Debt Financing, Debt Management Behaviour, and the Growth Sustainability of Small and Medium-sized Enterprises in Lira City

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(22/U/2186/PHD-BM/PS)

A Thesis Submitted in Fulfilment of the Requirements for the Award of the Degree of Doctor of Philosophy in Finance of Gulu University.

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DECLARATION

I, Okello Apollo, hereby declare that this thesis titled "Debt Financing, Debt Management Behaviour, and the Growth Sustainability of Small and Medium-sized Enterprises in Lira City" is submitted in fulfilment of the requirements for the award of the Doctor of Philosophy in Finance Degree of Gulu University. I confirm that this thesis is my original work and has not been submitted, either wholly or partly, for the award of any other academic qualification at Gulu University or any other higher education institution. All sources of information used in this thesis have been duly acknowledged through appropriate citation and referencing.

Okello Apollo	.....	14th October, 2026
Researcher	Signature	Date

DEDICATION

This thesis is dedicated to:

My dear mother, Esther Ejang Engola

My uncle, Engola Patrick

My late uncles, Moska Okaka Nyeramot Ijeo and Prof. Mathew Okai

You laid the foundation for my education through your love, sacrifice, and unwavering belief in my potential. Your tireless efforts and commitment bore fruit. Indeed, your labour paid off.

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ADB	African Development Bank
BUBU	Buy Uganda, Build Uganda
CFA	Confirmatory Factor Analysis
CFOs	Chief Financial Officers
CFI	Comparative Fit Index
CMB	Common Method Bias
DLi	Debt Literacy level of SME i
EAC	East African Community
EFA	Exploratory Factor Analysis
εi	Error Term
FSEi	Financial Self-Efficacy of SME i
GDP	Gross Domestic Product
GCC	Gulf Cooperation Council
ICC	Interclass Correlation Coefficient
IRi	Interest Rate charged to SME i
LISi	Lifestyle Pattern of SME i
LMi	Loan Maturity of SME i
LLCI	Lower Limit Confidence Interval
LSi	Loan Size of SME i
MI	Multiple Imputation
MoFPED	Ministry of Finance, Planning and Economic Development
MTIC	Ministry of Trade, Industry and Cooperatives
OLS	Ordinary Least Squares
RELi	Religiosity of SME i
RMSEA	Root Mean Square Error of Approximation
SEM	Structural Equation Modeling
SMEs	Small and Medium-sized Enterprises
SRMR	Standardized Root Mean Square Residual
SDGs	Sustainable Development Goals
TLI	Tucker-Lewis Index
TPB	Theory of Planned Behaviour

UBOS	Uganda Bureau of Statistics
UIA	Uganda Investment Authority
URA	Uganda Revenue Authority
ULCI	Upper Limit Confidence Interval

ABSTRACT

Growth sustainability of small and medium-sized enterprises depends on several interconnected factors; however, debt financing, debt management behaviour, and the effectiveness of these factors are influenced by the level of debt literacy among entrepreneurs. The purpose of this study was to examine the influence of debt financing and debt management behaviour on the growth sustainability of small and medium enterprises in Lira City, Uganda, while assessing the moderating role of debt literacy. The study was guided by Trade-Off Theory, Sustainable Growth Theory, Theory of Planned Behaviour, and Financial Capability Theory. A sequential explanatory mixed-methods research design was adopted, involving a survey of 311 small and medium enterprises followed by semi-structured interviews to provide deeper explanations of the quantitative findings. The results revealed that loan characteristics, including loan size, interest rates, and repayment practices, significantly influenced enterprise growth sustainability. Debt management practices, particularly financial self-efficacy, budgeting discipline, and responsible repayment behaviour, also contributed to improved sustainability outcomes. The results further showed that debt literacy strengthened the relationship between debt management behaviour and enterprise growth sustainability, while its interaction with debt financing was influenced by prevailing lending conditions. Qualitative findings indicated that entrepreneurs experience challenges related to high borrowing costs, limited loan adequacy, short repayment periods, collateral requirements, and unclear loan charges, which affect borrowing decisions. The study recommends the development of SME financing products aligned with business cash flows, expansion of debt literacy and financial capability programmes, and stronger collaboration between financial institutions and SME support organizations to promote responsible borrowing and sustainable enterprise growth.

CHAPTER ONE

INTRODUCTION

1.1 Introduction

The ability of small and medium-sized enterprises (SMEs) to achieve and sustain growth over time remains a critical concern in emerging economies. SMEs contribute significantly to employment creation, income generation, innovation, and local economic development; however, many continue to experience difficulties maintaining stable growth trajectories due to financial constraints, managerial challenges, and limited internal capabilities. Unlike short-term business growth, which is often reflected through increases in sales, profitability, or market expansion, growth sustainability emphasizes the capacity of enterprises to maintain continuous development while preserving financial stability, operational resilience, and long-term viability.

In Uganda, SMEs constitute a major component of the private sector and are central to national development objectives, including employment creation, industrialization, and economic transformation (National Planning Authority [NPA], 2020). However, despite their economic contribution, many SMEs struggle to sustain growth beyond initial expansion stages. Challenges such as inadequate financial planning, limited access to appropriate capital, weak financial management practices, and vulnerability to business shocks continue to restrict their ability to achieve enduring growth. Therefore, understanding the factors that enhance SME growth sustainability is essential for improving enterprise survival and competitiveness.

Financial resources represent one of the most important determinants of SME growth sustainability. SMEs require adequate financing to expand operations, acquire productive assets, manage working capital, and respond to market opportunities. Due to limited internal resources, many SMEs rely on debt financing as an external source of capital. Although debt financing can support

business expansion, its contribution to sustainable growth depends on how effectively borrowed funds are structured, utilized, and managed. Excessive borrowing, high interest obligations, inappropriate loan maturity periods, or inefficient use of borrowed resources may create financial pressures that undermine long-term enterprise stability.

In addition to the characteristics of debt financing, the behaviour of SME owners and managers plays a significant role in determining whether debt contributes positively to sustainable growth. Debt management behaviour reflects the financial decisions and practices involved in acquiring, allocating, monitoring, and repaying borrowed funds. Entrepreneurial characteristics such as financial self-efficacy, lifestyle choices, and personal values influence how business owners manage debt obligations and utilize financial resources. Consequently, the sustainability of SME growth cannot be fully explained by access to finance alone; it also requires consideration of the behavioural factors shaping financial decision-making.

Although previous studies have examined SME financing challenges, credit access, and business performance, limited empirical attention has been given to the combined influence of debt financing characteristics and debt management behaviour on growth sustainability, particularly among SMEs in developing urban settings such as Lira City, Uganda. Existing research has largely focused on immediate business outcomes rather than the ability of SMEs to maintain growth over time. This creates a gap in understanding how financial structures and entrepreneurial behaviours interact to support sustainable SME development.

Therefore, this study examines the relationship between debt financing, debt management behaviour, and the growth sustainability of SMEs in Lira City, Uganda. Specifically, it investigates the influence of debt financing characteristics, including loan size, interest rates, and loan maturity, on SME growth sustainability; examines the effect of debt management behaviour, including lifestyle patterns, religiosity, and financial self-efficacy; and

evaluates the moderating role of debt literacy in these relationships. The study is guided by Sustainable Growth Theory, Trade-Off Theory, Theory of Planned Behaviour, and Financial Capability Theory, which collectively explain how financial decisions, behavioural factors, and financial capabilities contribute to sustainable enterprise growth.

1.2 Background of the Study

Small and medium-sized enterprises (SMEs) are widely acknowledged as important contributors to economic development through employment creation, entrepreneurship development, innovation, income generation, and private-sector advancement. Their contribution is particularly significant in developing economies where SMEs provide opportunities for economic participation and livelihood creation. However, despite their economic importance, many SMEs experience difficulties sustaining growth over time due to limited financial resources, managerial constraints, changing market conditions, and vulnerability to economic shocks (Frimpong et al., 2022). Consequently, the challenge facing SMEs extends beyond achieving initial business expansion to developing the capacity to maintain stable and sustainable growth.

Growth sustainability differs from short-term business growth because it emphasizes the ability of enterprises to maintain continuous development while preserving financial stability, operational capacity, and resilience. While business growth is commonly assessed through indicators such as increased sales, profitability, assets, or employment, sustainable growth reflects the ability of firms to expand without creating financial or operational weaknesses that may threaten future survival (Mugisha & Ahenkan, 2026). For SMEs, achieving sustainable growth is particularly challenging because expansion frequently requires additional financial resources, yet inadequate financial management may expose enterprises to excessive risks and instability. Therefore, understanding the factors that enable SMEs to sustain growth remains an important area of scholarly and practical interest.

Financial resources represent one of the most important determinants of SME

growth sustainability. SMEs require adequate financing to expand operations, acquire productive assets, manage working capital, and exploit market opportunities. However, SMEs frequently encounter financing constraints due to limited collateral, inadequate financial records, information asymmetry, and the perception of higher lending risks by financial institutions (Duy-Tung et al., 2021). These constraints limit SMEs' ability to invest in productive activities and reduce their capacity to achieve long-term growth. The financing challenge remains particularly significant in developing economies where access to affordable and appropriate financial services continues to be limited. The International Finance Corporation (IFC, 2022) highlights that formal SMEs in developing countries face substantial unmet financing needs, demonstrating the continuing importance of improving access to productive capital.

Among available sources of external finance, debt financing remains one of the most commonly used mechanisms through which SMEs obtain resources for expansion and operational activities. Debt financing enables entrepreneurs to access capital while retaining ownership and control of their enterprises. It may support investment in productive assets, increase operational capacity, and facilitate business expansion. However, the contribution of debt financing to sustainable SME growth depends not only on access to borrowed funds but also on the characteristics and management of debt obligations (A. Okello et al., 2025).

