

Capital Structure and Profitability of Small and Medium Enterprises in Lusaka Zambia

Gospel Katolo^{1*}

¹ Graduate School of Business, University of Zambia, Lusaka, Zambia

* Corresponding Author

Article Info

Volume 7, Issue 5

Publication history:

Accepted on 19 July 2026;
Published: 21 September 2026

Key Words:

Capital Structure; Profitability; Small and Medium Enterprises; Long-Term Debt; Return on Assets; Zambia

Article Doi:

10.59413/ajocs/v7.i5.16

Abstract

This study examines the relationship between capital structure and profitability among small and medium enterprises in Lusaka, Zambia. A quantitative cross-sectional design was used, and structured questionnaires were administered to a target sample of 397 enterprises. A total of 355 usable responses were obtained, representing an 89.4% response rate. Profitability was measured using ordinal categories of return on assets, while capital structure was represented by total debt to assets and long-term debt to assets; sales growth was included as a control variable. The instrument demonstrated acceptable internal consistency (Cronbach's alpha = 0.71). Pearson correlation showed a weak positive association between total debt to assets and return on assets ($r = 0.159$, $p = 0.003$). The multiple regression model was statistically significant ($F(3,351) = 9.939$, $p < 0.001$) and explained approximately 7.8% of the variation in return on assets. Long-term debt to assets ($B = 0.175$, $p = 0.003$) and sales growth ($B = 0.168$, $p < 0.001$) were positive significant predictors, while total debt to assets was positive but not significant at the 5% level ($B = 0.117$, $p = 0.059$). Inadequate financial literacy, high interest rates, collateral constraints, and complex application procedures were the leading financing barriers. The findings suggest that debt maturity and the productive use of finance matter more than leverage alone. SMEs should align borrowing with cash-flow-generating investments and avoid treating a single debt-equity ratio as universally optimal.

1. Introduction

Small and medium enterprises (SMEs) are central to employment creation, innovation, income generation, and economic diversification. Their capacity to survive and grow, however, depends partly on access to finance and on how financing is structured. Capital structure describes the combination of debt and equity used to fund assets and operations. Debt may provide tax advantages and preserve ownership control, but it also creates fixed repayment obligations and exposure to financial distress. Equity reduces contractual repayment pressure but may be difficult to obtain and can dilute control.

These trade-offs are especially important for SMEs in emerging markets. Firms frequently operate with limited collateral, incomplete financial records, uneven cash flows, and restricted access to long-term credit. In Zambia, high borrowing costs and information asymmetry can make otherwise productive investment difficult to finance. The central managerial question is therefore not simply whether debt is beneficial, but whether its amount, maturity, and use are compatible with the firm's operating cash flows and growth opportunities.

Prior research has not produced a uniform conclusion on the capital structure-profitability relationship. The pecking order theory predicts a preference for internal funds, followed by debt and then external equity because of information asymmetry (Myers & Majluf, 1984). The trade-off theory proposes that firms balance the tax and control benefits of debt against expected distress and agency costs (Kraus & Litzenberger, 1973). Both perspectives are relevant to SMEs, but their implications may differ where credit markets are shallow and borrower risk is difficult to assess.

This article investigates the relationship between capital structure and SME profitability in Lusaka, identifies the principal barriers to formal debt finance, and assesses whether the evidence supports a single optimal financing mix. It contributes evidence from 355 SMEs across trade, manufacturing, and services and, importantly, separates long-term debt from total leverage. This distinction responds to the possibility that debt maturity, rather than debt quantity alone, determines whether borrowing supports productive investment or creates liquidity pressure.

2 Literature Review and Analytical Framework

2.1 Conceptualising Capital Structure and Profitability

Capital structure is the combination of internally generated funds, debt, and external equity used to finance a firm's assets and operations. In the Modigliani and Miller (1958) benchmark, financing choice is irrelevant to firm value under perfect markets. Once taxes, information asymmetry, transaction costs, and financial distress are introduced, however, financing choices can affect both value and accounting performance. For SMEs, these market imperfections are especially pronounced because ownership and management are often concentrated, financial disclosures are limited, and access to public equity is rare (Berger & Udell, 1998; Beck et al., 2008).

