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Original Article

Moderating Effect of Debt Literacy on the Link between Debt Management Behaviour and SME Growth Sustainability

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ABSTRACT

Small and Medium-sized Enterprises (SMEs) play a crucial role in the economic development of emerging economies; however, their growth is frequently obstructed by financial mismanagement and insufficient debt literacy. This research examines how debt literacy influences the relationship between debt management practices and the sustainability of growth in SMEs located in Lira City, Uganda. This study assesses the interaction between behavioural traits—such as lifestyle patterns, religiosity, and financial self-efficacy—and dimensions of debt literacy (debt knowledge and debt skills) in relation to firm growth. A cross-sectional quantitative design was utilized, and data were gathered from 311 SMEs through a structured questionnaire. Structural Equation Modelling (SEM) utilizing a bootstrap approach was applied to examine direct and moderating effects. The findings indicate that lifestyle patterns substantially impede the growth of SMEs, whereas financial self-efficacy and religiosity do not exert direct effects. Both traits positively influenced debt literacy, which was identified as a significant mediating factor. Debt literacy served as a partial mediator in the relationship between behavioural traits and firm growth, underscoring its significance in converting behavioural dispositions into sustainable financial results. The results substantiate the relevance of the Theory of Planned Behaviour, Sustainable Growth Theory, and Financial Capability Theory in elucidating SME performance. This study enhances theoretical understanding and informs policy development by illustrating the importance of debt literacy for effective financial behaviour. The integration of debt literacy into national SME support frameworks and financial training initiatives, customized to the behavioural profiles of entrepreneurs in developing economies, is recommended.

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INTRODUCTION

Small and Medium-sized Enterprises (SMEs) are universally recognized as catalysts of economic development, especially in emerging nations where industrialization and inclusive growth are critical concerns. Their contributions encompass job creation, innovation, domestic production, and poverty reduction, rendering them essential for both microeconomic stability and macroeconomic growth (Kok et al., 2019; Pandey, 2020). In Africa, particularly in Sub-Saharan regions, SMEs represent over 80% of employment prospects and contribute almost 60% to national GDP, establishing them as fundamental to regional development and inclusive economic participation (Amoah & Amoah, 2018; UBOS, 2020). The growth and sustainability of these firms are consistently impeded by systemic problems, such as restricted access to formal credit, regulatory limitations, infrastructural inadequacies, and financial mismanagement.

Access to money, particularly debt, has been recognized as a crucial facilitator and a possible impediment to SME growth, contingent upon its management and utilization. Access to sufficient financing continues to be a critical limitation for SMEs, profoundly affecting their ability to grow, innovate, and withstand challenges. Debt financing has been a principal external funding method for SMEs, frequently favoured for its non-dilutive characteristics and the potential it provides for prompt business expansion (Amankwah-Amoah & Wang, 2019). Nonetheless, mere access does not ensure success. The financial framework of the debt—specifically regarding interest rates, maturity periods, and repayment schedules—can either enhance or hinder SME operations. Research indicates that without effective debt management, SMEs are susceptible to financial difficulty, characterized by delayed repayments, cash flow deficiencies, or even insolvency (Buyinza et al., 2018; Cecchetti et al., 2011). The hazards are particularly evident in precarious financial contexts such as Uganda, characterized by fragmented loan markets and insufficient financial assistance services.

In light of these dangers, financial literacy, particularly debt literacy, plays a crucial role in determining how SMEs interact with and oversee external finance. A crucial mitigating factor in the effective utilization of debt by SMEs is debt literacy, defined as an individual's ability to comprehend and employ knowledge of borrowing, loan structures, and repayment processes (Mitchell & Lusardi, 2023). Debt literacy is essential for providing businesses with the analytical skills required to assess loan proposals, comprehend interest ramifications, and negotiate advantageous conditions (Lusardi & Tufano, 2015; Omar et al., 2024). The lack of such information among SME owners in numerous developing countries has been associated with suboptimal borrowing decisions, excessive indebtedness, and financial mismanagement. In Uganda, the situation is exacerbated by inadequate formal financial education and widespread distrust of financial institutions, rendering several entrepreneurs

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susceptible to predatory loan practices and suboptimal decision-making (Nafiu et al., 2022).

To comprehend the use of this information, it is essential to define debt literacy and examine how its elements affect business outcomes. This study defines debt literacy as a two-dimensional construct consisting of debt knowledge and debt skills. Debt knowledge encompasses understanding loan terms, repayment schedules, and borrowing costs, whereas debt skills pertain to the practical application of this knowledge in real-world decision-making, including budgeting, repayment planning, and financial forecasting (Agyei, 2018; Orobia et al., 2020). Research indicates that elevated debt literacy improves borrowing behaviour and acts as a safeguard against adverse financial outcomes. Debt literacy may serve as a moderating variable, either enhancing or diminishing the effect of debt management behaviour on long-term business success (Kintu et al., 2019). The convergence of financial acumen and behavioural implementation emphasizes the need to incorporate both cognitive and practical aspects of literacy into plans for SME development.

This emphasis on behavioural application results in a detailed analysis of the particular debt management behaviours that affect how SMEs manage financial obligations. This study examines debt management behaviour through three interconnected behavioural dimensions: lifestyle pattern, religiosity, and financial self-efficacy. These elements encompass the impact of personal beliefs, cultural values, and psychological feelings of control on debt-related decisions. Lifestyle patterns indicate the extent to which entrepreneurs choose spending above saving and investment. Religiosity may affect ethical judgements on debt repayment and risk aversion, but financial self-efficacy relates to entrepreneurs' confidence in managing financial responsibilities and making informed choices (Chrisman et al., 2016). These behavioural characteristics are intricately woven into the socio-cultural background and are crucial in influencing whether debt serves as a stimulus for growth or a precursor to business failure.

A targeted examination of the role of debt literacy in moderating these behavioural impacts on growth outcomes is both topical and pertinent, especially in under-explored contexts such as Lira City, Uganda. This study examines SMEs in Lira City, a developing metropolitan centre where small firms represent a substantial segment of economic activity yet have considerable obstacles in maintaining growth. This research utilizes a Structural Equation Modelling (SEM) Bootstrap technique to experimentally examine the moderating effect of debt literacy on the link between debt management behaviour and the sustainability of SME growth. This investigation connects theoretical discourse with applied policy, providing insights into how cognitive and behavioural interventions can enhance financial practices among SMEs. The study's findings are anticipated to increase academic literature on SME finance and aid in the development of tailored financial literacy programs and support systems that bolster SME resilience and long-term sustainability.

Statement of the Problem

Although debt financing is becoming increasingly significant for SMEs in Uganda, their growth and sustainability are hindered by inadequate financial decision-making and insufficient debt literacy. Despite initiatives to enhance lending accessibility, insufficient focus has been directed towards the management and utilization of borrowed capital by SME owners. Empirical evidence demonstrates that numerous SMEs in Uganda experience financial distress due to excessive borrowing, elevated interest rates, and inadequate loan structuring, frequently leading to high default rates, impeded growth, and business failure (Buyinza et al., 2018; Nuwagaba et al., 2021; Turyahikayo, 2015). The fundamental problem transcends financial availability and pertains to the behavioural aptitude of SME operators in properly managing debt within intricate financial contexts.

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While debt management behaviour is acknowledged as essential for SME performance, the influence of debt literacy—specifically the interplay of debt awareness and debt skills with behavioural characteristics such as lifestyle patterns, religion, and financial self-efficacy—has not been thoroughly investigated in Uganda. This study investigates how debt literacy influences the relationship between debt management practices and the sustainability of SME growth. The results are anticipated to facilitate the creation of customized strategies designed to enhance financial decision-making and promote enduring business resilience among SMEs in Uganda.

Research Objectives

The study aimed to explore the behavioural and cognitive factors that influence the sustainable growth of Small and Medium-sized Enterprises (SMEs) in Lira City, Uganda. The study investigated the interplay between debt management behaviour, debt literacy, and SME growth sustainability, with a focus on the moderating role of debt literacy. The study was guided by the following specific objectives:

- To examine the effect of debt management behaviour on the growth sustainability of SMEs in Lira City, Uganda.
- To assess the influence of debt literacy on SME growth sustainability.
- To determine the moderating effect of debt literacy on the relationship between debt management behaviour and SME growth sustainability.