Debt financing characteristics, including loan size, interest rates, and loan maturity, influence the extent to which borrowed resources contribute positively to enterprise development. Appropriate borrowing arrangements may provide SMEs with the financial capacity required for expansion, whereas excessive debt obligations, high borrowing costs, or unsuitable repayment periods may create financial pressure and restrict future investment. Trade-Off Theory explains that firms must balance the benefits of debt financing against the potential costs associated with financial distress (Kraus & Litzenberger, 1973). Within the SME context, this balance is particularly important because smaller enterprises often have limited financial buffers to absorb repayment

challenges. Recent empirical evidence indicates that the relationship between debt financing and SME growth sustainability depends on the structure of debt and the ability of entrepreneurs to manage financial obligations effectively (A. Okello et al., 2025).

However, access to finance alone does not fully explain differences in SME growth outcomes. The effectiveness of debt financing is also influenced by entrepreneurs' financial decisions, behaviours, and capabilities. Debt management behaviour represents the practices and decisions involved in borrowing, allocating borrowed resources, monitoring financial obligations, and repaying debt. Entrepreneurs differ in their ability to manage debt because financial decisions are influenced by knowledge, confidence, attitudes, personal values, and perceived control over financial matters (Ajzen, 1991). Therefore, examining debt financing without considering behaveioural factors provides an incomplete understanding of how debt contributes to sustainable SME growth.

Debt management behaviour is particularly important because borrowed funds may produce different outcomes depending on how entrepreneurs utilize and control financial resources. Entrepreneurs with strong financial self-efficacy may demonstrate greater confidence in making financial decisions, planning repayment strategies, and aligning borrowing decisions with business objectives. Conversely, weak financial management practices may result in inefficient use of borrowed funds, repayment difficulties, and increased financial vulnerability (Farrell et al., 2016). Recent studies on SME sustainability further demonstrate that financial management behaviours, including financing and cash flow management practices, influence enterprises' ability to maintain sustainable operations (Apon et al., 2025).

Beyond debt financing and debt management behaviour, financial capability plays an important role in determining whether SMEs can effectively utilize borrowed resources. One important dimension of financial capability is debt literacy, which refers to the knowledge and skills required to understand borrowing conditions, evaluate debt costs, assess repayment obligations,

and make informed debt decisions. Financial capability theory suggests that individuals require both access to financial resources and the ability to manage those resources effectively in order to achieve positive financial outcomes. Recent research demonstrates that financial literacy and related capabilities influence financial decision-making, responsible borrowing, and enterprise sustainability (Mitchell & Lusardi, 2023).

Debt literacy is particularly relevant within SME financing because entrepreneurs may experience different consequences from similar borrowing arrangements depending on their understanding of loan conditions and repayment obligations. Entrepreneurs with higher debt literacy may be better positioned to evaluate loan terms, select appropriate borrowing levels, and align debt commitments with business cash flows. Conversely, limited debt literacy may contribute to inappropriate borrowing decisions, excessive financial obligations, and reduced capacity to sustain growth. Therefore, debt literacy may influence the extent to which debt financing and debt management behaviour contribute to SME growth sustainability.

The African SME environment provides an important context for examining these relationships because many enterprises operate under conditions characterized by financing limitations, resource constraints, and capability challenges. Recent studies emphasize that sustainable SME development requires not only improved access to financial resources but also stronger entrepreneurial capabilities that enable effective resource utilization (Mugisha & Ahenkan, 2026). Thus, understanding the interaction between financial structures, entrepreneurial behaviour, and financial capability provides deeper insight into the mechanisms through which SMEs achieve sustainable growth.

Uganda provides a relevant context for examining these relationships because SMEs constitute a significant component of private-sector activity, employment creation, and economic development. The National Planning Authority (NPA, 2025) identifies private-sector development, employment creation, and improved access to productive financing as key priorities within Uganda's

development agenda. Despite these policy efforts, many SMEs continue to experience challenges related to financing access, financial management practices, and business sustainability.

The issue is particularly significant in Lira City, Northern Uganda, where SMEs contribute substantially to employment generation, household income, and local economic activity. However, many enterprises operate within challenging financial environments characterized by limited access to affordable credit, borrowing constraints, and inadequate financial management capabilities. These conditions raise important questions regarding whether debt financing functions as a mechanism for supporting sustainable enterprise growth or becomes a source of financial vulnerability.

Although previous studies have examined SME financing constraints, access to credit, financial literacy, and business performance, limited attention has been given to the combined influence of debt financing characteristics, debt management behaviour, and debt literacy on growth sustainability, particularly in developing urban contexts such as Lira City. Existing studies have largely focused on whether SMEs obtain financing or whether financing improves performance outcomes, while insufficient attention has been directed toward understanding how debt structures and entrepreneurial financial behaviours interact to influence long-term growth sustainability.

Therefore, this study examines the relationship between debt financing, debt management behaviour, and the growth sustainability of small and medium-sized enterprises in Lira City, Uganda. Specifically, the study investigates the influence of debt financing characteristics, including loan size, interest rate, and loan maturity, on growth sustainability; examines the effect of debt management behaviour, including lifestyle patterns, religiosity, and financial self-efficacy; and assesses the moderating role of debt literacy in these relationships. Guided by Sustainable Growth Theory, Trade-Off Theory, Theory of Planned Behaviour, and Financial Capability Theory, the study contributes to the understanding of how financial structures, behavioural capabilities, and

debt-related knowledge influence the ability of SMEs to achieve sustainable growth.

1.3 Problem Statement

Small and medium-sized enterprises (SMEs) are expected to achieve sustainable growth through continuous improvement in sales, profitability, and employment while maintaining financial and operational resilience. However, despite their contribution to economic development, many SMEs struggle to sustain growth due to financing constraints, ineffective financial management practices, and limited internal capabilities (Agyapong et al., 2016). In Uganda, empirical studies indicate that SMEs continue to experience challenges related to access to finance, financial management capacity, and business sustainability, which constrain their ability to achieve long-term growth (Eton et al., 2019; Okello et al., 2017). Although debt financing provides SMEs with resources required for expansion and investment, inappropriate loan sizes, high interest costs, and unfavourable repayment conditions may create financial pressures that undermine sustainable growth (Wasiuzzaman et al., 2020). Furthermore, the contribution of debt financing to SME growth sustainability may depend on entrepreneurs' debt management behaviour, including financial discipline, lifestyle choices, financial self-efficacy, and repayment practices (Orobia et al., 2020). While previous studies have examined SME financing, access to credit, and financial literacy, limited empirical attention has been given to how debt financing characteristics and debt management behaviour jointly influence growth sustainability, particularly within the context of SMEs in Lira City, Uganda. Additionally, the extent to which debt literacy strengthens or weakens these relationships remains insufficiently explored. Therefore, without a clear understanding of how debt-related factors and entrepreneurs' financial capabilities influence sustainable growth, SMEs may continue to experience unstable expansion, weak profitability, and limited employment creation. This study therefore examines the effect of debt financing and debt management behaviour on the growth sustainability of SMEs in Lira City, Uganda, while

assessing the moderating role of debt literacy.

1.4 Objectives of the Study

1.4.1 General Objective of the Study

To examine the effects of debt financing and debt management behaviour on the growth sustainability of small and medium-sized enterprises (SMEs) in Lira City, Uganda, and to assess the moderating role of debt literacy in these relationships**.**

1.4.2 Specific Objectives

This study was guided by the following specific research objectives:

i To examine the effect of debt financing on SME growth sustainability in Lira City.

ii To investigate the effect of debt management behaviour on SME growth sustainability in Lira City.

iii To assess the moderating effect of debt literacy on the relationship between debt financing and SME growth sustainability in Lira City.

iv To examine the moderating effect of debt literacy on the relationship between debt management behaviour and SME growth sustainability in Lira City.

v To explore SME owners' perspectives on how debt financing influences the growth sustainability of their enterprises in Lira City.

vi To explore SME owners' perspectives on how debt management behaviour affects the growth sustainability of their enterprises in Lira City.

1.5 Research Hypothesis

The quantitative objectives of the study were guided by the following hypotheses:

i. H_1: Debt financing has a statistically significant effect on the growth sustainability of SMEs.
ii. H_2: Debt management behaviour has a statistically significant effect on the growth sustainability of SMEs.
iii. H_3: Debt literacy has a statistically significant moderating effect on the relationship between debt financing and the growth sustainability of SMEs.
iv. H_4: Debt literacy has a statistically significant moderating effect on the relationship between debt management behaviour and the growth sustainability of SMEs.

These hypotheses were tested using regression and Structural Equation Modeling (SEM), allowing for the evaluation of both direct and moderated relationships among the study variables.

1.6 Research Questions

The qualitative objectives of the study were guided by the following research questions:

i. How do SME owners perceive the influence of debt financing on the growth sustainability of their enterprises in Lira City?
ii. How do SME owners perceive the influence of their debt management behaviours on the growth sustainability of their enterprises in Lira City?

1.7 Conceptual Framework

A conceptual framework provides a structured representation of the relationships among study variables by translating theoretical assumptions into measurable constructs and illustrating how independent variables, moderating variables,

and dependent variables are expected to interact (Waldt et al., 2024). It provides a logical foundation for hypothesis development, variable measurement, and empirical testing by linking theoretical perspectives with the research problem.

This study's conceptual framework is developed from four complementary theoretical perspectives: The Trade-Off Theory of Capital Structure, Theory of Planned Behaviour (TPB), Financial Capability Theory, and Sustainable Growth Theory. The integration of these theories is based on their relevance to explaining different dimensions of SME growth sustainability. The Trade-Off Theory explains the role of debt financing decisions, the Theory of Planned Behaviour explains entrepreneurs' behavioural tendencies in managing debt, Financial Capability Theory explains the role of debt literacy in financial decision-making, while Sustainable Growth Theory explains the ability of SMEs to maintain growth over time.