Profitability may respond to leverage through competing channels. Debt can provide a tax shield, reduce the dilution of owner control, fund capacity expansion, and discipline managers by imposing fixed payment commitments. At the same time, interest and principal repayments can weaken liquidity, constrain operating decisions, and increase the probability and cost of distress. Accordingly, the sign of the leverage-profitability relationship is theoretically ambiguous and likely to depend on debt cost, maturity, asset productivity, and the stability of operating cash flows (Myers, 1984; Jensen, 1986).

Empirical evidence reflects this ambiguity. Abor (2005) found that different debt components had different associations with profitability among listed Ghanaian firms, while Abor (2007) reported that debt policy and SME performance varied across Ghana and South Africa. Studies of European SMEs likewise show that firm size, asset structure, age, profitability, and national institutions influence financing decisions (Michaelas et al., 1999; Hall et al., 2004; Sogorb-Mira, 2005; Psillaki & Daskalakis, 2009). These findings caution against treating total leverage as a sufficient description of capital structure.

2.2 Debt Maturity and Firm Performance

Debt maturity determines when financing must be refinanced or repaid. Long-term debt can match the useful lives and cash-generation periods of productive assets, reducing rollover pressure and allowing time for investment returns to materialise. Short-term debt may be appropriate for working capital, but excessive reliance on it can expose firms to refinancing risk, interest-rate changes, and liquidity shocks. The maturity-matching principle therefore predicts that long-term finance will be more supportive of profitability when it funds long-lived, cash-generating assets.

Evidence from SME research supports examining debt components separately. Michaelas et al. (1999) showed that short- and long-term debt respond differently to firm characteristics and economic conditions, while Hall et al. (2004) found that determinants of SME capital structure vary across debt maturities. This study therefore includes both total debt to assets and long-term debt to assets. Total leverage captures the overall debt burden, whereas long-term leverage captures the financing stability potentially associated with longer investment horizons.

2.3 Financing Constraints in SMEs

SMEs frequently experience financing constraints because lenders cannot fully observe borrower quality or monitor the use of funds. Under information asymmetry, lenders may ration credit rather than simply raise interest rates because higher prices can attract riskier borrowers and encourage riskier behaviour (Stiglitz & Weiss, 1981). Smaller firms are particularly affected by limited collateral, short credit histories, incomplete accounts, and high transaction costs relative to loan size (Berger & Udell, 1998; Beck & Demirguc-Kunt, 2006).

Across developing economies, access to finance is consistently identified as a constraint on enterprise growth, with the burden falling more heavily on smaller firms (Beck et al., 2005; Beck et al., 2008). In African firms, improved access to finance has also been associated with stronger firm performance, although institutional conditions and firm capabilities shape the outcome (Fowowe, 2017). Financial literacy matters because owners must maintain credible records, compare the effective cost of facilities, forecast cash flows, appraise investments, and select appropriate maturities. Nevertheless, literacy initiatives cannot substitute for affordable products, proportionate collateral standards, and efficient lending procedures.

2.4 Theoretical Framework

The study is anchored primarily in pecking order theory and trade-off theory, with complementary insights from agency theory and credit-rationing theory. These perspectives offer different but related explanations of how SMEs choose finance and how those choices may influence profitability.

Pecking order theory. Firms prefer internal finance, then debt, and finally external equity because managers possess more information about the firm than outside investors (Myers & Majluf, 1984). The theory is particularly relevant to owner-managed SMEs, where external equity may threaten control and be costly to negotiate. It predicts that profitable firms may use less debt because retained earnings are available; conversely, growing firms with financing deficits may borrow more. In this study, total debt to assets represents the extent to which SMEs move beyond internal funding, while sales growth captures an important source of financing demand.

Trade-off theory. Firms balance the benefits of debt, including tax advantages and preservation of control, against expected distress and agency costs (Kraus & Litzenberger, 1973). The theory does not imply one universal leverage ratio; the optimum varies with business risk, asset structure, tax position, borrowing cost, and cash-flow stability. A positive association between long-term debt and return on assets would be consistent with the benefits of stable financing outweighing distress costs over the observed range.