Research Hypotheses

Based on the stated objectives, the study proposes the following hypotheses to be tested empirically using Structural Equation Modeling (SEM) with a bootstrap approach. The hypotheses aim to establish the direct and moderating relationships among debt management behaviour, debt literacy, and SME growth sustainability:

- H_1: Debt management behaviour has a statistically significant effect on the growth sustainability of SMEs in Lira City, Uganda.
- H_2: Debt literacy has a statistically significant influence on the growth sustainability of SMEs.
- H_3: Debt literacy significantly moderates the relationship between debt management behaviour and SME growth sustainability.

Significance of the Study

This research provides significant insights into theoretical frameworks, policy development, and practical applications in business. This research theoretically expands behavioural finance by empirically illustrating the interaction between two dimensions of debt literacy—debt knowledge and debt skills—and behavioural traits, including lifestyle patterns, religiosity, and financial self-efficacy, in relation to the sustainability of SME growth. This study enhances the current literature by introducing a behavioural model that incorporates financial competence into the examination of debt utilization and firm performance, thus contributing to the academic understanding of the cognitive and behavioural elements influencing SME financing results (Lusardi & Tufano, 2015; Mitchell & Lusardi, 2022; Sabri & Wijekoon, 2019).

The study offers SME owners and managers a framework to enhance business performance via improved financial decision-making. The study underscores the significance of acquiring debt knowledge and developing practical debt management skills, illustrating how SMEs can make informed borrowing decisions, optimize debt utilization, and ensure consistent loan repayment practices. Behavioural competencies are essential for attaining long-term business resilience and sustainable growth (Agyei, 2018; Orobia et al., 2020).

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The research presents important implications for policymakers and financial service providers. The identification of specific behavioural and knowledge-based gaps among SME operators can guide the creation of financial literacy programs and debt management support tools tailored to the needs of SMEs. These interventions enhance credit risk profiling, decrease default rates, and encourage responsible borrowing practices, especially in underserved and resource-limited regions like Lira City. An increase in financial literacy within the SME sector is expected to positively impact national economic development by improving productivity, creating jobs, and fostering innovation.

LITERATURE REVIEW

Theoretical Review

This research is based on three interconnected theoretical frameworks that together shape its conceptual model and analytical methodology. The Theory of Planned Behaviour (TPB), the Sustainable Growth Theory (SGT), and the Financial Capability Theory (FCT) provide complementary perspectives for analysing the interplay of behavioural attributes, financial competencies, and firm-level strategies in relation to the sustainable growth of Small and Medium-sized Enterprises (SMEs)(Ajzen, 1991; Atkinson et al., 2006; Higgins, 1977). This integration of frameworks addresses the Journal of Small Business Management's focus on behavioural and capability-based factors influencing SME performance, especially in resource-constrained settings.

The initial foundational framework is the Theory of Planned Behaviour, which provides a psychological rationale for the formation of behavioural intentions influenced by attitudes, subjective norms, and perceived behavioural control. In the realm of SMEs, TPB offers a significant framework for analysing the impact of entrepreneurs' personal and social beliefs on their debt management practices. This theory is utilized in the study to elucidate the impact of lifestyle patterns on financial discipline, the influence of religiosity on ethical obligations concerning debt repayment, and the role of financial self-efficacy in reflecting the confidence to manage and utilize credit responsibly (Ajzen, 1991).

The second theoretical anchor is the Sustainable Growth Theory (SGT), which asserts that a firm's long-term growth must correspond with its capacity to finance expansion through internally generated earnings. For SMEs in financially constrained environments such as Lira City, this theory underscores the significance of prudent debt management and the need for caution regarding excessive reliance on external financing. SGT endorses the study's aim to evaluate the extent to which responsible debt management practices contribute to sustainable growth through the maintenance of financial stability, the prevention of over-leverage, and the encouragement of internal reinvestment. This theory offers a framework for connecting financial decision-making to growth trajectories in small businesses (Higgins, 1977).

The third theoretical foundation is the Financial Capability Theory (FCT), which posits that access to financial products alone does not lead to enhanced financial outcomes; rather, individuals must have the requisite knowledge, skills, and confidence to make informed decisions. This theory is fundamental to the study's conceptualization of debt literacy, operationalized through two primary dimensions: debt knowledge and debt skills. FCT supports the investigation of how debt literacy influences the relationship between debt management behaviour and the sustainability of SME growth. The theory offers a capability-based explanation for the variation in financial behaviour outcomes among SME populations with differing literacy levels (Atkinson et al., 2006; Kempson et al., 2013).

Conceptual Review

This study examines three primary constructs: debt management behaviour, debt literacy, and the

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sustainability of SME growth. Debt management behaviour pertains to the strategies employed by SME owners in managing borrowed capital. It encompasses lifestyle patterns, which delineate spending habits and personal consumption tendencies; religiosity, which signifies the impact of religious beliefs on financial decision-making and repayment discipline; and financial self-efficacy, which indicates the confidence in one's ability to execute financial tasks proficiently and meet debt obligations (Orobia et al., 2020; Sabri & Wijekoon, 2019). These aspects are essential as they determine how SMEs manage debt utilization and repayment, affecting firm stability and development potential over time.

Debt literacy is defined as a combination of two elements: debt knowledge and debt skills. Debt knowledge includes understanding loan structures, interest rates, credit terms, and payback schedules, whereas debt skills pertain to the actual use of this information in budgeting, planning, and managing loan repayments (Agyei, 2018; Lusardi & Tufano, 2015). Collectively, these competencies influence the degree to which SME owners can make intelligent borrowing choices, evade excessive debt, and utilize credit to enhance operational efficiency and financial sustainability. Increased debt literacy improves the likelihood of responsible financial conduct and sustained growth.

This study defines SME growth sustainability as the ability of a small or medium-sized firm to attain steady enhancements in sales, profitability, and employment levels while maintaining financial stability. It demonstrates the capacity to reinvest profits, control operating expenses, and enhance market presence over time (Endris & Kassegn, 2022). Sustainable growth encompasses not merely immediate performance but also the establishment of resilience against financial disruptions, market fluctuations, and company uncertainties. This construct is crucial to the study as it encapsulates the outcome variable affected by both debt-related behaviours and financial literacy.

Empirical Evidence

Empirical research conducted in various regions has shown inconclusive findings concerning the relationship between debt management strategies and the growth of Small and Medium-sized Enterprises (SMEs). Methodical loan utilization and precise financial recordkeeping significantly enhanced asset returns for SMEs in Tanzania (Badi & Ishengoma, 2021). Insufficient debt supervision substantially led to the collapse of SMEs in South Africa (Mamaro & Legotlo, 2020). Deficient borrowing management, ineffective loan structure, and inadequate financial controls have led to increased failure rates among SMEs in Uganda (Nuwagaba et al., 2021). These findings underscore the importance of financial access and the ensuing behavioural patterns following loan acquisition.

Building on this foundation, behavioural finance research has increasingly examined the impact of cognitive and psychological factors on financial results in small and medium-sized enterprises (SMEs). Financial self-efficacy has been empirically linked to timely loan repayment, reduced loan defaults, and improved creditworthiness (Razak et al., 2020). Religiosity has become a significant determinant, with robust religious commitment positively correlating with ethical debt repayment and conservative borrowing practices (Opoku et al., 2023). These behavioural concepts are essential for understanding the fundamental processes that affect SME debt management strategies across many cultural and socio-economic environments.

Despite the growing recognition of behavioural characteristics, the moderating effect of debt literacy remains insufficiently explored in empirical studies. Behavioural qualities can amplify or diminish the influence of financial knowledge; nevertheless, empirical investigation of these relationships is limited (Sabri & Wijekoon, 2019). Furthermore, contemporary research has rarely employed advanced statistical models such as Structural Equation Modelling (SEM) with

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bootstrapping, which are more effective in clarifying the complex relationships among latent behavioural and cognitive traits. This discrepancy is especially pronounced in resource-constrained settings like Uganda, where financial literacy and practices among SME owners demonstrate considerable diversity.

When examined independently, debt literacy exhibits a positive link with the financial performance of SMEs. Research in Malaysia revealed that SMEs exhibiting superior debt awareness and repayment planning capabilities showed improved cash flow management and stronger growth trajectories (Agyei, 2018; Orobia et al., 2020). Debt literacy improved credit discipline, loan utilization efficiency, and enterprise resilience (Elliyana et al., 2024; Mireku et al., 2023). Nonetheless, most of these studies treat debt literacy as a singular predictor, neglecting to explore its interaction with other behavioural traits, so limiting both analytical rigour and practical relevance.