The first construct, debt financing, is derived from the Trade-Off Theory of Capital Structure, which argues that firms achieve an optimal financing structure by balancing the benefits of debt against the costs associated with excessive borrowing (Modigliani & Miller, 1963; Myers, 1984). In this study, debt financing is operationalized through three dimensions: loan size, interest rate, and loan maturity. These dimensions reflect the financial conditions under which SMEs acquire external funds and determine whether debt supports enterprise expansion or creates financial pressure.

The second construct, debt management behaviour, is informed by the Theory of Planned Behaviour (Ajzen, 1991), which explains that behavioural decisions are influenced by individuals' attitudes, perceived social expectations, and perceived control over actions. In the context of SME debt management, entrepreneurs' financial decisions are influenced by their personal orientations, social values, and confidence in managing financial obligations. Therefore, this study operationalizes debt management behaviour through lifestyle patterns, religiosity, and financial self-efficacy. Lifestyle patterns represent entrepreneurs' attitudes and personal financial orientations, religiosity reflects

social and value-based influences affecting financial decisions, while financial self-efficacy represents perceived ability and confidence in managing debt-related decisions.

The third construct, debt literacy, is derived from Financial Capability Theory, which emphasizes that individuals require adequate financial knowledge and skills to make informed financial decisions and manage financial risks effectively (Atkinson et al., 2006). In this study, debt literacy is conceptualized as a moderating variable comprising debt knowledge and debt skills. Entrepreneurs with higher debt literacy are expected to better understand loan conditions, evaluate borrowing decisions, manage repayment obligations, and utilize borrowed funds more effectively.

The dependent construct, growth sustainability of SMEs, is grounded in Sustainable Growth Theory, which explains that enterprises must maintain a balance between growth objectives and financial capacity to achieve long-term viability (Higgins, 1977). Unlike short-term business performance, growth sustainability reflects the ability of enterprises to maintain continuous development while preserving financial and operational stability. Following Nuwagaba et al. (2021), this study measures growth sustainability through sales growth, profitability growth, and employment growth.

Based on these theoretical foundations, the conceptual framework proposes that debt financing and debt management behaviour directly influence SME growth sustainability, while debt literacy moderates these relationships. Figure 1.1 presents the hypothesised relationships among the study variables. Figure 1.1Conceptual Framework Showing the Relationship between Debt Financing, Debt Management Behaviour, Debt Literacy, and Growth Sustainability of SMEs.

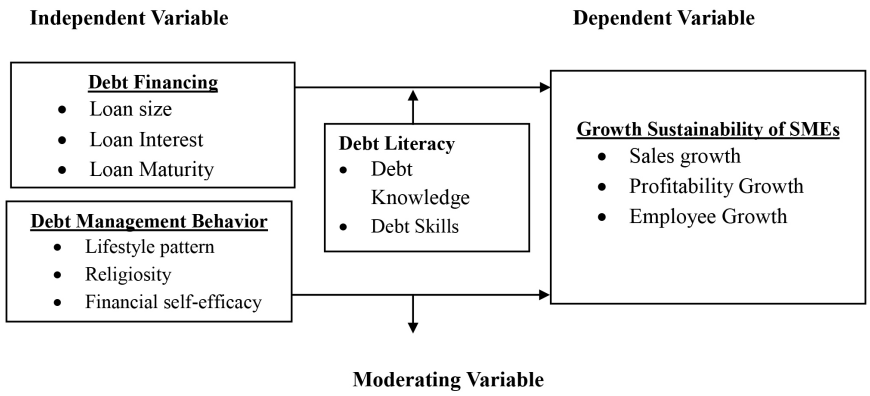


Figure 1.1: Conceptual Framework

Source: Developed by the researcher based on Trade-Off Theory (Modigliani & Miller, 1963; Myers, 1984), Theory of Planned Behaviour (Ajzen, 1991), Sustainable Growth Theory (Higgins, 1977), Financial Capability Theory (Atkinson et al., 2006), and Nuwagaba et al. (2021)

Figure 1.1 illustrates the hypothesized relationships among debt financing, debt management behaviour, debt literacy, and SME growth sustainability. The framework demonstrates the pathway through which theoretical assumptions are translated into measurable variables and empirically testable relationships.

The framework proposes that debt financing influences SME growth sustainability. According to the Trade-Off Theory of Capital Structure, debt can provide SMEs with resources required for investment, expansion, and improved operational capacity. However, the sustainability effects of debt depend on financing conditions, including the amount borrowed, cost of borrowing, and repayment period. Therefore, loan size, interest rate, and loan maturity are expected to influence the ability of SMEs to maintain sustainable growth.

The framework further proposes that debt management behaviour influences SME growth sustainability. Based on the Theory of Planned Behaviour, entrepreneurs' financial behaviours are shaped by personal beliefs, social

influences, and perceived control over financial decisions (Ajzen, 1991). In this study, lifestyle patterns, religiosity, and financial self-efficacy represent behavioural factors that influence how entrepreneurs acquire, utilize, and repay debt. Effective debt management behaviour is therefore expected to enhance the contribution of borrowed funds towards sustainable enterprise development.

The framework also identifies debt literacy as a moderating variable. Financial Capability Theory suggests that individuals with stronger financial knowledge and skills are more capable of making effective financial decisions (Atkinson et al., 2006). Accordingly, debt literacy is expected to strengthen the relationship between debt financing, debt management behaviour, and growth sustainability because financially capable entrepreneurs are more likely to select suitable loans, manage repayment obligations, and avoid harmful borrowing practices.

Finally, growth sustainability represents the dependent variable of the study. Consistent with Nuwagaba et al. (2021), sustainable growth is assessed through sales growth, profitability growth, and employment growth. These indicators capture whether SMEs are able to maintain continuous development rather than merely achieving temporary improvements in business performance.

1.8 Scope of Study

The scope of this study was defined across three main dimensions: content, geographical location, and time. These boundaries were established to maintain the study's focus, contextual relevance, and methodological consistency.

This study examined the relationship between debt financing, debt management behaviour, and growth sustainability among Small and Medium-Sized Enterprises (SMEs). Debt financing was assessed through structural dimensions, including loan size, interest rates, and loan maturity periods. Debt management behaviour was examined through behavioural characteristics, including lifestyle patterns, religiosity, and financial self-efficacy. The study further assessed the moderating role of debt literacy, focusing on entrepreneurs' knowledge and skills related to debt acquisition, financial decision-making,

and repayment management. Growth sustainability, which represented the outcome variable, was evaluated using indicators including sales growth, profitability growth, and employment growth. The study adopted a mixed-methods approach by combining quantitative evidence with qualitative insights to understand SME owners' experiences, challenges, and strategies related to debt access and utilization.

Geographically, the study was conducted in Lira City, Northern Uganda. The city represents an important commercial centre with a diverse SME sector operating across different business activities. This setting provided an appropriate context for examining how debt financing conditions, financial management behaviours, and debt literacy influence SME growth sustainability within a developing economy.

The study focused on SME financing practices, debt management behaviours, and growth sustainability experiences during the period 2025. The quantitative component of the study was conducted between January and March 2025, during which structured questionnaires were administered to SME owners to measure debt financing practices, debt management behaviour, debt literacy, and growth sustainability outcomes. The qualitative component was conducted between June and July 2025 using interviews with SME owners to obtain deeper insights into their experiences, decision-making processes, and contextual challenges related to debt utilization and business sustainability. Therefore, the study period covered the implementation of both quantitative and qualitative phases, including data collection, analysis, and integration of findings.

1.9 Significance of the Study

This study provides significant insights that are extremely relevant to various internal and external stakeholders, all of whom stand to gain in different ways.

Owners and managers of SMEs are key internal stakeholders who will benefit directly from the study. The research provides practical knowledge on how to navigate the complexities of debt financing and debt management

behaviour. Owners and managers will gain insights into making informed financial decisions that optimize the use of debt, reduce risks associated with over-borrowing, and foster sustainable business growth. By understanding the impact of debt management on growth sustainability, they can develop more effective financial strategies, ensuring the stability and expansion of their enterprises.

Employees will indirectly benefit from the study's findings, as effective debt management within an SME contributes to greater business stability and growth. When SMEs manage their debt responsibly, they are better positioned to remain financially healthy, which in turn can create a more secure working environment for employees. This financial stability can lead to job security, potential salary increases, and opportunities for professional development as the business grows and expands its operations.

For administrators responsible for overseeing financial practices within SMEs, the study provides critical tools for enhancing debt management frameworks. Administrators can apply the study's insights to develop and implement policies that ensure the business maintains a healthy balance between debt and growth. These insights will help administrators create systems that promote financial prudence, improve cash flow management, and support long-term growth sustainability within the enterprise.

Among the external stakeholders, clients stand to benefit from the improved financial health of SMEs that manage their debt efficiently. A business that is financially stable and growing sustainably is better equipped to deliver consistent, high-quality products and services. As SMEs improve their debt management, clients can expect more reliable service delivery, potentially lower costs, and an overall better customer experience, which strengthens business-client relationships.

For other SMEs, the study's findings offer valuable guidance on best practices for debt management and sustainable growth. By analyzing the success factors identified in the research, other businesses can adopt similar strategies that

promote financial health and stability. This can help SMEs avoid the common pitfalls of poor debt management and enable them to achieve more sustainable growth in a competitive market.

The study also has significant implications for government entities. Policymakers responsible for SME regulation and support can use the study's insights to craft policies that facilitate easier access to debt financing while promoting responsible financial management. By understanding the challenges SMEs face in managing debt, governments can develop programs and regulations that encourage financial literacy and provide support for SME growth sustainability, which is critical to broader economic development.

The Uganda Revenue Authority (URA) can benefit from the study by gaining a deeper understanding of the financial practices within SMEs. The findings can help the URA identify areas where SMEs may need assistance in managing their finances and complying with tax regulations. Improved debt management practices can also lead to better tax compliance, as financially stable businesses are more likely to meet their fiscal obligations, contributing to national revenue collection efforts.