Agency theory. Separation of ownership, control, and financing can create conflicts among owners, managers, and lenders (Jensen & Meckling, 1976). Debt can discipline managers by limiting discretionary cash flow, but it may also encourage risk shifting or underinvestment when borrowers and lenders have competing claims. In closely held SMEs, owner-manager conflicts may be limited, but lender-borrower conflicts remain important. Collateral requirements, monitoring, and restrictive terms can therefore affect both access to debt and the profitability of financed activities.

Credit-rationing theory. Because lenders cannot perfectly distinguish low-risk from high-risk borrowers, some viable SMEs may receive less credit than they demand even when willing to pay the prevailing price (Stiglitz & Weiss, 1981). This framework links the reported barriers - financial literacy, collateral, interest rates, and application complexity - to the capital structure actually observed. Financing structure is therefore partly a managerial choice and partly the outcome of supply-side constraints.

Taken together, the framework predicts that the profitability effect of debt will depend on both quantity and quality. Total debt may support expansion

but can also raise servicing pressure. Long-term debt should be more favourable where maturity is aligned with asset life and project cash flows. Sales growth is expected to relate positively to profitability because it indicates revenue expansion and may reflect the productive deployment of finance.

2.5 Research Gap and Contribution

Existing capital-structure evidence is dominated by listed firms and by SMEs in developed or larger African economies. Listed-company studies have access to audited continuous ratios and capital-market data, but their financing choices differ materially from those of owner-managed SMEs. Cross-country SME studies demonstrate that institutional context matters, yet they may obscure country-specific conditions. African studies provide valuable evidence from countries such as Ghana and South Africa, but their results cannot be assumed to apply directly to Zambia, where SME financing conditions, lender practices, and market depth differ.

Within the available SME literature, leverage is also frequently treated as a single aggregate measure. This leaves uncertainty about whether profitability is related to the overall debt burden or to the maturity structure of that debt. In addition, quantitative capital-structure models are not always examined alongside the practical barriers that shape access to finance. The present study addresses these gaps by analysing 355 SMEs in Lusaka across three sectors, distinguishing total debt from long-term debt, controlling for sales growth, and reporting financing barriers in the same empirical setting. Its contribution is therefore contextual and analytical: it provides Zambia-specific evidence and shows why debt maturity and access constraints should be considered together.

2.6 Research Objectives and Hypotheses

The study seeks to: (1) determine the relationship between total debt to assets and profitability; (2) assess the relationship between long-term debt to assets and profitability; (3) determine the relationship between sales growth and profitability; and (4) identify the main barriers faced by SMEs when accessing formal debt finance.

The corresponding hypotheses are: H1, total debt to assets is positively associated with return on assets; H2, long-term debt to assets is positively associated with return on assets; and H3, sales growth is positively associated with return on assets. Because the design is cross-sectional and the financial measures are self-reported ordinal categories, these hypotheses concern statistical association and do not establish causal effects.

3 Methodology

3.1 Research Design and Sample

The study adopted a positivist, quantitative, cross-sectional survey design. The target population comprised SMEs operating in Lusaka in the trade, manufacturing, and services sectors. A sample of 397 enterprises was selected using a random sampling approach described in the source study. Of the questionnaires administered, 355 were usable, producing a response rate of 89.4%.

3.2 Measures

The questionnaire captured respondent characteristics, financing structure, financial performance, financing barriers, and perceptions of financing optimality. Capital structure was represented by ordinal categories for total debt to assets (TDA), long-term debt to assets (LTDA), and short-term debt to total debt. Profitability was measured using categories of return on assets (ROA). Sales growth (SG) was measured using ordered year-on-year growth bands and was included in the regression as a control variable. The use of bands enabled responses from SMEs that did not disclose precise financial statements, but it limits interpretation of the coefficients as changes between ordered categories rather than percentage-point effects.

Table 1. Study variables

Variable	Role	Operational measure
Return on assets	Dependent	Ordered ROA bands from less than 5% to above 20%
Long-term debt to assets	Predictor	Ordered bands from 0-20% to 81-100%
Total debt to assets	Predictor	Ordered bands from 0-20% to 81-100%
Sales growth	Control	Ordered bands from negative growth to above 30%

3.3 Data Analysis and Quality Checks

Data were coded and analysed in SPSS version 29. The analysis used frequencies, percentages, Pearson correlation, analysis of variance, and multiple linear regression. The regression specification was $ROA = \beta_0 + \beta_1 LTDA + \beta_2 TDA + \beta_3 SG + \epsilon$. Statistical significance was evaluated at the 5% level. Cronbach's alpha for the ten-item instrument was 0.71, meeting the commonly applied 0.70 threshold for exploratory research.