A consensus is forming that the amalgamation of financial expertise and behavioural traits is more representative of SME performance than either one alone. Enterprises with high debt literacy and strong financial self-efficacy were more likely to employ borrowed funds for productive ends, avoid debt pitfalls, and sustainably reinvest profits (Kintu et al., 2019). Behavioural discipline, enhanced by financial expertise, serves as a protection against adverse economic conditions (Ilugbusi & Adisa, 2024). Holistic viewpoints are crucial for developing multifaceted strategies to enhance SME success.

Owing to the intricate characteristics of financial behaviour and literacy, academics have progressively embraced Structural Equation Modelling (SEM) with bootstrapping as a preferred analytical technique. This method enables simultaneous assessment of direct, indirect, and moderating effects among factors, yielding an enhanced understanding of behavioural dynamics. Structural Equation Modelling (SEM) was utilized to examine the debt decisions of small and medium-sized enterprises (SMEs), omitting variables such as debt literacy (Buyinza et al., 2018). This study addresses the methodological deficiency by utilizing SEM-Bootstrap to investigate the moderating influence of debt literacy on the correlation between debt management behaviour and the sustainability of SME growth.

In summary, while current empirical research underscores the importance of financial behaviour and literacy in influencing SME success, it often overlooks the synergistic effects of these characteristics. This study enriches the current literature by introducing a comprehensive behavioural-finance framework encompassing lifestyle patterns, religiosity, financial self-efficacy, and debt literacy. This study focuses on SMEs in Lira City, Uganda, utilizing SEM-Bootstrap for empirical analysis to fulfil the need for context-specific, methodologically robust research that enriches academic understanding and guides policy formulation.

Identified Gaps

This research aimed at filling notable gaps in the current literature regarding SME financing and behavioural finance, especially within developing economies. The role of debt literacy as a moderating variable in the relationship between debt management behaviour and the sustainability of SME growth has been inadequately explored in empirical research. Debt literacy is acknowledged for its significance in financial decision-making; however, limited research has explored its conditional impact on behavioural outcomes within SME contexts, despite its theoretical relevance and practical implications for business sustainability.

Secondly, contemporary studies frequently examine behavioural factors, including lifestyle choices, religiosity, and financial self-efficacy, in isolation, neglecting their integration with cognitive financial competencies such as debt knowledge and debt skills. This fragmented perspective neglects the

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interaction of these constructs in influencing the financial behaviours and decisions of SME owners. The study integrates behavioural dimensions with financial competence in a unified model, enhancing the understanding of mechanisms that influence debt outcomes.

Third, many previous empirical studies predominantly utilize basic statistical methods, especially linear regression models, thereby constraining the examination of intricate interaction effects. This methodological limitation hinders a more comprehensive understanding of the interactions between moderator and predictor variables. This study addresses the existing gap by employing Structural Equation Modelling (SEM) with bootstrapping, a robust statistical method well-suited for testing moderation in behavioural finance research and consistent with the methodological standards of the Journal of Small Business Management.

Theoretical applications of behavioural finance concepts, including the Theory of Planned Behaviour and the Financial Capability Theory, in the context of SMEs, are limited. This occurs notwithstanding their significant explanatory capacity regarding financial behaviour. The application of these theories enhances the conceptual framework for understanding the relationship among personal values, behavioural intentions, and financial competence in the context of responsible debt management and growth promotion.

There is a significant deficiency of empirical research addressing SMEs in Uganda, especially in regional urban centres such as Lira City. Existing research predominantly focuses on capital cities or national-level aggregates, potentially failing to accurately represent the experiences of entrepreneurs in smaller municipalities. This study addresses the contextual gap by providing localized insights into behavioural finance practices among SMEs in Lira City, thus improving the relevance and applicability of its findings for policy and practice.

Theoretical Model

The conceptual model established for this study illustrates the anticipated links among the primary constructs: debt management behaviour, debt literacy, and the sustainability of SME growth. The graphic below illustrates that debt management behaviour, which includes lifestyle patterns, religion, and financial self-efficacy, is posited to directly impact the sustainability of SME growth. Debt literacy, encompassing debt knowledge and abilities, serves as a moderating variable anticipated to either enhance or diminish the influence of debt management behaviour on the growth of SMEs.

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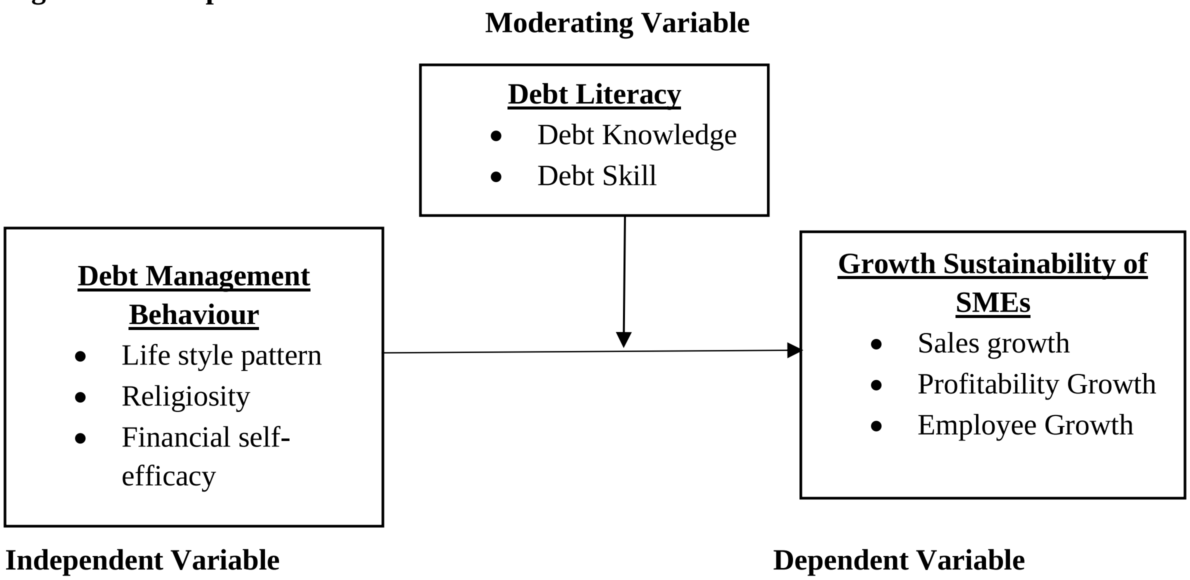
Figure 1: Conceptual Framework



This model (refer to Figure 1) provides a thorough framework for examining the interplay between cognitive abilities and behavioural practices in shaping sustainable growth outcomes in SMEs. It emphasizes the importance of viewing debt literacy not merely as a standalone predictor, but as a strategic enabler that can enhance or hinder the effectiveness of behavioural traits in financial decision-making. This work utilizes SEM-Bootstrap methods to investigate the complex, multifaceted relationships often overlooked in conventional linear analysis.

RESEARCH METHODOLOGY

This section lays out the methodology that guided the empirical investigation of the link between debt management practices and the long-term viability of growth for SMEs in Lira City, Uganda. To guarantee methodological rigour, validity, and reliability of results, the strategy was developed in line with the recognized norms of social science research (Creswell & Creswell, 2018).

Research Design

This research utilized a cross-sectional quantitative design to investigate the moderating role of debt literacy in the relationship between debt management behaviour and the sustainability of growth in Small and Medium-sized Enterprises in Lira City, Uganda. This design was suitable as it facilitated the collection of primary data from a wide sample at one point in time, allowing the researcher to discern existing patterns, relationships, and interactions among the study variables (Bryman, 2016). The quantitative approach was appropriate for this study, which sought to test hypotheses concerning latent constructs including lifestyle patterns, religiosity, financial self-efficacy, debt literacy, and indicators of SME growth. Structured instruments and statistical procedures improved the objectivity and reliability of the results (Creswell & Creswell, 2018). Structural Equation Modelling (SEM), utilizing bootstrapping techniques, was applied to examine both direct and moderating relationships, providing a comprehensive analytical framework for addressing complex models with latent constructs (Hair et al., 2021).

Study Area

The study was carried out in Lira City, Northern Uganda, which is an emerging urban centre characterized by a dynamic small and medium-sized enterprise (SME) sector engaged in trade, agro-processing, hospitality, education, and services (UBOS, 2020). Lira City was intentionally chosen

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due to the considerable financial access and debt management challenges faced by its SMEs, providing an appropriate context to investigate the interaction between behavioural and cognitive factors, such as debt literacy, and debt management behaviour in relation to sustainable business outcomes. The city presents a varied lending landscape, encompassing both formal and informal credit sources, which facilitates an examination of the behavioural aspects of debt utilization among SME operators.

