 10, the study concludes that multicollinearity is not a problem in the estimated model and that inferences from the model are reliable.

Table 4. 2.3 Variance Inflation Factor Results

Variable	**VIF**	**1/VIF**
Profitability	1.07	0.933996
Managerial Ownership	1.06	0.945182
Location	1.05	0.949462
Asset Structure	1.04	0.961797
Culture	1.01	0.991595
Mean VIF	1.05	

5.0 CONCLUSION AND RECOMMENDATIONS

5.1 Summary of Findings

The primary objective of this study is to analyze the determinants of capital structure decisions of Small and Medium-sized Enterprises (SMEs) in Ghana. Specifically, this research sought to establish relationships between leverage and asset structure, profitability, managerial ownership, location, and the cultural background of stakeholders. The recommendations were also intended for policymakers and other stakeholders to adopt and implement policies that support SMEs in Ghana.

Following Ordinary Least Squares (OLS) regression analysis, this study identified significant direct causal relationships between the leverage ratio and factors such as asset structure, managerial ownership, and the cultural background of stakeholders. Specifically, a 1% increase in the "Asset Structure" corresponds to a 0.15% increase in the leverage ratio. Managerial ownership exhibits a higher marginal effect, with a 1% increase, resulting in an 11.36% increase in the share of debt in the overall capital structure. The cultural affiliation of stakeholders, particularly those with Christian beliefs, was associated with an 11.02% higher leverage ratio than businesses with non-Christian stakeholders.

In contrast, a statistically insignificant inverse causal relationship was found between profitability and leverage ratio. This discrepancy could be attributed to the fact that approximately 89.2% of the businesses in the sample generate similar annual net profits, reaching at most GHS1,000,000 despite having varying amounts of debt. In addition, the location of businesses does not significantly impact the leverage ratio. The constant coefficient in the model indicated that approximately 68.1% of the debt used by sampled businesses in their operations was not contingent on factors included in the model, such as asset structure, stakeholder culture, profitability, managerial ownership, and business location.

5.2 Conclusion

Based on these findings, the study concludes that the main factors influencing the capital structure decisions of SMEs in Ghana are managerial ownership, asset structure, and the cultural background of stakeholders. However, Managerial ownership has a higher marginal effect. All of these factors positively contribute to the leverage ratio, representing the share of total debt in the total capital structure. An increase in the "Asset Structure" by 1 percent corresponds to a 0.15 percent increase in the leverage ratio. An increase in managerial ownership by 1 percent increase results in an 11.36 percent increase in the share of debt in the overall capital structure.

5.3 Recommendation

This study proposes that the Bank of Ghana should contemplate a reduction in the cost of borrowing by lowering the Monetary Policy Rate. This action aims to alleviate expenses associated with both short and long-term loans.

Furthermore, the study endorses the government's initiative to provide long-term loans to SMEs at a more affordable rate than the market, facilitated by the Development Bank of Ghana. This study advocates for the expansion of such programs.

Additionally, this study underscores the significance of managerial ownership in streamlining the loan acquisition process. It recommends that SMEs consider offering shares to employees, leveraging their influence to facilitate loan acquisition, and using collectively owned assets as collateral. This study recommends that SMEs enhance their physical asset capacity, enabling them to leverage these assets as collateral when applying for loans. This study supports government initiatives to eliminate excise duties on agricultural and pharmaceutical inputs and suggests extending this exemption to all inputs, especially those crucial for SMEs in manufacturing, service, and trading.

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