The findings of this study will be a significant asset for academics and scholars, enhancing the current literature on debt financing, debt literacy, debt management behaviour, and the growth sustainability of Small and Medium-sized Enterprises. This addition will enrich comprehension and enlighten subsequent investigations into the topic. This study provides a clear path for future research efforts to enhance our comprehension of the elements that impact the growth and resilience of Small and Medium-sized Enterprises. It achieves this through its discoveries, approaches, and theoretical frameworks.

By actively participating in the research process, the study is anticipated to enhance the researcher's expertise and understanding in teaching, research, publication, and overall professional growth. The programme will offer practical expertise in doing empirical research, analyzing data, and making significant findings by exploring the intricacies of small firm growth and

behaviour management.

1.10 Justification of the Study

The justification for this study arises from the persistent challenge of achieving sustainable growth among small and medium-sized enterprises (SMEs), particularly in developing economies where enterprises face difficulties in accessing, utilizing, and managing financial resources effectively (Frimpong et al., 2022). Although previous studies have examined SME financing, financial literacy, and enterprise performance, existing evidence remains fragmented, with limited understanding of how debt financing characteristics, debt management behaviour, and debt literacy jointly influence growth sustainability (Wasiuzzaman et al., 2020). Specifically, limited attention has been given to how loan size, interest rates, loan maturity, financial self-efficacy, and debt-related knowledge interact to determine SMEs' ability to maintain sales growth, profitability, and employment creation over time. This gap is particularly important in emerging urban contexts such as Lira City, Uganda, where SMEs operate under financial and managerial constraints, yet empirical evidence regarding the mechanisms supporting sustainable growth remains limited. The study is therefore necessary to provide context-specific evidence on how debt-related factors influence SME growth sustainability and to extend existing scholarship by integrating financial structure, entrepreneurial behaviour, and financial capability within a single framework. Furthermore, by examining debt literacy as a moderating factor and employing a sequential explanatory mixed-methods design, the study provides both empirical evidence and deeper insights into SME owners' experiences regarding debt utilization and management (Creswell & Plano, 2018). The findings are expected to contribute to SME finance literature and provide practical insights for SME owners, financial institutions, and enterprise-support stakeholders seeking to promote sustainable SME development.

1.11 Operational Definitions

The operational definitions adopted in this study are informed by established

theoretical perspectives and empirical literature. However, the definitions are contextualized to reflect the specific objectives, variables and measurement approach of this study, which focuses on debt financing, debt management behaviour, debt literacy and growth sustainability among small and medium-sized enterprises (SMEs) in Lira City, Uganda.

Debt financing refers to the acquisition of external funds through borrowing arrangements that require repayment of the principal amount together with associated financing costs. SMEs commonly utilize debt financing to support business operations, working capital requirements, investment activities and expansion initiatives (Abor, 2005; Berger & Udell, 2006). In this study, debt financing is operationalized through three dimensions, namely loan size, interest rate and loan maturity, which represent the magnitude, cost and repayment structure of borrowed funds respectively.

Debt management behaviour refers to the attitudes, practices and behavioural patterns through which SME owners or managers acquire, utilize, monitor and repay business debt obligations. Effective debt management behaviour involves responsible borrowing decisions, appropriate allocation of borrowed resources, repayment planning and control of financial commitments (Lestari & Silvy, 2022). In this study, debt management behaviour is represented by lifestyle pattern, religiosity and financial self-efficacy, which capture the behavioural and psychological factors influencing how SME owners or managers manage debt-related decisions.

Debt literacy refers to the knowledge and skills that enable individuals to understand, evaluate and make informed decisions regarding debt-related financial matters, including loan costs, interest rates, repayment obligations and borrowing conditions (Lusardi & Tufano, 2015). Debt literacy enables borrowers to assess alternative financing options, understand contractual obligations and manage indebtedness more effectively. In this study, debt literacy is examined as a moderating variable that influences the strength of the relationships between debt financing, debt management behaviour and growth

sustainability.

Growth sustainability refers to the ability of an enterprise to maintain continuous growth while preserving financial stability, operational capacity and long-term viability. Sustainable growth reflects the ability of SMEs to expand business activities, generate economic value and maintain performance over time (Nuwagaba et al., 2021). In this study, growth sustainability is assessed through three dimensions: sales growth, profitability growth and employment growth, consistent with established measures of SME performance and expansion (Nuwagaba et al., 2021).

Loan size refers to the amount of debt financing obtained by an SME from a financial institution or other lender for business-related purposes. The size of borrowed funds influences an enterprise's ability to finance operations, undertake investments and manage liquidity requirements (Berger & Udell, 2006). In this study, loan size represents the magnitude of external financing accessed by SMEs.

Interest rate refers to the cost charged by a lender for the use of borrowed funds, usually expressed as a percentage of the outstanding or agreed loan amount. Interest rates influence the affordability of credit, repayment obligations and the overall cost of debt financing for SMEs (Stiglitz & Weiss, 1981). In this study, interest rate represents the financial cost associated with SME borrowing.

Loan maturity refers to the agreed period within which borrowed funds and associated financing costs are expected to be repaid by the borrower. The maturity structure of debt affects repayment pressure, cash-flow management and the financial risk exposure of enterprises (Berger & Udell, 2006). In this study, loan maturity represents the repayment duration attached to SME debt obligations.

Lifestyle pattern refers to the behavioural orientation reflected in an SME owner's or manager's consumption habits, spending priorities, financial discipline and allocation of resources. Individual financial behaviours and

spending orientations may influence borrowing decisions, resource utilization and debt management practices (Ajzen, 1991). In this study, lifestyle pattern represents the extent to which personal financial behaviours influence business debt management decisions among SME owners or managers.Religiosity refers to the extent to which religious beliefs, values and practices influence an individual's attitudes, ethical considerations and behavioural decisions, including financial choices and obligations (Worthington et al., 2003). In this study, religiosity reflects the influence of religious values on borrowing practices, repayment responsibility and financial discipline among SME owners or managers.

Financial self-efficacy refers to an individual's perceived confidence and capability to perform financial tasks, make appropriate financial decisions and effectively manage financial challenges (Bandura, 1994). In this study, financial self-efficacy represents SME owners' or managers' confidence in their ability to manage debt obligations, control financial resources and make sound financial decisions.

Sales growth refers to the increase in an enterprise's sales revenue over a specified period. It is widely used as an indicator of SME growth because it reflects market expansion, customer demand and business performance improvement (Nuwagaba et al., 2021). In this study, sales growth represents one dimension of growth sustainability.

Profitability refers to the ability of an enterprise to generate financial returns from its business operations after accounting for operational costs and expenses. Profitability is considered an important indicator of business performance and long-term sustainability because it reflects the efficiency with which enterprises utilize available resources (Nuwagaba et al., 2021). In this study, profitability represents the financial performance dimension of SME growth sustainability.

Employment growth refers to the increase in the number of employees engaged by an enterprise over a given period. Employment expansion represents an

important dimension of SME growth because it reflects business development, economic contribution and organizational expansion (Nuwagaba et al., 2021). In this study, employment growth represents the human resource expansion dimension of growth sustainability.

Small and medium-sized enterprise (SME) refers to an enterprise classified as small or medium based on established criteria relating to employment size, capital investment and annual turnover. In Uganda, SME classification is guided by the national MSME framework, which considers employment levels, investment characteristics and turnover thresholds in defining enterprise categories (Uganda Investment Authority [UIA], 2017). For this study, an SME refers specifically to a small or medium-sized enterprise operating in Lira City that satisfied the inclusion criteria established for participation in the study.

1.12 Conclusion

This chapter provided the foundation for the study by establishing the background, research problem, purpose, objectives, hypotheses, scope, significance, justification, and operational definitions of the study. The chapter highlighted the importance of sustainable growth among small and medium-sized enterprises and demonstrated that achieving long-term enterprise development requires more than access to financial resources. It emphasized that the structure of debt financing, entrepreneurs' debt management behaviour, and debt literacy may influence the extent to which borrowed resources contribute to sustainable SME growth.

The chapter further identified the existing challenge that, although SMEs rely on debt financing to support business activities, limited understanding remains regarding how debt financing characteristics, debt management behaviour, and debt literacy interact to influence growth sustainability, particularly among SMEs in Lira City, Uganda. This gap provided the basis for examining the relationships among the study variables and developing the research objectives and hypotheses.

The chapter also presented the scope, significance, justification, and operational definitions that establish the boundaries and relevance of the study. By focusing on debt financing, debt management behaviour, debt literacy, and growth sustainability, the study seeks to contribute empirical evidence on the factors that enable SMEs to achieve sustained development within a developing economy context.

The next chapter presents the review of related literature. It examines the theoretical perspectives, empirical evidence, and research gaps relating to debt financing, debt management behaviour, debt literacy, and SME growth sustainability. The literature review provides the basis for positioning the current study within existing knowledge and identifying the areas requiring further investigation.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviews the literature on debt financing, debt management behaviour, debt literacy, and the growth sustainability of small and medium-sized enterprises (SMEs). It presents the theoretical foundations guiding the study, drawing on Trade-Off Theory, Theory of Planned Behaviour, Sustainable Growth Theory, and Financial Capability Theory to explain how financial decisions, entrepreneurial behaviours, and financial capabilities influence SME growth sustainability. The chapter further examines the key study constructs and reviews empirical evidence on the relationships among debt financing, debt management behaviour, debt literacy, and SME growth sustainability, with particular attention to findings from developing economies and Uganda. Through a critical evaluation of existing literature, the chapter identifies conceptual, contextual, and methodological gaps that justify the present study and provides the foundation for the research framework developed in subsequent chapters.