3.4 Ethical Considerations

Participation was voluntary and based on informed consent. Respondent identities were excluded from the reported dataset, information was presented in aggregate form, and participants retained the right to withdraw. The source study reports that institutional and gatekeeper permissions were obtained before data collection.

4 Results

4.1 Sample Characteristics and Financial Profile

The sample was reasonably balanced across services (36.1%), manufacturing (33.8%), and trade (30.1%). The largest workforce group had 11-50 employees (39.4%). Annual turnover was concentrated in the lower two reported bands: 42.0% recorded ZMW 150,000-ZMW 400,000 and 40.8% recorded ZMW 400,001-ZMW 600,000.

Debt financing was common but generally moderate. The modal TDA band was 41-60% (35.2% of respondents), followed by 61-80% (24.8%). For LTDA, the largest group was also 41-60% (31.5%). Short-term debt represented 26-50% of total debt for 42.5% of respondents. On performance, 27.3% reported ROA of 11-15%, 25.4% reported 16-20%, and 11.5% reported ROA above 20%.

The distribution shows substantial variation in both financing and performance, which is necessary for examining their statistical relationship. The concentration of TDA in the 41-80% range indicates that debt was a material source of finance for many respondents rather than a marginal funding instrument. At the same time, the spread in ROA categories suggests that comparable leverage levels did not translate automatically into identical profitability outcomes. This descriptive pattern supports the need to test debt maturity and sales growth jointly rather than infer performance from leverage alone.

Table 2. Selected descriptive results

Indicator	Leading category	Share
Sector	Services	36.1%
Total debt to assets	41-60%	35.2%
Long-term debt to assets	41-60%	31.5%
Short-term debt to total debt	26-50%	42.5%
Return on assets	11-15%	27.3%

4.2 Barriers to Debt Financing

Inadequate financial literacy was the most frequently reported financing barrier (33.2%), followed by high interest rates (26.5%), lack of collateral (20.3%), and complex loan application procedures (20.0%). The distribution indicates that access constraints are not solely a question of the price of credit; borrower capability, security requirements, and administrative design are also material.

These findings address the fourth research objective. Financial literacy and interest rates together accounted for 59.7% of the principal barriers selected by respondents, while collateral and application procedures accounted for the remaining 40.3%. The result points to a dual constraint: some SMEs may struggle to present bankable information and evaluate facilities, while others may remain excluded even with viable projects because of pricing, security, or procedural requirements. This pattern accords with information-asymmetry and credit-rationing explanations, under which both borrower information quality and lender screening practices determine access (Stiglitz & Weiss, 1981; Berger & Udell, 1998).

Table 3. Main challenge in accessing finance

Challenge	Frequency	Percent
Inadequate financial literacy	118	33.2%
High interest rates	94	26.5%
Lack of collateral	72	20.3%
Complex application processes	71	20.0%

4.3 Correlation and Regression Results

TDA had a weak positive correlation with ROA ($r = 0.159$, $p = 0.003$). TDA was weakly correlated with sales growth ($r = 0.092$), but the association was not statistically significant ($p = 0.083$). The correlation between perceived optimality of the financing mix and sales growth was effectively zero ($r = -0.028$, $p = 0.600$). These results caution against assuming that managers' satisfaction with their financing mix necessarily corresponds with stronger growth.

The positive TDA-ROA correlation provides preliminary support for the first objective, but its small magnitude indicates that total leverage alone has limited explanatory value. The non-significant relationship between TDA and sales growth further suggests that firms with more debt were not necessarily the firms experiencing stronger sales expansion. Similarly, the absence of a relationship between perceived financing optimality and sales growth shows that subjective satisfaction with the funding mix should not be treated as an objective performance measure.

The regression model was statistically significant, $F(3,351) = 9.939$, $p < 0.001$. Based on the reported sums of squares, the model explained approximately 7.8% of the variation in ROA (R-squared approximately 0.078; adjusted R-squared approximately 0.070). LTDA was positively and significantly associated with ROA ($B = 0.175$, $\beta = 0.158$, $p = 0.003$). Sales growth was also positive and significant ($B = 0.168$, $\beta = 0.182$, $p < 0.001$). TDA was positive but did not reach the 5% significance threshold ($B = 0.117$, $\beta = 0.101$, $p = 0.059$). Sales growth had the largest standardized coefficient among the predictors.