Study Population

The study's target population included 1,398 respondents from 699 registered SMEs across 12 distinct business categories in Lira City (Ouni, 2024). The entities encompassed radio stations, funeral services, wholesale merchants, motor spare parts suppliers, agro-input dealers, petrol stations, catering services, millers, supermarkets, educational institutions, bookshops and manufacturing firms. This diversity facilitated a thorough evaluation of debt behaviour and financial practices across various sectors. Table 1 presents a comprehensive distribution.

Table 1: Presents the Distribution of the Study Population Across the Various SME Categories.

SME Category	No. of SMEs	No. of Respondents
Radio Stations	08	16
Funeral Services	04	08
Wholesale Merchants	35	70
Motor Spares and Garages	68	136
Agro Input Providers	21	42
Gas and Oil Stations	50	100
Catering and Hotel Services	136	268
Millers	58	116
Supermarkets	50	100
Book and Stationery Hubs	14	28
Private Schools	246	492
Manufacturing Firms	11	22
Total	699	1,398

Source: Ouni (2024).

Sample Size and Sampling Technique

The sample size of 311 SMEs was calculated from a population of 1,398 using Yamane's (1967) formula, applying a margin of error of 5% and a confidence level of 95%. The sampling technique utilized was simple random sampling, which guaranteed that each enterprise had an equal opportunity for selection. This approach enhances generalizability and minimizes selection bias (Pace, 2021). The sample size was deemed statistically adequate for SEM analysis.

Data Collection Method

Primary data were collected throughout a two-month duration, specifically in February and March 2025, with a structured questionnaire containing Likert-scale items, which are recognised for evaluating attitudes and behaviours in finance and management research (Boone & Boone, 2012). The questionnaire assessed behavioural and literacy characteristics including debt knowledge, debt skills, lifestyle patterns, religiosity, financial self-efficacy, and indicators of SME growth. Survey items were adapted from validated instruments (Mitchell & Lusardi, 2022; Sabri & Wijekoon, 2019). A preliminary study with 20 SMEs was performed before comprehensive data collection to improve the clarity, dependability, and coherence of the instrument. Informed consent was secured from all individuals before their involvement in the study,

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guaranteeing voluntary participation and compliance with ethical standards.

Measurement of Variables

The study's variables were defined using notions from prior work and adapted to the local situation. Debt Management Behaviour (Lifestyle Pattern, Religiosity, Financial Self-efficacy), debt literacy (knowledge and Skills), and the sustainability of SME growth (sales, profitability, and employment growth) were assessed using 5-point Likert scales. Construct items were derived from established studies and evaluated via SEM, with debt literacy functioning as a moderating variable.

Validity

Three types of validity were evaluated: face validity, content validity, and construct validity (Saunders; et al., 2016). The tool was reviewed by experts and subject matter experts from a similar context, specifically Soroti City. The Item Content Validity Index (I-CVI) method was utilized according to Lynn (1986), and average congruency percentages were computed (Schilling et al., 2007). All constructs attained satisfactory CVI scores exceeding 0.70, thereby validating content relevance and appropriateness for the study context.

Reliability

Reliability was evaluated by Cronbach's Alpha for each variable and subcomponent. All constructions achieved the minimum requirement of 0.70, so affirming robust internal consistency (Taber, 2018). Significantly, growth sustainability indicators produced the greatest reliability scores, succeeded by debt literacy and debt management behaviour. The debt knowledge assessment yielded an alpha of 0.902, affirming its strong measuring features.

Data Analysis Technique

Data analysis was conducted utilizing Stata Version 17. The analysis comprised descriptive statistics for respondent profiling, Exploratory Factor Analysis (EFA) to identify latent constructs, and Confirmatory Factor Analysis (CFA) to validate the measurement model. Structural Equation Modelling (SEM) utilizing bootstrapping techniques was implemented to evaluate both direct and moderating relationships. Debt management behaviour, debt literacy, and SME growth sustainability were modelled as latent variables, facilitating a detailed analysis of the moderating effect of debt literacy on growth outcomes.

Ethical Considerations

Ethical approval for this work was secured by the Uganda National Council for Science and Technology (UNCST Ref: SS3676ES) and the Gulu University Research Ethics Committee (GUREC Ref: GUREC-2024-1057). Furthermore, administrative approval was obtained from the Lira City Council. Before participation, written informed consent was secured from all respondents, and involvement was completely optional. To maintain confidentiality, personal identifiers were omitted from the dataset, and access to the data was rigorously regulated. The study complied with the ethical norms of beneficence, respect for individuals, and impartiality, ensuring professional and respectful interaction throughout the research process.

RESULTS

Descriptive Statistics

Within this section, the demographic and background characteristics of the 311 small and medium-sized enterprise respondents who took part in the study are presented. The following are some of the most important factors that are taken into consideration: gender, age bracket, marital status, degree of education, business type, age of business, number of employees, and key sources of debt financing. Table 2 provides a comprehensive breakdown of the characteristics of the respondents in question.

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Table 2: Background Characteristics of the Respondents

Variable	Frequency	Percent
Gender		
Male	200	64.3
Female	111	35.7
Age Bracket		
18-24	44	14.1
25-34	134	43.1
35-50	110	35.4
50+	23	7.4
Marital Status		
Single	63	20.3
Married	239	76.8
Widow	9	2.9)
Level of Education		
Non	2	0.6
Primary	6	1.9
Secondary	43	13.8
Tertiary (College)	78	25.1
University (Undergraduate)	150	48.2
Post Graduate (Master and Higher)	10	3.2
Others (Vocational, Church-Based, and Group Training)	22	7.1
Business Categories		
Radio Stations	4	1.3
Funeral Services	2	0.6
Wholesale Merchants	16	5.1
Motor Spares and Garage	30	9.6
Agro-Input Service Provider	9	2.9
Gas and Oil Stations	22	7.1
Catering and Hotel Services	60	19.3
Millers	26	8.4
Supermarkets	22	7.1
Books and Stationary Hub	6	1.9
Private Schools	109	35.0
Manufacturing firms	5	1.6
Age of the Business		
<1	12	3.9
1-5	67	21.5
6-10	123	39.5
11-15	47	15.1
16-20	54	17.4
21+	8	2.6
Number of Employees		
5-49	251	80.7
50-100	60	19.3
Major Source of debt finance		
Friends/Relatives	7	2.3
Money Lenders	44	14.1
Associations (VSLAS)	23	7.4
SACCOs	55	17.7
Microfinance Institutions	57	18.3
Banks	125	40.2

N=311

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A total of 311 individuals from a variety of small and medium-sized enterprises (SMEs) in Lira City, Uganda participated in the study. The demographic characteristics of these respondents are summarized in Table 2. Based on the findings of the demographic research, it was found that 64.3% of the respondents were male, which indicates that the majority of business ownership in the region is led by men. Among the participants, the majority (43.1% of them) were between the ages of 25 and 34, followed by the age range of 35–50 years old (35.4% of them). The percentage of people who were either under 24 years old (14.1%) or over 50 years old (7.4%) was lower.

The bulk of the population was married (76.8%), while 20.3% of the population was single and just 2.9% of the population was widowed. In terms of educational achievement, nearly half of the respondents (48.2%) had completed their undergraduate education at a university, followed by 25.1% who had completed their tertiary education, and 13.8% who had completed their secondary education. On the other hand, the remaining individuals had either primary, vocational, or no formal education at all. Only 3.2% of the population received postgraduate education.

In terms of the types of businesses that were represented, the most prominent ones were private schools, which accounted for 35.0% of the total, followed by catering and hotel services (19.3%), motor spares and garages (9.6%), and millers (8.4%). Other industries, such as supermarkets, petrol and oil stations, and suppliers of agricultural inputs, had a reasonable level of representation. On the other hand, burial services, radio stations, and manufacturing enterprises were the groups with the lowest level of representation.

According to the age distribution of businesses, the majority of small and medium-sized enterprises (SMEs) had been in operation for between six and ten years (39.5%), while others fell into the groups of one to five years 21.5%, sixteen to twenty years 17.4%, and eleven to fifteen years 15.1%. Only 2.6% of the companies had been in operation for more than 21 years, which is a rather tiny percentage.