2.2 Theoretical Review

This study is guided by four complementary theoretical perspectives: Trade-Off Theory of Capital Structure (Kraus & Litzenberger, 1973; Modigliani & Miller, 1963), Theory of Planned Behaviour (Ajzen, 1991), Sustainable Growth Theory (Higgins, 1977), and the Financial Capability perspective (Atkinson et al., 2006). The theories were selected because the study examines the relationship between debt financing, debt management behaviour, debt literacy and the growth sustainability of SMEs. No single theory adequately explains all these dimensions. Trade-Off Theory provides the basis for understanding the financial implications of debt financing; the Theory of Planned Behaviour explains behavioural influences on debt management; Sustainable Growth Theory provides a firm-level explanation of financially sustainable growth;

while the Financial Capability perspective explains the role of knowledge and skills in financial decision-making. The theories are therefore used in an integrated manner, with the limitations of one perspective providing the rationale for incorporating the next.

2.2.1 Trade-Off Theory of Capital Structure

Trade-Off Theory explains firms' financing choices in terms of a balance between the benefits and costs of debt. Its intellectual foundation is associated with the recognition of the tax advantages of debt by Modigliani and Miller (1963), while the classical trade-off formulation was developed by Kraus and Litzenberger (1973). The theory proposes that firms determine an appropriate level of debt by balancing the benefits obtained from debt, particularly the tax shield, against the potential costs of financial distress and bankruptcy. The central implication is that debt financing can create value up to the point at which its marginal benefits are offset by its marginal costs (Kraus & Litzenberger, 1973).

The theory assumes that firms make financing decisions by considering the relative costs and benefits associated with alternative sources of finance. Debt is therefore not inherently beneficial or harmful; its implications depend on the level and terms of borrowing relative to the firm's capacity to service the obligation. This assumption is particularly relevant to SMEs because the consequences of debt may depend on the amount borrowed, the cost of borrowing and the period over which repayment is required. In this study, these dimensions are represented by loan size, interest rate and loan maturity, which constitute the dimensions of debt financing.

The study draws from Trade-Off Theory the concepts of debt financing, financing costs and the financial consequences of borrowing. These concepts provide the theoretical basis for examining whether differences in loan size, interest rate and loan maturity are associated with differences in SME growth sustainability. The theory therefore informs the examination of the relationship between debt financing and growth sustainability and provides the principal

theoretical lens for the first research objective and hypothesis.

However, Trade-Off Theory primarily explains financing decisions from a financial and structural perspective. It gives limited attention to the behavioural characteristics of SME owners and managers that may influence how debt is acquired, used and managed. Two firms facing similar borrowing conditions may therefore manage their debt differently because of differences in attitudes, social influences and perceived ability to control financial decisions. This limitation necessitates a behavioural perspective, provided by the Theory of Planned Behaviour.

2.2.2 Theory of Planned Behaviour

The Theory of Planned Behaviour (TPB) was formally developed by Ajzen (1991). TPB explains behaviour through three principal determinants: attitude towards the behaviour, subjective norms and perceived behavioural control. These factors influence behavioural intentions, which in turn influence actual behaviour, while perceived behavioural control may also directly affect behaviour (Ajzen, 1991). The theory assumes that individuals generally make behavioural decisions within the limits of the information and control available to them and that behavioural outcomes are influenced not only by what individuals know but also by their attitudes, social environment and perceived capacity to act.

The relevance of TPB to this study lies in its explanation of the behavioural processes through which SME owners and managers approach financial obligations. The study adapts the theory's behavioural concepts to examine lifestyle pattern, religiosity and financial self-efficacy as dimensions of debt management behaviour. Lifestyle pattern reflects the manner in which personal consumption and financial priorities may shape the management of business debt; religiosity provides a social and normative dimension that may influence financial conduct; while financial self-efficacy reflects perceived capability to undertake and manage financial decisions. These dimensions extend the behavioural interpretation of debt management beyond the purely structural

characteristics of borrowing.

Accordingly, TPB provides the theoretical basis for examining debt management behaviour and its relationship with SME growth sustainability. It informs the second research objective and hypothesis and also provides a behavioural lens for interpreting the qualitative accounts of SME owners and managers. The theory helps explain why SMEs exposed to similar financing conditions may nevertheless demonstrate different approaches to debt repayment, financial discipline and the use of borrowed funds.

Despite its relevance, TPB is principally concerned with individual behavioural processes and does not by itself provide a sufficient explanation of how such behaviour translates into sustained firm growth. SME growth also depends on the firm's ability to generate and retain resources while maintaining financial balance. This limitation provides the rationale for incorporating Sustainable Growth Theory.

2.2.3 Sustainable Growth Theory

Sustainable Growth Theory, associated with Higgins (1977), explains the extent to which a firm can grow without fundamentally altering its financial policies or creating financial pressures that cannot be supported by its internally generated resources. The sustainable growth perspective links growth to profitability, asset utilization, retention of earnings and financial structure. It therefore views growth sustainability as a function of the firm's capacity to support expansion while maintaining an appropriate financial balance (Higgins, 1977).

The theory assumes that growth cannot be considered sustainable merely because a firm experiences an increase in sales or assets. Rather, continued growth must be supported by the firm's financial capacity and operational performance. Growth that exceeds the firm's ability to generate or obtain the resources required to support it may increase financial pressure and threaten continuity. This perspective is relevant to SMEs because debt financing and debt management may affect not only the availability of resources for expansion

but also the firm's capacity to meet financial obligations while maintaining operations.

The present study adopts growth sustainability as the principal outcome and operationalises it through sales growth, profitability and employment growth. Sustainable Growth Theory therefore provides the firm-level perspective through which the effects of debt financing and debt management behaviour can be interpreted. In combination with Trade-Off Theory, it explains how the structure and cost of debt may relate to the capacity of SMEs to sustain growth. In combination with TPB, it provides a basis for understanding how owners' and managers' debt management behaviour may translate into firm-level growth outcomes.

Nevertheless, Sustainable Growth Theory does not adequately explain the role of financial knowledge and skills in shaping the way owners and managers understand and manage debt. Two SME owners may face similar financing conditions and pursue similar growth objectives but differ in their ability to understand interest rates, repayment obligations, loan maturity and the consequences of alternative borrowing decisions. The Financial Capability perspective therefore complements the theory by introducing the cognitive and skills dimension of financial decision-making.

2.2.4 Financial Capability Perspective

The Financial Capability perspective emphasises that effective financial decision-making involves more than the possession of financial information. It encompasses financial knowledge, skills, attitudes and the capacity to apply these in financial decisions (Atkinson et al., 2006). Financial capability is therefore concerned with the ability to translate financial understanding into appropriate financial behaviour. This perspective is particularly relevant to debt decisions because borrowers need to understand the costs, conditions and obligations associated with different forms of credit and apply that knowledge when making and managing borrowing decisions.

The perspective assumes that individuals with greater financial knowledge and skills are better positioned to understand financial products and make informed decisions, although financial outcomes are also shaped by the wider economic and financial environment (Atkinson et al., 2006). In this study, the relevant component is debt literacy, which concerns the knowledge and skills required to understand and manage debt, including loan terms, interest costs, repayment obligations and loan maturity.

Unlike the other perspectives, the Financial Capability perspective allows the study to examine debt literacy not simply as a direct predictor of SME outcomes, but as a factor that may change the strength of the relationships between debt financing, debt management behaviour and growth sustainability. Thus, debt literacy is conceptualised as a moderating variable. An SME owner or manager with adequate debt knowledge and skills may interpret loan conditions differently, manage repayment obligations more effectively and make more informed use of borrowed funds than one with limited debt literacy. This provides the theoretical basis for examining the moderating role of debt literacy in the third and fourth research objectives and hypotheses.

The Financial Capability perspective does not, however, explain the structural costs of debt, the behavioural processes underlying debt management or the mechanisms through which financial decisions translate into firm growth. It therefore complements rather than replaces Trade-Off Theory, TPB and Sustainable Growth Theory. The four perspectives collectively provide a broader explanation of the relationships examined in this study.

2.2.5 Integrative Theoretical Synthesis

The four theoretical perspectives are integrated to explain the study's conceptual relationships. Trade-Off Theory explains the financial structure and costs associated with debt financing; Theory of Planned Behaviour explains behavioural influences on debt management; Sustainable Growth Theory explains the capacity of SMEs to maintain growth without creating unsustainable financial pressures; and the Financial Capability perspective

explains how debt-related knowledge and skills may condition the effects of financing and behavioural decisions.

The integration is particularly important because debt financing is not determined solely by the availability or cost of credit. Its implications for SME growth also depend on how borrowed funds are managed, the behavioural characteristics of the owner or manager, the firm's capacity to sustain growth and the level of knowledge and skills available to interpret and manage debt obligations. The theoretical framework therefore moves from financing structure, through behaviour and financial capability, to firm-level growth sustainability. The theoretical relationships can be summarized in table 2.1 as follows:

Table 2.1: Alignment of Study Relationships with Theoretical Perspectives

Study relationship	Principal theoretical basis	Supporting perspective
Debt financing → Growth sustainability	Trade-Off Theory	Sustainable Growth Theory
Debt management behaviour → Growth sustainability	Theory of Planned Behaviour	Sustainable Growth Theory
Debt literacy moderates debt financing → Growth sustainability	Financial Capability perspective	Trade-Off Theory and Sustainable Growth Theory
Debt literacy moderates debt management behaviour → Growth sustainability	Financial Capability perspective	Theory of Planned Behaviour and Sustainable Growth Theory

The integration also guides the qualitative phase of the study. The qualitative inquiry does not treat the theories as propositions to be statistically tested; rather, they provide sensitizing lenses for interpreting how SME owners and managers describe the use of debt, debt management practices, financial knowledge and the sustainability of their businesses. This enables the qualitative findings to explain and contextualize the quantitative relationships identified in the first phase.