With respect to the first objective and H1, the TDA coefficient was positive but fell just outside the conventional 5% significance threshold. H1 is therefore not supported in the multivariable model, notwithstanding the significant bivariate correlation. The difference between the correlation and regression results implies that part of the simple TDA-ROA association overlaps with debt maturity or sales growth. The result should not be described as evidence that more total debt causes higher profitability.

For the second objective, LTDA remained a positive and statistically significant predictor after controlling for TDA and sales growth; H2 is supported. A one-category increase in LTDA was associated with a 0.175-category increase in the ordinal ROA outcome, holding the other predictors constant. This is not a 17.5 percentage-point change in ROA. The finding is consistent with maturity matching: longer-tenor funding may allow financed assets more time to generate returns and may reduce immediate refinancing pressure.

For the third objective, sales growth was positive and significant and had the largest standardized coefficient; H3 is supported. The result reinforces the commercial mechanism through which finance may improve performance: funding is most valuable when it supports revenue-generating activity. However, the model's R-squared of approximately 0.078 means that about 92.2% of variation in ROA was not explained by the three included predictors. Capital structure is therefore relevant but not dominant, and omitted operational, sectoral, managerial, and macroeconomic factors remain important.

Table 4. Multiple regression predicting return on assets

Predictor	B (SE)	Standardized beta	p
Constant	1.651 (0.250)	-	<0.001
Long-term debt to assets	0.175 (0.059)	0.158	0.003
Total debt to assets	0.117 (0.062)	0.101	0.059
Sales growth	0.168 (0.048)	0.182	<0.001

Note. Dependent variable: ROA category. N = 355. Overall model: $F(3,351) = 9.939$, $p < 0.001$; R-squared approximately 0.078. Coefficients reflect movements between ordinal response categories and should not be interpreted as percentage-point changes in ROA.

4.4 Discussion

Total Leverage and Profitability

The findings provide qualified evidence on total leverage. TDA was positively correlated with ROA, but it was not statistically significant at the 5% level after LTDA and sales growth were included. This distinction is important: a bivariate relationship can reflect characteristics shared with other predictors, whereas the regression coefficient estimates the association of TDA conditional on the other variables. The result therefore suggests that the composition and deployment of debt matter more than its aggregate amount.

This outcome is compatible with the mixed empirical literature. Abor (2005, 2007) found that debt components can relate differently to performance across firm types and countries, while SME capital-structure studies show that profitability and leverage are shaped by firm-specific and institutional factors (Sogorb-Mira, 2005; Psillaki & Daskalakis, 2009). From a trade-off perspective, additional debt can fund profitable assets, but higher servicing and distress costs can offset the benefit. From a pecking-order perspective, profitable SMEs may also rely more heavily on retained earnings, weakening any simple positive leverage-profitability relationship.

Long-Term Debt and Profitability

LTDA was positively and significantly associated with ROA. The result supports the maturity-matching argument and indicates that stable funding may be more important than leverage alone. Longer maturities can reduce rollover frequency and align repayment with the period over which fixed assets or business expansion generate cash. The finding also accords with evidence that the determinants and consequences of short- and long-term debt differ among SMEs (Michaelas et al., 1999; Hall et al., 2004).

The result must nevertheless be interpreted as an association. More profitable SMEs may qualify for longer-term credit because they have stronger records, better collateral, or more stable cash flows. Conversely, well-structured long-term borrowing may itself support profitable investment. The cross-sectional design cannot determine the direction of this relationship. Longitudinal data would be required to distinguish financing effects from lender selection and reverse causality.

Sales Growth and the Productive Use of Finance

Sales growth had the largest standardized coefficient and was a significant positive predictor of ROA. This finding highlights that finance is not productive by itself. Debt contributes to performance when it supports additional sales, improved capacity utilisation, higher margins, or more efficient assets. Managers should therefore evaluate borrowing through expected incremental cash flows rather than view access to credit as an end in itself.