Based on the number of employees, it was determined that 80.7% of the companies employed between 5 and 49 individuals, while 19.3% employed between 50 and 100 people, which is in line with the classification of small and medium-sized enterprises (SMEs). On the subject of debt financing, the majority of small and medium-sized enterprises (SMEs) relied on official financial institutions. Forty-two percent of SMEs obtained loans from banks, eighteen percent from microfinance institutions, and seventeen percent from SACCOs. Moneylenders, VSLAs, and friends and family were among the informal sources that accounted for a lesser share of the total.

Exploratory Factor Analysis

Exploratory Factor Analysis of Debt Management Behaviour

Several tests, including the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy and the Bartlett's Test of Sphericity, were carried out in order to determine whether or not the data were suitable for factor analysis. An evaluation of the factorability of the correlation matrix is carried out by these tests. The findings are presented in Table 3.

Table 3: KMO and Bartlett's Test of Sphericity

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.832
Bartlett's Test of Sphericity	Approx. Chi-Square	6169.975
	df	741
	Sig.	**.000**

Article DOI: https://doi.org/10.37284/ijfa.4.1.3093

Based on the data presented in Table 3, the KMO value of 0.832 is significantly higher than the acceptable threshold of 0.60, which indicates that the sampling adequacy is quite high. The results of the Bartlett's Test of Sphericity demonstrated a statistically significant result ($\chi^2 = 6169.975$, df = 741, $p < 0.001$), so demonstrating that the correlation matrix was adequate for applying factor analysis. The continuation of factor extraction is strongly justified by these results, which provide solid rationale.

An examination of the Total variation Explained was carried out in order to ascertain the percentage of variation that was accounted for by the elements that were extracted. Initial eigenvalues and rotation sums of squared loadings are presented in Table 4, which may be found here.

Table 4: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	8.253	21.162	21.162	8.253	21.162	21.162	5.699	14.613	14.613
2	4.331	11.105	32.267	4.331	11.105	32.267	4.884	12.524	27.137
3	3.806	9.758	42.025	3.806	9.758	42.025	4.022	10.314	37.451
4	2.266	5.809	47.834	2.266	5.809	47.834	3.456	8.862	46.313
5	2.124	5.447	53.281	2.124	5.447	53.281	2.718	6.968	53.281

Extraction Method: Principal Component Analysis.

As can be seen in Table 4, five components that had eigenvalues that were greater than one were extracted, and these components collectively accounted for 53.28 percent of the total variance. This suggests that the fundamental concepts involved in growth sustainability are represented in a manner that is evenly divided. The rotation sums indicate that there is a balanced distribution of variation among the five components, which justifies the preservation of these factors for further investigation.

The Rotated Component Matrix is presented in Table 5, which illustrates the pattern of factor loadings following the application of Varimax rotation. The fundamental features of the growth sustainability construct are made clearer as a result of this.

Table 5: Rotated Component Matrix[a]

ITEMS		Component				
		1	2	3	4	5
SSG2	The business has expanded into new markets or regions to boost sales	.746				
SEG7	The business has been hiring employees with specialized skills to support business growth	.694				
SSG7	The business has implemented successful marketing strategies that have driven sales growth	.688				
SEG1	The number of employees in the business has increased as the business has grown.		.759			
SPG3	Over the past year, the business has experienced improved profitability despite rising costs.		.738			
SSG9	My business uses pricing strategies effectively to maximize sales growth.		.726			
SEG3	Over the past year, the growth in staff numbers has been directly aligned with business growth.		.676			

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ITEMS		Component				
		1	2	3	4	5
SPG11	The business has diversified revenue streams, reducing dependency on one source of income and increasing profitability.			.711		
SSG6	I actively track customer feedback to improve products/services, leading to increased sales.			.681		
SSG1	The demand for my products/services has increased significantly over the past year.			.676		
SEG10	Employee productivity has increased as a result of strategic recruitment and team building.				.725	
SEG11	The business's workforce is more efficient, leading to cost savings and higher growth.				.679	
SPG13	The business has a clear financial strategy to ensure continued profitability, even in uncertain economic conditions.					.819
	Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.					
	a. Rotation converged in 6 iterations.					

The five extracted components each have their own unique factor loadings, which are displayed in Table 5. Items such as SSG2, SSG7, and SEG7, which are associated with sales growth, displayed a high level of loading on Component 1, which indicates that market expansion and marketing success were present. The SEG1, SPG3, SSG9, and SEG3 components that make up Component 2 are reflective of the expansion of employment and profitability. The contributions from SPG11, SSG6, and SSG1 are displayed in Component 3, which aligns with the components of customer engagement and revenue diversification. SEG10 and SEG11, which are indicators of productivity and efficiency, are the components that make up Component 4. Component 5, which is denoted by SPG13, is responsible for strategic preparation of financial matters. Based on these findings, a multi-dimensional structure of growth sustainability that includes employment, sales, and profitability dimensions has been validated.

Exploratory Factor Analysis of Debt Literacy

Both the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy and Bartlett's Test of Sphericity were computed in order to determine whether or not the data were sufficient for factor analysis. With the help of these tests, the study determined whether or not the data matrix was appropriate for factor extraction. Table 6 provides a summary of the findings.

Table 6: KMO and Bartlett's Test of Sphericity

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.671
Bartlett's Test of Sphericity	Approx. Chi-Square	962.345
	Df	105
	Sig.	.000

According to the data shown in Table 6, the KMO value was 0.671, which is higher than the minimal value of 0.60 that is suggested. This indicates that the sampling adequacy for factor analysis is satisfactory. Furthermore, it is worth noting that Bartlett's Test of Sphericity yielded a statistically significant result ($\chi^2 = 962.345$, df = 105, $p < 0.001$), so offering confirmation that the correlation matrix

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contains an adequate amount of intercorrelations to warrant the utilization of factor analysis.

Table 7 displays the total variance that can be attributed to the components that were extracted. This study helped determine the number of elements that should be kept and the degree to which they accurately represent the variables that were observed.

Table 7: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.955	19.700	19.700	2.955	19.700	19.700	2.424	16.161	16.161
2	2.115	14.099	33.799	2.115	14.099	33.799	2.145	14.298	30.458
3	1.575	10.499	44.298	1.575	10.499	44.298	1.751	11.675	42.134
4	1.307	8.716	53.014	1.307	8.716	53.014	1.632	10.880	53.014
Extraction Method: Principal Component Analysis.									

As can be seen in Table 7, a total of 53.01% of the variance was accounted for by the extraction of four components that had eigenvalues that were greater than 1. A balanced distribution of explanatory power across the four components is confirmed by the rotational sums of squared loadings. The first component is responsible for explaining 16.16% of the variance, while the fourth component is responsible for 10.88% of the variance. Within the framework of the debt literacy construct, this suggests that there is a stable multidimensional structure.

The Rotated Component Matrix, which can be seen in Table 8, displays the factor loadings of each item after the Varimax rotation has been applied. This improves the interpretability of the data by clearly grouping items that have extremely strong correlations under particular components.

Table 8: Rotated Component Matrix[a]

		Component			
		1	2	3	4
SKI4	Paying back a loan of UGX 800,000 in monthly instalments of UGX 80,000 over 12 months results in a total interest of UGX 160,000 at an annual rate of 18%	.846			
SKI3	Taking a loan of UGX 2,000,000 for 3 years at a 15% annual interest rate leads to a total interest payment of UGX 900,000	.788			
SKI1	Borrowing UGX 1,000,000 at an annual interest rate of 10% results in an interest payment of UGX 100,000 after one year	.757			
KNO9	A secured loan requires collateral, while an unsecured loan does not.		.645		
KNO7	Defaulting on a loan means failing to repay it as agreed, which can have serious financial and legal consequences.			.731	
KNO3	When you miss a payment on a loan, it can negatively affect your credit score.			.663	
KNO6	Shorter loan terms usually result in lower overall interest payments.				.668
SKI2	A loan of UGX 500,000 with an annual compound interest rate of 12% amounts to UGX 560,000 after one year				.608
	Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.				
	a. Rotation converged in 14 iterations.				

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It is evident from the data shown in Table 8 that SKI4, SKI3, and SKI1 all scored highly on Component 1, indicating that they had strong computational and interest calculation skills. Additionally, KNO9 was loaded into Component 2, which is concerned with the comprehension of loan collateral. The third component was responsible for capturing knowledge regarding loan default and the influence on credit score, with KNO7 and KNO3 loading extremely high. Component 4 consisted of KNO6 and SKI2, both of which emphasised knowing compound interest and the effectiveness of repayment. These findings provide evidence that the debt literacy construct is comprised of four separate elements, which encompass both the conceptual and computational realms.