Overall, the theoretical framework positions SME growth sustainability as the outcome of an interaction between financial structure, managerial behaviour and financial capability. Trade-Off Theory explains the financial consequences of debt financing, TPB explains behavioural influences on debt management, Sustainable Growth Theory connects these factors to the firm's capacity for sustained growth, and the Financial Capability perspective explains the conditioning role of debt literacy. The combination therefore provides a coherent theoretical foundation for examining the direct relationships and moderating effects specified in the study hypotheses.

2.3 Empirical Literature Review

This section provides a review of the empirical literature pertinent to the study's objectives. This analysis rigorously evaluates current research on the correlation between debt financing and the sustainable growth of SMEs, the impact of debt management practices on SME expansion, and the moderating effect of debt literacy within these dynamics. Furthermore, it examines empirical evidence about SME owners' encounters with debt financing and debt management strategies, specifically how these experiences influence firm sustainability in relation to sales, profitability, and employment growth. The review delineates significant methodological, contextual, and theoretical deficiencies that substantiate the present study.

2.3.1 Debt Financing and Growth Sustainability of SMEs

The empirical literature presents a continuing debate on whether debt financing enhances or constrains the growth sustainability of small and medium-sized enterprises (SMEs). On one side, debt provides enterprises with external resources that can supplement internally generated funds and support investment, working capital, expansion and other growth-oriented activities. On the other side, debt creates repayment obligations and financing costs that may reduce liquidity and constrain reinvestment when borrowing becomes excessive or expensive. The relationship is therefore not necessarily linear, because the contribution of debt depends on how much is borrowed, the cost of

borrowing and the period over which the debt must be repaid (Abor & Biekpe, 2009; Beck et al., 2005; Myers & Majluf, 1984; Serrasqueiro et al., 2018). This debate provides the basis for examining whether debt financing represents a growth-enabling resource or a financial burden for SMEs.

Evidence supporting the positive view indicates that appropriately structured debt can provide SMEs with resources that facilitate improved business performance and growth. Badi and Ishengoma (2021), for example, found that access to debt finance was associated with SME performance in Tanzania, while Manyanga et al. (2023) reported positive relationships between debt financing and the financial performance of SMEs in Zimbabwe. Similar evidence is provided by Nuwagaba et al. (2021), who found a positive relationship between traditional debt finance and sustainable small-business growth in Uganda. These findings are consistent with the broader argument that external finance can relax financial constraints and enable SMEs to undertake activities that would otherwise be limited by insufficient internal resources (Beck et al., 2005; Serrasqueiro et al., 2018). Taken together, the studies suggest that debt can support growth when it provides productive financial capacity rather than merely increasing the enterprise's financial obligations.

However, the positive relationship identified in these studies does not imply that all forms or levels of debt are equally beneficial. Evidence increasingly indicates that the conditions attached to borrowing determine whether debt contributes to or constrains SME growth. Badi and Ishengoma (2021) emphasized the importance of access to appropriately structured debt, while Manyanga et al. (2023) distinguished among different forms of debt financing in explaining SME financial performance. Nuwagaba et al. (2021) similarly found that traditional debt finance was positively associated with sustainable growth, although other financing options showed stronger relationships with growth. These findings complement the capital-structure argument that financing decisions involve trade-offs between the benefits of additional external funds and the costs associated with financial obligations (Kraus & Litzenberger, 1973; Modigliani & Miller, 1963). Thus, the emerging agreement

is not simply that debt is beneficial, but that its contribution to growth depends on the characteristics and use of the financing.

This qualification becomes more important when the contradictory evidence is considered. While some studies report positive relationships between debt and SME performance or growth, other research identifies debt as a potential constraint on growth. Serrasqueiro et al. (2018), for instance, found that debt and interest rates could restrict SME growth, particularly where financing costs increased the burden associated with external finance. This evidence contrasts with the positive relationships reported by Badi and Ishengoma (2021), Manyanga et al. (2023) and Nuwagaba et al. (2021). The contradiction does not necessarily mean that one group of studies is incorrect; rather, it indicates that the debt-growth relationship may vary according to financing conditions, firm characteristics, the form of debt and the period under consideration. This interpretation is also consistent with the capital-structure literature, which recognizes that debt can generate benefits through additional financing while simultaneously imposing costs through interest and repayment obligations (Myers, 1984; Myers & Majluf, 1984).

The difference in findings is further illustrated by longitudinal evidence. Serrasqueiro et al. (2018) identified restrictive effects of debt on SME growth, whereas Serrasqueiro et al. (2023), using evidence on SMEs' growth, profitability and debt relationships, showed that the relationship between debt and firm outcomes is more complex than a uniformly negative association. Their findings are broadly compatible with the positive evidence reported by Manyanga et al. (2023) and Badi and Ishengoma (2021), although the studies differ in context, measurement and methodology. The variation across findings suggests that the effect of debt should be examined through the characteristics of financing rather than through debt access alone. In particular, the amount borrowed, the cost of borrowing and the period available for repayment may determine whether debt provides sufficient financial capacity to support growth or instead creates pressure on business cash flows.

The importance of these dimensions is evident in the literature on SME financing. Loan size determines the amount of financial resources available for investment and operations, but excessive borrowing may increase repayment obligations and financial exposure; interest rate determines the cost of using borrowed funds and therefore affects the resources available for reinvestment; and loan maturity determines the period over which the principal and associated costs must be serviced. These dimensions correspond with the broader capital-structure literature, which views financing decisions as a balance between the benefits of external funds and the costs of financial distress and servicing obligations (Kraus & Litzenberger, 1973; Modigliani & Miller, 1963; Myers, 1984). Empirically, the positive performance effects reported by Badi and Ishengoma (2021) and Manyanga et al. (2023), alongside the restrictive evidence associated with debt costs reported by Serrasqueiro et al. (2018), reinforce the importance of examining these debt characteristics jointly rather than treating debt financing as a single undifferentiated source of finance.

The African evidence further demonstrates why such an integrated examination is necessary. Studies from Tanzania and Zimbabwe provide evidence that debt can support SME performance, while evidence from other African settings indicates that the cost and structure of debt can constrain growth (Badi & Ishengoma, 2021; Manyanga et al., 2023). Research on SME financing in sub-Saharan Africa also shows that SMEs commonly operate under financing constraints and may rely on combinations of formal and informal financing arrangements (Abor & Biekpe, 2009; Beck et al., 2005). Consequently, findings from one African country cannot automatically be assumed to apply to another because the nature of financial markets, lending conditions, firm characteristics and access to formal credit may differ. The cross-country evidence therefore establishes the relevance of debt financing to SME growth while simultaneously indicating the need for context-specific investigation.

Within Uganda, the available empirical evidence provides an important but incomplete basis for understanding this relationship. Nuwagaba et al. (2021) found a positive relationship between traditional debt finance and sustainable

small-business growth, suggesting that external debt can contribute to business sustainability. At the same time, Nkundabanyanga et al. (2014) demonstrated the importance of lending terms and financial literacy in formal credit accessibility, indicating that access to debt cannot be separated from the conditions under which credit is obtained and managed. These findings complement the broader evidence that the financing environment and debt characteristics can influence the usefulness of external finance (Beck et al., 2005; Serrasqueiro et al., 2018). Nevertheless, the Ugandan evidence remains limited in relation to the simultaneous assessment of loan size, interest rate and loan maturity and their relationship with the multidimensional sustainability of SME growth.

The reviewed evidence therefore reveals substantial agreement alongside important unresolved contradictions. There is agreement that debt financing can provide SMEs with resources necessary for investment, operations and expansion, and that appropriately structured external finance can be associated with improved performance and growth (Badi & Ishengoma, 2021; Manyanga et al., 2023; Nuwagaba et al., 2021). There is also agreement that the cost and conditions of borrowing matter because repayment obligations and interest costs can reduce the resources available for business growth (Nkundabanyanga et al., 2014; Serrasqueiro et al., 2018)financial literacy and access to formal credit by small and medium enterprises (SMEs. However, the literature disagrees on the overall direction and magnitude of the debt-growth relationship, with positive and restrictive effects reported across different settings and methodological approaches (Serrasqueiro et al., 2018, 2023). In the researcher's view, this unresolved debate reflects a conceptual limitation in studies that examine access to debt or individual debt characteristics separately. A more comprehensive assessment should consider debt financing as a construct comprising the amount borrowed, the cost of borrowing and the maturity of the loan, while examining its relationship with the broader sustainability of SME growth.

This review consequently identifies an emerging conceptual, contextual and empirical gap. Conceptually, relatively limited attention has been given to the combined contribution of loan size, interest rate and loan maturity in explaining

SME growth sustainability, despite evidence that each dimension can shape the benefits and costs of borrowing (Kraus & Litzenberger, 1973; Nkundabanyanga et al., 2014)financial literacy and access to formal credit by small and medium enterprises (SMEs. Empirically, previous studies have produced inconsistent findings, with some demonstrating positive relationships between debt and SME performance or growth and others identifying restrictive effects associated with debt and its costs (Manyanga et al., 2023; Serrasqueiro et al., 2018). Contextually, the available Ugandan evidence does not sufficiently address SMEs in Lira City using an integrated measure of debt financing and growth sustainability. The present study therefore conceptualizes debt financing through loan size, interest rate and loan maturity and examines its relationship with SME growth sustainability, thereby providing an empirical test of the unresolved relationship identified in the literature. Accordingly, the study hypothesises that:

H_1: Debt financing has a statistically significant effect on the growth sustainability of SMEs.