The modest explanatory power of the model reinforces this interpretation. Most variation in profitability arose from factors outside TDA, LTDA, and sales growth. Management quality, operating costs, sector competition, firm age, asset efficiency, inflation, exchange-rate exposure, tax conditions, and borrowing costs may all shape SME profitability. The model identifies statistically relevant relationships but does not provide a complete theory of performance.

Financing Barriers and the Absence of a Universal Optimum

Financial literacy was the most frequently reported barrier, followed by high interest rates, collateral constraints, and complex applications. This ordering supports the view that SME finance is affected by both demand-side capability and supply-side design. Better records and forecasts can reduce information gaps, but firms may still face credit rationing when collateral is insufficient or lending terms do not reflect their cash-flow profiles (Stiglitz & Weiss, 1981; Beck & Demirgüç-Kunt, 2006).

The study does not establish a universal optimal debt-equity ratio. Views on the optimality of current financing were divided: 39.2% agreed or strongly agreed, 40.0% disagreed or strongly disagreed, and 20.8% were neutral. Perceived optimality was also unrelated to sales growth. Consistent with trade-off theory and cross-country SME evidence, an appropriate structure is firm-specific and depends on cash-flow stability, sector, collateral, investment horizon, cost of finance, and the availability of retained earnings or equity.

Contribution to Knowledge

The study extends the literature in three ways. First, it provides evidence from Zambian SMEs, a setting that is underrepresented in the published capital-structure literature. Second, it demonstrates empirically that long-term debt and total debt do not have identical relationships with profitability. Third, it connects quantitative financing-performance results with the practical access constraints reported by the same SME population. The combined evidence shifts the managerial question from “How much debt?” to “What maturity, at what cost, for which cash-generating use, and under what access constraints?”

5 Conclusions

5.1 Conclusion

This study examined capital structure, profitability, and financing barriers among 355 SMEs in Lusaka. Total debt showed a weak positive bivariate relationship with ROA but was not significant at the 5% level in the multivariable model. By contrast, long-term debt and sales growth were significant

positive predictors. The findings therefore show that debt maturity and the productive use of finance are more informative than total leverage alone. Financial literacy, high interest rates, collateral requirements, and application complexity further demonstrate that observed capital structures reflect both managerial choices and financing constraints. The study fills a contextual gap in Zambian SME evidence and an analytical gap by separating long-term debt from aggregate leverage. Its practical conclusion is not that SMEs should maximise debt, but that they should align financing maturity with investment horizons, assess affordability through realistic cash flows, and use borrowed funds for activities capable of generating sustainable returns.

5.2 Implications

Implications for SME Managers

- Match the maturity of borrowing to the useful life and cash-generation period of the financed asset.
- Assess debt affordability using realistic cash-flow forecasts and sensitivity tests, not turnover expectations alone.
- Use borrowed funds for clearly appraised investments and monitor whether those investments improve sales, margins, and asset productivity.
- Strengthen financial statements, management accounts, tax records, and credit histories to improve lender confidence and negotiating capacity.

Implications for Financial Institutions and Policymakers

- Develop appropriately priced, longer-tenor products aligned with SME investment cycles.
- Expand cash-flow-based credit assessment and credit guarantees where conventional collateral is insufficient.
- Simplify application requirements while preserving sound underwriting and consumer protection.
- Integrate practical financial-management support into SME lending and public enterprise-development programmes.
- Support transparent equity and patient-capital channels so that SMEs are not forced to rely solely on debt.

5.3 Limitations and Future Research

The study has several limitations. First, its cross-sectional design cannot establish causality or capture how financing decisions and profitability evolve over time. Second, the measures were self-reported and recorded in ordinal bands, which may introduce recall, social-desirability, and measurement error. Third, the sample was confined to Lusaka and may not represent rural SMEs or enterprises in other provinces. Fourth, the model explained a modest share of profitability variation and did not incorporate several potentially important variables, including firm age, size, sector effects, cost of debt, inflation exposure, asset tangibility, and governance. Finally, equity financing was discussed in the questionnaire and conclusions but was not included as a separate predictor in the reported regression; no causal conclusion about equity can therefore be drawn from the model.