Exploratory Factor Analysis of Growth Sustainability

Several tests, including the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy and Bartlett's Test of Sphericity, were carried out to determine whether or not the data were suitable for factor analysis. An evaluation of the factorability of the correlation matrix is carried out by these tests. The findings are presented in Table 9.

Table 9: KMO and Bartlett's Test of Sphericity

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.832
Bartlett's Test of Sphericity	Approx. Chi-Square	6169.975
	df	741
	Sig.	.000

Based on the data presented in Table 9, the KMO value of 0.832 is significantly higher than the acceptable threshold of 0.60, which indicates that the sampling adequacy is quite high. The results of the Bartlett's Test of Sphericity demonstrated a statistically significant result ($\chi^2 = 6169.975$, df = 741, $p < 0.001$), so demonstrating that the correlation matrix was adequate for applying factor analysis. The continuation of factor extraction is strongly justified by these results, which provide solid rationale.

An examination of the Total variation Explained was carried out to ascertain the percentage of variation that was accounted for by the elements that were extracted. Initial eigenvalues and rotation sums of squared loadings are presented in Table 10, which may be found here.

Table 10: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	8.253	21.162	21.162	8.253	21.162	21.162	5.699	14.613	14.613
2	4.331	11.105	32.267	4.331	11.105	32.267	4.884	12.524	27.137
3	3.806	9.758	42.025	3.806	9.758	42.025	4.022	10.314	37.451
4	2.266	5.809	47.834	2.266	5.809	47.834	3.456	8.862	46.313
5	2.124	5.447	53.281	2.124	5.447	53.281	2.718	6.968	53.281
Extraction Method: Principal Component Analysis.									

According to the data shown in Table 10, five components that had eigenvalues that were greater than one were extracted. These components collectively accounted for 53.28 percent of the total variance. It is clear from this that the fundamental concepts involved in growth sustainability are represented in a manner that is evenly divided. The rotation sums indicate that there is a symmetrical distribution of variation among the five

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components, which justifies the preservation of these factors for further investigation.

Following the application of the Varimax rotation, the Rotated Component Matrix is presented in Table 11, which illustrates the pattern of factor loadings. The fundamental aspects of the growth sustainability architecture are brought into greater clarity as a result of this.

Table 11: Rotated Component Matrix[a]

ITEMS	Statement	Component				
		1	2	3	4	5
SSG2	The business has expanded into new markets or regions to boost sales	.746				
SEG7	The business has been hiring employees with specialized skills to support business growth	.694				
SSG7	The business has implemented successful marketing strategies that have driven sales growth	.688				
SEG1	The number of employees in the business has increased as the business has grown.		.759			
SPG3	Over the past year, the business has experienced improved profitability despite rising costs.		.738			
SSG9	My business uses pricing strategies effectively to maximize sales growth.		.726			
SEG3	Over the past year, the growth in staff numbers has been directly aligned with business growth.		.676			
SPG11	The business has diversified revenue streams, reducing dependency on one source of income and increasing profitability.			.711		
SSG6	I actively track customer feedback to improve products/services, leading to increased sales.			.681		
SSG1	The demand for my products/services has increased significantly over the past year.			.676		
SEG10	Employee productivity has increased as a result of strategic recruitment and team building.				.725	
SEG11	The business's workforce is more efficient, leading to cost savings and higher growth.				.679	
SPG13	The business has a clear financial strategy to ensure continued profitability, even in uncertain economic conditions.					.819
	Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.					
	a. Rotation converged in 6 iterations.					

The five extracted components each have their unique factor loadings, which are displayed in Table 11. Items such as SSG2, SSG7, and SEG7, which are associated with sales growth, displayed a high level of loading on Component 1, which indicates that market expansion and marketing success were present. The SEG1, SPG3, SSG9, and SEG3 components that make up Component 2 are reflective of the expansion of employment and profitability. The contributions from SPG11, SSG6, and SSG1 are displayed in Component 3, which aligns with the components of customer engagement and revenue diversification. SEG10 and SEG11, which are indicators of productivity and efficiency, are the components that make up Component 4. Component 5, which is denoted by

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SPG13, is responsible for strategic preparation of financial matters. Based on these findings, a multi-dimensional structure of growth sustainability that includes employment, sales, and profitability dimensions has been validated.

Confirmatory Factor Analysis

A Confirmatory Factor Analysis (CFA) was used to assess the measurement model, which included three critical constructs: debt management behaviour, debt literacy, and growth sustainability. This model aims to confirm the links between observed indicators and their latent variables, as well as to verify the reliability and validity of the constructs in relation to sustainable SME financial practices.

Figure 2: CFA Model for Debt Management Behaviour, Debt Literacy, and Growth Sustainability

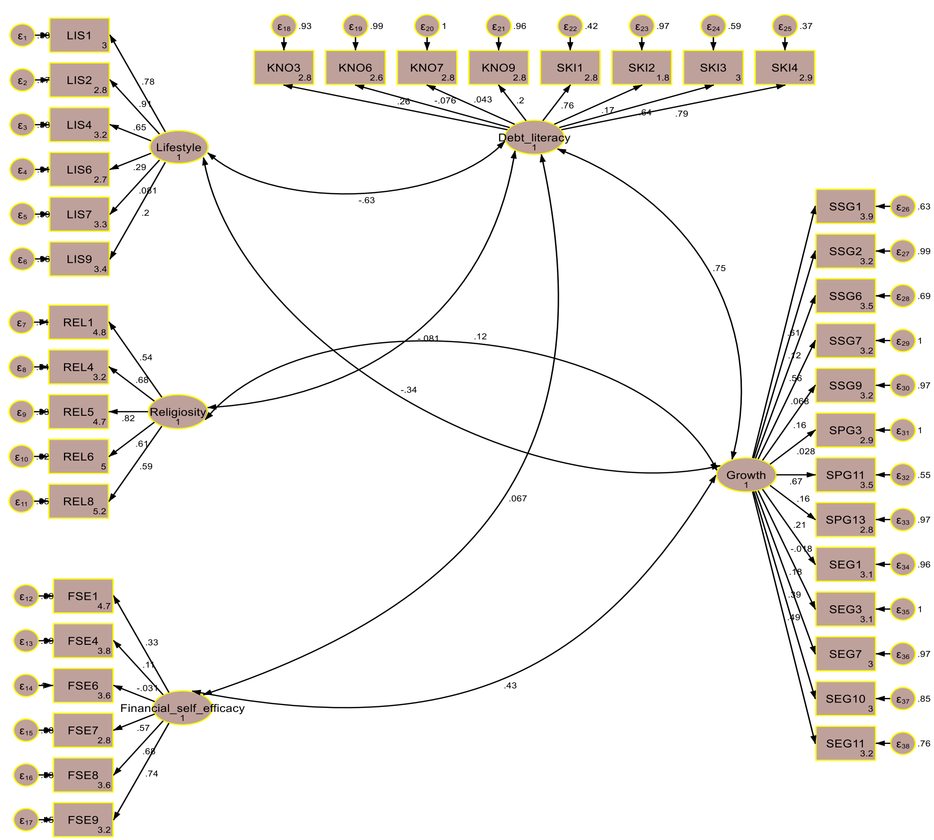

Figure 2 depicts the CFA model, which focuses on debt management behaviour, debt literacy, and growth sustainability. It displays the observed indicators' standardized factor loadings in relation to their respective latent constructions, as well as the related error terms. The model gives empirical evidence for the construct structure and facilitates further investigation using Structural Equation Modelling.

Structural Equation Modelling

This section presents the results of the structural equation model (SEM) used to examine how financial self-efficacy, religiosity, and lifestyle influence SME growth sustainability, with debt literacy modelled as a mediating variable. The model explores both direct and indirect pathways to evaluate how personal traits affect growth outcomes through financial knowledge and behaviour.