2.3.2 Debt Management Behaviour and Growth Sustainability of SMEs

The empirical literature on debt management behaviour and SME growth sustainability has increasingly shifted attention from the availability of finance to what entrepreneurs do with debt after it is obtained. The central debate is whether business outcomes are determined primarily by access to financial resources or by the behavioural capacity of entrepreneurs to plan, allocate, monitor and repay borrowed funds. One stream of research argues that disciplined budgeting, repayment practices, financial planning and reinvestment enable SMEs to convert borrowed resources into productive activities and sustained growth, whereas another suggests that access to finance alone may be insufficient where entrepreneurs exhibit weak financial control or inappropriate expenditure behaviour (Badi & Ishengoma, 2021; Graña-Alvarez et al., 2022; Serrasqueiro et al., 2023). This distinction is important because debt creates obligations that continue after the loan has been obtained,

meaning that the entrepreneur's subsequent financial behaviour may determine whether borrowed funds become a resource for growth or a source of financial pressure.

Evidence supporting the behavioural perspective indicates that effective post-loan management is associated with improved SME outcomes. Graña-Alvarez et al. (2022), using firm-level evidence from developed and developing countries, reported that budgeting, repayment discipline and reinvestment were important to SME viability, suggesting that the management of debt after borrowing may be as important as access to capital itself. Similarly, Serrasqueiro et al. (2023) found that financial planning and record-keeping were associated with improved SME growth, while Badi and Ishengoma (2021) reported that effective debt monitoring enhanced the benefits associated with access to debt finance. These findings converge around the proposition that entrepreneurs must exercise financial discipline in the use and repayment of borrowed funds for debt to contribute to sustainable business outcomes. The agreement, therefore, is not simply that finance matters, but that the behaviour surrounding the use and management of finance is an important mechanism through which financial resources may translate into business performance and growth.

The positive evidence, however, raises a further question concerning what determines disciplined debt management behaviour. Much of the earlier literature concentrates on observable practices such as budgeting, monitoring, record-keeping and repayment, while giving less attention to the personal characteristics that shape those practices. For example, Badi and Ishengoma (2021) demonstrate the importance of debt monitoring, and Serrasqueiro et al. (2023) highlight financial planning and record-keeping, but these studies do not explicitly incorporate psychological or behavioural characteristics such as financial self-efficacy, lifestyle orientation or religiosity. Likewise, Graña-Alvarez et al. (2022) focus on post-loan behaviours but do not examine these three characteristics as integrated behavioural dimensions. This creates an important conceptual distinction between what entrepreneurs do in managing

debt and the behavioural characteristics that may explain why they do it, suggesting the need for a broader conceptualisation of debt management behaviour.

Financial self-efficacy provides one explanation for differences in debt management behaviour because entrepreneurs who believe in their ability to manage financial challenges may be more likely to exercise control over borrowing and repayment decisions. Razak et al. (2020), for example, found that higher financial self-efficacy predicted more disciplined debt repayment among SME proprietors in Nairobi. This evidence is consistent with the broader behavioural perspective that beliefs about personal capability can influence financial decisions and behavioural outcomes (Ajzen, 1991; Ranyard, 2018). However, the emphasis on self-efficacy alone leaves unanswered whether confidence operates alongside other behavioural characteristics that shape how entrepreneurs use debt. The limitation is therefore not that self-efficacy is irrelevant, but that examining it in isolation provides an incomplete account of debt management behaviour and does not establish whether such behaviour ultimately contributes to firm-level growth indicators.

The same issue arises in relation to religiosity, where the literature suggests that personal values may influence financial conduct. The evidence presented in the reviewed literature indicates that religious values can encourage responsible borrowing, discourage wasteful expenditure and promote repayment discipline, thereby potentially supporting more responsible debt management. This perspective is consistent with research examining the role of beliefs, attitudes and behavioural intentions in financial decision-making (Ajzen, 1991; Lestari & Silvy, 2022). However, the existing evidence largely treats religiosity as an individual explanatory variable rather than as one component of a broader debt management behaviour construct. Consequently, although the literature suggests that values can influence financial conduct, it remains unclear whether religiosity, when considered together with other behavioural characteristics, is associated with the sustainability of SME growth.

Lifestyle orientation provides another behavioural pathway through which debt management may affect SME outcomes. Evidence reviewed in the source material indicates that frugal and investment-oriented behaviour is associated with more favourable financial outcomes, whereas consumption-oriented behaviour may increase the risk of inappropriate use of borrowed resources (Nyeko et al., 2024; Palupi et al., 2023). This argument complements the evidence on self-efficacy and religiosity because entrepreneurs differ not only in their perceived financial capability and value systems but also in how they prioritize consumption, saving and investment. Nevertheless, the literature has generally examined lifestyle behaviour separately from other behavioural characteristics and has not sufficiently connected it to broader firm-level growth outcomes. The emerging pattern is therefore that individual behavioural dimensions have been studied independently, while the combined behavioural process through which entrepreneurs manage debt remains insufficiently examined.

The limitations become more apparent when evidence from Uganda is considered. Nuwagaba et al. (2021) identified weaknesses in internal controls and disordered debt utilization as important issues in understanding SME loan default, providing contextual evidence that the way entrepreneurs manage debt can have consequences beyond the initial acquisition of finance. Similarly, research on financial inclusion and SME growth in Uganda suggests that access to finance interacts with the capacity of small firms to utilize financial resources effectively (Lakuma et al., 2019; Turyakira et al., 2019). More recent evidence further strengthens this line of inquiry: Nakanwagi et al. (2026) examined the relationship between debt management skills and performance among micro and small enterprises in Western Uganda and considered access to finance as a mediating mechanism. These studies collectively suggest that financial behaviour and debt-management capabilities are relevant to SME outcomes, but they do not provide a comprehensive examination of lifestyle pattern, religiosity and financial self-efficacy as dimensions of a single debt management behaviour construct.

The developing-country evidence consequently reveals both agreement and

contradiction. There is broad agreement that disciplined financial behaviour, effective monitoring, financial planning and responsible debt utilization can improve the capacity of SMEs to benefit from borrowed funds (Badi & Ishengoma, 2021; Graña-Alvarez et al., 2022; Serrasqueiro et al., 2023). There is also evidence that particular behavioural characteristics, especially self-efficacy, values and lifestyle orientation, are associated with financial decision-making and debt-related practices (Ajzen, 1991; Lestari & Silvy, 2022; Razak et al., 2020). However, the literature differs in the extent to which these behavioural characteristics are treated as direct determinants of firm-level outcomes. Some studies focus on repayment behaviour, others on financial performance, and others on access to or use of finance. As a result, the evidence does not yet provide a consistent explanation of whether a broader debt management behaviour construct has a statistically significant relationship with the sustainability of SME growth.

From the researcher's perspective, this fragmented evidence points to the need to move beyond examining individual debt-management practices or isolated behavioural characteristics. Debt management behaviour can be understood more comprehensively as an underlying behavioural construct reflected in the entrepreneur's lifestyle pattern, religiosity and financial self-efficacy, because these characteristics can shape expenditure choices, attitudes towards financial obligations, confidence in managing financial decisions and the discipline with which borrowed resources are used. Such a conceptualization complements the behavioural logic of the Theory of Planned Behaviour, which links beliefs and attitudes to behavioural intentions and actions (Ajzen, 1991), while also recognizing that financial behaviour involves cognitive, psychological and contextual processes (Ranyard, 2018). The value of this approach is that it allows the study to examine debt management behaviour at the construct level rather than treating budgeting, repayment, lifestyle, religiosity and self-efficacy as unrelated phenomena.

The emerging gap is therefore conceptual, empirical and contextual. Conceptually, previous research has tended to emphasize specific debt-

management practices or individual behavioural attributes rather than integrating lifestyle pattern, religiosity and financial self-efficacy into a single debt management behaviour construct (Graña-Alvarez et al., 2022; Razak et al., 2020; Serrasqueiro et al., 2023). Empirically, existing studies provide evidence that behavioural characteristics influence financial decisions and debt practices, but relatively few directly examine whether these characteristics collectively relate to measurable dimensions of SME growth sustainability, including sales, profitability and employment growth (Badi & Ishengoma, 2021; Nuwagaba et al., 2021; Nyakundi & Nakanwagi, 2026). Contextually, evidence from developed economies and other African settings cannot fully establish how these behavioural mechanisms operate among SMEs in Lira City. The present study therefore conceptualises debt management behaviour as a latent construct represented by lifestyle pattern, religiosity and financial self-efficacy and examines its relationship with the growth sustainability of SMEs. On this basis, the study tests the following hypothesis:

*H_2: Debt management behaviour has a statistically significant effect on the growth sustainability of SMEs***.**

2.3.3 The Moderating Role of Debt Literacy Between Debt Financing and SME Growth Sustainability

The relationship between debt financing and SME growth sustainability remains contested, with empirical evidence suggesting that the benefits of borrowing depend not only on the availability and structure of debt but also on the capabilities of borrowers. Badi and Ishengoma (2021), for example, found among 150 registered Tanzanian SMEs that flexible loan conditions and lower interest rates enhanced the benefits derived from external financing. Similarly, Kassegn and Endris (2022), using data from 200 SMEs in Addis Ababa, found that appropriately structured loans, particularly those with manageable costs and longer maturities, supported liquidity, reinvestment and business growth. These findings suggest that debt financing can contribute to sustainable growth when its characteristics are compatible with firms' financial capacity. However,

both studies primarily examined the characteristics of debt financing and did not consider whether differences in borrowers' debt-related knowledge condition the benefits obtained from such financing. This omission leaves unresolved whether similar loan conditions necessarily produce similar growth outcomes among SMEs with different levels of financial understanding.

The importance of loan structure becomes more evident where debt is costly or poorly matched to business cash flows. Githaiga and Kabiru (2015) found that high-interest and short-term borrowing was associated with weaker profitability and cash-flow stability among SMEs in Nairobi, while Mamaro and Legotlo (2020) reported that longer-term financing supported capital investment and employment expansion among South African SMEs, whereas reliance on short-term financing was associated with operational instability. These findings complement the evidence of Badi and Ishengoma (2021) and Kassegn and Endris (2022) by demonstrating that debt does not operate uniformly across firms; rather, its consequences vary according to the conditions under which it is obtained and used. Nevertheless, the studies largely treat loan characteristics as direct determinants of outcomes, without examining whether borrowers' ability to understand interest costs, repayment obligations, maturity periods and associated risks changes the strength or direction of the debt financing–growth relationship.