Future research should use audited or independently verified panel data, continuous financial ratios, and sector-specific models. Longitudinal analysis could test whether long-term debt precedes improved profitability or whether more profitable firms simply qualify for longer-term credit. Studies should also directly measure equity finance, cost of debt, collateral, financial literacy, and macroeconomic exposure, and should extend sampling beyond Lusaka.

References

- Abor, J. (2005). The effect of capital structure on profitability: An empirical analysis of listed firms in Ghana. *The Journal of Risk Finance*, 6(5), 438-445. <https://doi.org/10.1108/15265940510633505>
- Abor, J. (2007). Debt policy and performance of SMEs: Evidence from Ghanaian and South African firms. *The Journal of Risk Finance*, 8(4), 364-379. <https://doi.org/10.1108/15265940710777315>
- Beck, T., & Demircuc-Kunt, A. (2006). Small and medium-size enterprises: Access to finance as a growth constraint. *Journal of Banking & Finance*, 30(11), 2931-2943. <https://doi.org/10.1016/j.jbankfin.2006.05.009>
- Beck, T., Demircuc-Kunt, A., & Maksimovic, V. (2005). Financial and legal constraints to growth: Does firm size matter? *The Journal of Finance*, 60(1), 137-177. <https://doi.org/10.1111/j.1540-6261.2005.00727.x>
- Beck, T., Demircuc-Kunt, A., & Maksimovic, V. (2008). Financing patterns around the world: Are small firms different? *Journal of Financial Economics*, 89(3), 467-487. <https://doi.org/10.1016/j.jfineco.2007.10.005>
- Berger, A. N., & Udell, G. F. (1998). The economics of small business finance: The roles of private equity and debt markets in the financial growth cycle. *Journal of Banking & Finance*, 22(6-8), 613-673. [https://doi.org/10.1016/S0378-4266\(98\)00038-7](https://doi.org/10.1016/S0378-4266(98)00038-7)
- Fowowe, B. (2017). Access to finance and firm performance: Evidence from African countries. *Review of Development Finance*, 7(1), 6-17. <https://doi.org/10.1016/j.rdf.2017.01.006>
- Hall, G. C., Hutchinson, P. J., & Michaelas, N. (2004). Determinants of the capital structures of European SMEs. *Journal of Business Finance & Accounting*, 31(5-6), 711-728. <https://doi.org/10.1111/j.0306-686X.2004.00554.x>
- Jensen, M. C. (1986). Agency costs of free cash flow, corporate finance, and takeovers. *American Economic Review*, 76(2), 323-329.
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305-360. [https://doi.org/10.1016/0304-405X\(76\)90026-X](https://doi.org/10.1016/0304-405X(76)90026-X)
- Kraus, A., & Litzenberger, R. H. (1973). A state-preference model of optimal financial leverage. *The Journal of Finance*, 28(4), 911-922. <https://doi.org/10.1111/j.1540-6261.1973.tb01415.x>
- Michaelas, N., Chittenden, F., & Poutziouris, P. (1999). Financial policy and capital structure choice in U.K. SMEs: Empirical evidence from company panel data. *Small Business Economics*, 12(2), 113-130. <https://doi.org/10.1023/A:1008010724051>

- Modigliani, F., & Miller, M. H. (1958). The cost of capital, corporation finance and the theory of investment. *American Economic Review*, 48(3), 261-297.
- Myers, S. C. (1984). The capital structure puzzle. *The Journal of Finance*, 39(3), 575-592. <https://doi.org/10.1111/j.1540-6261.1984.tb03646.x>
- Myers, S. C., & Majluf, N. S. (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics*, 13(2), 187-221. [https://doi.org/10.1016/0304-405X\(84\)90023-0](https://doi.org/10.1016/0304-405X(84)90023-0)
- Psillaki, M., & Daskalakis, N. (2009). Are the determinants of capital structure country or firm specific? *Small Business Economics*, 33(3), 319-333. <https://doi.org/10.1007/s11187-008-9103-4>
- Sogorb-Mira, F. (2005). How SME uniqueness affects capital structure: Evidence from a 1994-1998 Spanish data panel. *Small Business Economics*, 25(5), 447-457. <https://doi.org/10.1007/s11187-004-6486-8>
- Stiglitz, J. E., & Weiss, A. (1981). Credit rationing in markets with imperfect information. *American Economic Review*, 71(3), 393-410.