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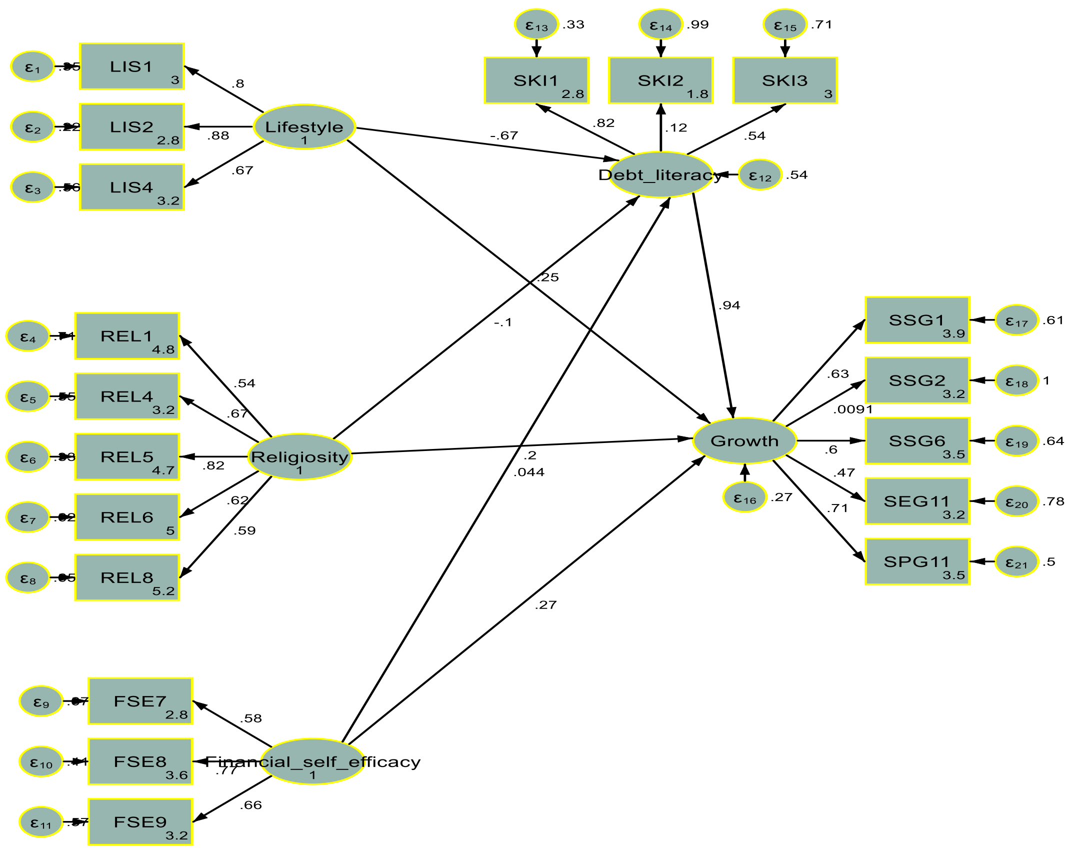
Figure 3 illustrates the structural model, displaying the standardized paths between financial self-efficacy, religiosity, lifestyle, debt literacy, and SME growth sustainability. Each path represents the hypothesized direction and strength of the relationships among the latent constructs.

Figure 3: SEM Model Diagram with Standardized Coefficients



Direct Effects of Debt Management Behaviour on SME Growth

Table 12 Shows the Direct Effects of the Exogenous Variables on the Outcome Variable (SME Growth Sustainability).

Direct Path	Std. Coefficient	Std. Error	z-value	p-value	Significance
Financial Self-Efficacy → Growth	0.044	0.069	0.63	0.526	Not Significant
Religiosity → Growth	-0.101	0.063	-1.60	0.110	Not Significant
Lifestyle → Growth	-0.672	0.055	-12.22	0.000	Significant

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The direct path analysis (see Table 12) indicates that lifestyle has a significant negative impact on SME growth (β = –0.672, p < 0.001), suggesting that certain lifestyle factors may impede business performance. However, financial self-efficacy (p = 0.526) and religiosity (p = 0.110) do not directly influence SME growth, highlighting the potential for indirect effects through other variables.

Mediation Effects of Debt Literacy

Table 13 Displays the Effects of Debt Management Behaviours on Debt Literacy, Which Mediates the Influence on Growth.

Mediated Path	Path Coefficient	p-value	Mediation Type
Financial Self-Efficacy → Debt Literacy → Growth	0.273 × (Positive)	0.000	Partial Mediation (Implied)
Religiosity → Debt Literacy → Growth	0.202 × (Positive)	0.004	Partial Mediation (Implied)
Lifestyle Pattern → Debt Literacy → Growth	0.254 × (Positive)	0.058	Marginal Mediation

As shown in Table 13, debt literacy was significantly predicted by financial self-efficacy (β = 0.273, p < 0.001) and religiosity (β = 0.202, p = 0.004), indicating their positive influence on financial knowledge. The lifestyle pattern construct had a marginal effect on debt literacy (β = 0.254, p = 0.058). These findings suggest that debt management behaviour may influence SME growth indirectly by shaping financial competence.

Hypothesis Testing

Table 14: Summarizes the Hypotheses Tested and Their Results.

Hypothesis	Path	Std. Coefficient	p-value	Supported?
H1	Financial Self-Efficacy → Growth Sustainability	0.044	0.526	No
H2	Religiosity → Growth Sustainability	-0.101	0.110	No
H3	Lifestyle Pattern → Growth Sustainability	-0.672	0.000	Yes
H4	Financial Self-Efficacy → Debt Literacy	0.273	0.000	Yes
H5	Religiosity → Debt Literacy	0.202	0.004	Yes
H6	Lifestyle Pattern→ Debt Literacy	0.254	0.058	Marginal

As presented in Table 14, among the six hypotheses tested, three were supported, two were not supported, and one was marginally supported. Notably, lifestyle pattern shows both a direct negative influence on growth sustainability and a marginal positive association with debt literacy. Both financial self-efficacy and religiosity show no direct effect on growth but significantly predict debt literacy, reinforcing the role of financial competence as a mediating mechanism.

DISCUSSION OF RESULTS

Direct Effects of Debt Management Behaviour on SME Growth Sustainability

The results of this research highlight the intricate influence of debt management practices—specifically lifestyle patterns, religiosity, and financial self-efficacy—on the growth sustainability of small and medium-sized enterprises. Among the three psychological traits, lifestyle exhibited a noteworthy negative direct

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impact on the sustainability of SME growth (β = -0.672, $p < 0.001$). This outcome is consistent with claims found in scholarly works indicating that specific individual behaviours, including excessive personal consumption, the prioritization of non-business expenditures, or a lack of formal financial planning, frequently obstruct business reinvestment and growth, especially in emerging markets (Chrisman et al., 2016; Kok et al., 2019). Within the context of SMEs in Uganda, the scarcity of capital and the narrow profit margins create a landscape where lifestyle choices that detract from business reinvestment can significantly hinder growth, as evidenced by the findings of Turyahikayo (2015) and Buyinza et al. (2018).

In contrast to anticipated outcomes, the variables of financial self-efficacy and religiosity exhibited no noteworthy direct influence on the growth of SMEs (β = 0.044, p = 0.526; β = -0.101, p = 0.110, respectively). Although previous studies indicate that religious commitment may foster ethical financial behaviour and that financial self-efficacy can improve responsible decision-making (Razak et al., 2020; Opoku et al., 2023), this research proposes that these characteristics, in isolation, may not adequately impact growth outcomes without the addition of suitable financial knowledge. The results bolster the premise within the Theory of Planned Behaviour that there must be a congruence between behavioural intentions and perceived behavioural control, which in this instance is exemplified by financial knowledge and practical competence (Ajzen, 1991).

Mediating Role of Debt Literacy

The concept of debt literacy has surfaced as a crucial mediating factor linking these behavioural characteristics to the growth of small and medium-sized enterprises. The relationship between financial self-efficacy and religiosity with debt literacy was found to be both positive and significant (β = 0.273, $p < 0.001$; β = 0.202, p = 0.004, respectively). This indicates that entrepreneurs who possess greater confidence or hold strong religious beliefs are more inclined to attain or utilize financial knowledge. This aligns with the research conducted by Lusardi and Tufano (2015) and Omar et al. (2024), which indicates that psychological and cultural factors frequently act as precursors to the acquisition of literacy. In Uganda, where the landscape of financial education is constrained and access to formal financial services is uneven (Nafiu et al., 2022), characteristics such as religiosity may foster a prudent approach to borrowing, subsequently promoting the pursuit of financial knowledge for enhanced financial management.

It is noteworthy that lifestyle patterns exhibited a slightly positive effect on debt literacy (β = 0.254, p = 0.058). This indicates that although specific lifestyle choices might impede direct business expansion, they could simultaneously act as catalysts for the development of financial competencies, particularly in times of financial strain. This paradox illustrates the complex nature of lifestyle, revealing how it can embody both harmful consumption patterns and adaptive financial strategies in times of stress. This aligns with the findings of Buyinza et al. (2018), which indicate that SMEs in Uganda frequently reactively acquire financial skills, prompted by experiences of financial distress.

Consequently, the mediating function of debt literacy in this analysis underscores the significance of financial acumen in converting behavioural characteristics into developmental results. This discovery aligns with the Financial Capability Theory (Atkinson et al., 2006), which posits that mere access to financial resources is insufficient; individuals must also have the necessary skills, confidence, and motivation to adeptly manage their financial choices. Furthermore, it is consistent with Sustainable Growth Theory (Higgins, 1977), which underscores the necessity for sustainable business development to be financed judiciously through well-informed capital structuring. Within the framework of SMEs in Lira City, the interplay

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between behavioural tendencies and financial acumen is pivotal in ascertaining whether debt serves as a driver of growth or a source of turmoil.

Interpretation of Structural Hypotheses

The results of the hypothesis testing elucidate the relationships modelled. The Hypotheses H1 and H2, which posited that financial self-efficacy and religiosity would have a direct impact on the growth of SMEs, were not substantiated. This suggests that these debt management behaviours may be inadequate for driving growth without the mediation of debt literacy. Hypothesis 3, which posited a direct negative impact of lifestyle on the growth of small and medium-sized enterprises, received substantial support. This illustrates how individual consumption behaviours and insufficient financial discipline can jeopardize the sustainability of enterprises.

The Hypotheses H4 and H5, which proposed that financial self-efficacy and religiosity positively influence debt literacy, received support, confirming that cognitive and moral beliefs may predispose individuals to seek and apply financial knowledge. Hypothesis 6, which investigated the influence of lifestyle on debt literacy, received marginal support. This indicates that certain lifestyle characteristics may indirectly promote learning or financial adaptations in response to stress. The results highlight the significant influence of debt literacy on the relationship between behavioural traits and enterprise growth.

Theoretical and Policy Implications

This study contributes to behavioural finance by proposing a model that integrates psychological dispositions and financial capabilities. This study enhances comprehension by illustrating that debt literacy mediates and influences the connection between internal characteristics and external performance results. This research validates the application of the Theory of Planned Behaviour, Financial Capability Theory, and Sustainable Growth Theory in elucidating the interplay of behavioural, cognitive, and structural factors that affect the growth of SMEs.

There is a significant necessity to enhance financial literacy programs, especially those designed for the specific circumstances of small business owners in emerging urban centres such as Lira City. These programs must encompass not only fundamental budgeting and bookkeeping but also incorporate debt literacy modules that emphasize comprehension of interest rates, loan terms, and repayment strategies. The design of these programs should account for the socio-cultural backgrounds and behavioural tendencies of SME owners to ensure their relevance and effectiveness. Integrating local languages and culturally relevant case studies into the curriculum may improve comprehension and practical application.

Financial institutions ought to integrate behavioural and cognitive screening tools into their credit assessment processes for SMEs. Assessing an applicant's debt literacy and behavioural patterns enables financial institutions to create tailored loan terms, potentially mitigating default risks and encouraging responsible borrowing practices. Tools may encompass basic financial literacy quizzes, interviews evaluating spending behaviour, or assessments of the borrower's historical financial decision-making record. Profiling SME owners enables lenders to identify entrepreneurs who could benefit from pre-loan counselling or flexible repayment options.

Community and faith-based organizations ought to be involved as strategic partners in the advancement of financial literacy. This study highlights the substantial impact of religiosity, indicating that such institutions can effectively function as credible platforms for the dissemination of financial education and the promotion of ethical financial behaviour. Financial literacy campaigns rooted in faith can integrate religious principles regarding stewardship, integrity, and prudent management, thereby enhancing the relatability and effectiveness of financial education. These organizations can

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offer continuous support and accountability frameworks that strengthen sound financial practices.

Finally, the creation of customized financial products that consider the distinct debt literacy levels and behavioural characteristics of SMEs can enhance loan utilization and repayment rates. Financial service providers must develop flexible and adaptive tools that correspond with the growth ambitions and financial capacities of entrepreneurs in fragile economic ecosystems. Products like tiered loan packages, grace periods, and financial coaching services may be integrated into loan agreements. These innovations will guarantee that SMEs obtain both capital and the necessary support and framework for effective utilization.

The policy interventions correspond with recent literature recommendations that advocate for multidimensional, context-specific strategies aimed at fostering SME development and enhancing financial inclusion (Mitchell & Lusardi, 2022; Elliyana et al., 2024).

CONCLUSION AND IMPLICATIONS

This research analysed the direct and mediating influences of debt management behaviour and debt literacy on the sustainable growth of SMEs in Lira City, Uganda. The findings indicate that lifestyle patterns have a significant negative impact on SME growth, whereas financial self-efficacy and religiosity do not have direct effects unless mediated by debt literacy. Debt literacy, defined by knowledge and skills, serves a crucial mediating function in converting behavioural traits into significant financial results. The findings support the notion that behaviourally driven decision-making should be integrated with financial capability to achieve sustainable enterprise growth. Small and medium-sized enterprises that exhibit strong behavioural characteristics alongside elevated financial literacy are more inclined to effectively manage debt, mitigate financial distress, and maintain long-term growth.

Theoretical Implications

This work empirically validates the combined application of the Theory of Planned Behaviour, Financial Capability Theory, and Sustainable Growth Theory within a cohesive behavioural-finance model, thereby contributing to the theoretical literature. It expands TPB by illustrating that internal psychological dispositions must engage with cognitive abilities—particularly debt literacy—to affect financial outcomes. Within the framework of FCT, the research substantiates the notion that financial results are contingent not only on capital accessibility but also on the ability to utilize it efficiently. Moreover, SGT is substantiated by the assertion that growth must be organically maintained through fiscally astute judgements, particularly in contexts with constrained external resources. This multidimensional method provides a more comprehensive explanation of SME financial behaviour compared to classic linear models.

Policy and Practical Implications

The study highlights the necessity for government agencies, financial institutions, and development partners to incorporate debt literacy into national financial education programs and frameworks for supporting SMEs. Financial literacy initiatives must be customized to target specific behavioural patterns and knowledge deficiencies discovered among SME owners. Institutions ought to implement behavioural screening instruments during credit evaluations to categorize borrowers according to their financial attitudes and literacy levels.

Financial service providers ought to develop and execute solutions that align with borrowers' behavioural profiles, integrating features such as grace periods, adaptable repayment plans, and compulsory pre-loan training sessions. Community-based organizations and religious institutions can function as venues for culturally relevant financial education, ensuring that debt literacy initiatives

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effectively reach different small and medium-sized enterprise populations. These pragmatic solutions would not only diminish loan default rates but also enhance the long-term viability of SME operations.

Contribution to Knowledge

This research offers multiple advancements to the current corpus of understanding. Initially, it situates debt literacy as a pivotal construct that connects behavioural characteristics and the performance of SMEs—an aspect that has not been thoroughly examined in the existing Ugandan SME literature. Secondly, it implements behavioural characteristics such as lifestyle, religiosity, and financial self-efficacy within a structural equation model, providing a detailed and evidence-based comprehension of how these characteristics influence enterprise results. Third, the study utilizes a comprehensive SEM-Bootstrap methodology that facilitates the concurrent assessment of direct, indirect, and interaction effects, thereby addressing the methodological shortcomings observed in previous SME research. Ultimately, by concentrating on Lira City, the research offers nuanced insights that can guide region-specific policies and interventions, thereby enhancing the geographic and practical significance of behavioural finance studies in sub-Saharan Africa.

Together, these contributions deepen our comprehension of the relationship among behaviour, literacy, and sustainable growth in SMEs, while also laying the groundwork for future research and evidence-informed policymaking in emerging economies.

DECLARATIONS

Ethical Approval

The Gulu University Research Ethics Committee (GUREC) has provided approval for this study, assigned reference number GUREC-2024-1057. The investigation was formally documented with the Uganda National Council for Science and Technology (UNCST) under registration number SS3676ES. Before taking part, all participants were thoroughly briefed on the study's nature, purpose, and confidentiality terms, and they willingly provided written informed consent. Throughout the processes of data collection, storage, and analysis, strict measures were implemented to ensure confidentiality and anonymity.

Conflict of Interest

The author declares that there are no known conflicts of interest associated with the publication of this manuscript.

Data Availability Statement

The dataset supporting the conclusions of this article is available from the corresponding author, Okello Apollo, upon reasonable request.

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