Evidence from Uganda further reinforces the importance of borrower capability in explaining the outcomes of debt financing. Short-term loans with high interest rates and rigid repayment conditions were reported to constrain liquidity among Ugandan enterprises (Bob et al., 2018). Higher levels of general financial literacy were found to be associated with improved loan utilization and enterprise performance (Orobia et al., 2020). Although these findings point towards the importance of financial knowledge in determining how borrowing is used, general financial literacy is broader than knowledge specifically related to debt. Consequently, the evidence does not establish whether entrepreneurs who understand debt-specific concepts are better able to convert particular financing conditions into sustainable growth. The distinction

is important because an entrepreneur may possess general financial knowledge but still have limited understanding of interest accumulation, repayment schedules, debt affordability and the consequences of different loan structures.

The emerging evidence on financial comprehension therefore provides a basis for considering debt literacy as a potentially important conditioning factor. Namagembe and Mbago (2023), using Structural Equation Modelling among SMEs in Northern Uganda, found that inadequate financial comprehension was associated with ineffective debt allocation and increased default. Their findings extend earlier evidence by linking financial understanding more directly to debt-use outcomes. However, the study did not examine whether financial comprehension changes the relationship between specific debt-financing characteristics and enterprise performance. Thus, while the existing evidence indicates that knowledgeable borrowers may use debt more effectively, it remains unclear whether debt literacy actually strengthens the positive contribution of appropriately structured debt or weakens the adverse effects associated with costly or restrictive borrowing.

This issue is also reflected in international evidence concerning debt-specific education and borrowing behaviour. Debt-management training was found to be associated with more strategic borrowing decisions and reduced reliance on high-risk loans among Indonesian SMEs (Ferli, 2023; Zaniarti et al., 2022). These findings suggest that knowledge and skills relating specifically to debt can influence how entrepreneurs evaluate and use external finance. However, the studies focus primarily on borrowing decisions and debt-management behaviour rather than on the interaction between debt literacy and debt financing in explaining sustainable SME growth. Thus, the evidence supports the relevance of debt-specific knowledge but does not establish whether literacy operates as a moderator through which the effects of loan size, interest rate and maturity on growth sustainability vary across SMEs.

The behavioural dimension of debt literacy provides a further explanation for why similarly financed SMEs may experience different outcomes. Porzak

et al. (2021), using evidence from 250 Polish SMEs, found that debt-literate entrepreneurs managed loans more effectively and experienced lower financial stress. This evidence is consistent with the broader findings of Orobia et al. (2020) and Namagembe and Mbago (2023), which associate financial understanding with more effective financial and debt-related decisions. Nevertheless, Porzak et al. (2021) did not examine wider SME growth outcomes or the interaction between debt literacy and specific debt structures. Consequently, although the studies collectively indicate that knowledge can influence debt-use behaviour, they provide limited evidence on whether debt literacy changes the extent to which debt financing contributes to sustainable growth.

A further debate concerns whether debt literacy should be treated as a direct explanatory factor or as a condition under which financing produces different outcomes. Studies that examine financial literacy or debt knowledge primarily as a direct predictor imply that better-informed entrepreneurs achieve better financial outcomes regardless of the financing conditions they face. In contrast, the evidence on loan structure demonstrates that the consequences of borrowing depend on interest costs, maturity and repayment requirements (Badi & Ishengoma, 2021; Githaiga & Kabiru, 2015; Kassegn & Endris, 2022). Bringing these strands together suggests that the effect of debt financing may not be uniform across SMEs because entrepreneurs differ in their capacity to understand and manage debt obligations. From this perspective, debt literacy is conceptually more appropriate as a moderating factor when the research question is whether financial knowledge changes the strength of the relationship between debt financing and growth sustainability.

The empirical evidence nevertheless remains fragmented in three important respects. First, studies on debt financing predominantly examine loan size, interest rate, maturity or repayment conditions without explicitly modelling debt literacy (Badi & Ishengoma, 2021; Endris & Kassegn, 2022). Second, studies examining financial literacy or debt knowledge tend to focus on loan utilization, repayment, financial stress or borrowing decisions rather than sustainable growth outcomes (Namagembe & Mbago, 2023; Orobia et al.,

2020; Porzak et al., 2021). Third, even where debt-specific knowledge is considered, the interaction between debt literacy and the characteristics of debt financing has not been adequately tested. The literature therefore contains evidence for both sides of the relationship, but there is insufficient empirical integration of financing characteristics and borrower capability within a single moderated model.

From the researcher's perspective, these limitations indicate that the contribution of debt financing to SME growth sustainability cannot be fully understood by considering financing conditions independently of entrepreneurs' debt-related knowledge. The existing studies establish that loan characteristics can either support or constrain business outcomes and that financial or debt-related knowledge can influence how entrepreneurs use and manage borrowed funds (Badi & Ishengoma, 2021; Orobia et al., 2020; Porzak et al., 2021). What remains insufficiently established is whether debt literacy changes the magnitude of the relationship between debt financing and growth sustainability. This distinction is particularly relevant to the present study because debt financing is operationalized through loan size, interest rate and loan maturity, while debt literacy captures the knowledge and skills required to understand and manage debt obligations. Examining their interaction therefore provides a more integrated explanation of why comparable financing arrangements may generate different growth outcomes among SMEs.

The emerging gap is consequently both conceptual and empirical. Conceptually, previous studies have tended to treat debt financing and financial literacy as separate predictors, with limited attention to debt literacy as a contingency mechanism linking the characteristics of borrowing to sustainable SME growth. Empirically, there is limited evidence from the Ugandan SME context on whether debt literacy changes the relationship between loan size, interest rate and loan maturity and growth sustainability. The present study addresses this gap by conceptualizing debt literacy as a moderator, rather than a mediator, and testing its interaction with debt financing using Structural Equation Modelling. The study therefore proposes that the relationship between debt

financing and SME growth sustainability varies according to the level of debt literacy possessed by SME owners and managers. Accordingly, the following hypothesis is formulated:

H_3: Debt literacy has a statistically significant moderating effect on the relationship between debt financing and the growth sustainability of SMEs.

2.3.4 The Moderating Role of Debt Literacy Between Debt Management Behaviour and SME Growth Sustainability

The relationship between debt management behaviour and SME growth sustainability has received increasing empirical attention, although the evidence suggests that behavioural practices do not operate independently of entrepreneurs' financial capabilities. Badi and Ishengoma (2021), for example, found among 150 SMEs in Tanzania that effective loan oversight and repayment planning were associated with improved firm performance. Similarly, Mamaro and Legotlo (2020) reported that inadequate debt monitoring and inconsistent repayment practices were associated with increased SME failure in South Africa. These findings indicate that how entrepreneurs manage borrowed funds may be as important as the availability of finance itself. However, both studies examined debt management behaviour largely as a direct determinant of enterprise outcomes and did not establish whether differences in debt-related knowledge alter the effectiveness of such behaviour. Thus, while behavioural discipline appears important for SME outcomes, the extent to which entrepreneurs' understanding of debt strengthens or weakens this relationship remains insufficiently established.

The importance of effective debt management is further illustrated by evidence from Uganda. Nuwagaba et al. (2021) found that inadequate financial controls and ineffective repayment arrangements contributed to debt-management difficulties among SMEs. Their findings are consistent with Badi and Ishengoma (2021) and Mamaro and Legotlo (2020), suggesting that monitoring, repayment discipline and control over borrowed funds are relevant to business

sustainability. Nevertheless, Nuwagaba et al. (2021) adopted a qualitative approach and did not incorporate debt literacy as a conditioning variable. Consequently, the evidence provides useful insight into the behavioural processes through which debt may become problematic but does not explain whether entrepreneurs with greater debt knowledge are better able to translate sound debt-management behaviour into sustainable growth.

The behavioural literature also identifies specific characteristics that may shape debt-management practices. Razak et al. (2020), for instance, found among SME owners in Nairobi that financial self-efficacy was associated with responsible repayment behaviour. This finding complements evidence that entrepreneurs' confidence and perceived control can influence the manner in which debt obligations are managed. However, self-efficacy alone may not explain why similar behavioural intentions produce different financial outcomes across entrepreneurs. Financial knowledge can enhance the effectiveness of behavioural intentions, suggesting that behavioural characteristics and cognitive capabilities may operate jointly rather than independently (Sabri & Wijekoon, 2019). Although their study focused on young financial behaviour rather than SME debt management, the evidence provides a useful basis for examining whether knowledge strengthens the translation of intended or actual debt-management behaviour into business outcomes.

The interaction between financial knowledge and debt-management behaviour is particularly relevant to the concept of debt literacy. Agyei (2018) reported that understanding debt was associated with improved repayment behaviour among SMEs, while Orobia et al. (2020) found that financial knowledge was positively associated with loan utilization among Ugandan SMEs. Taken together, these studies suggest that knowledge can facilitate more effective financial behaviour. However, they primarily examine knowledge as a direct explanatory factor rather than as a variable that changes the strength of the relationship between debt-management behaviour and enterprise performance. The distinction is important because an entrepreneur may demonstrate repayment discipline or financial self-efficacy, but the effectiveness of that

behaviour may depend partly on the ability to understand loan costs, repayment obligations, risks and alternative uses of borrowed funds.

Evidence from Ugandan SMEs provides further support for considering the behavioural and cognitive dimensions jointly. Kintu et al. (2019), using Structural Equation Modelling among 220 SMEs, reported that financial aptitude and self-efficacy were associated with more effective management and utilisation of borrowed funds. Buyinza et al. (2018) likewise examined financial behaviour, financial literacy and SME success using Structural Equation Modelling. These studies are important because they recognize that financial behaviour and financial capability can coexist within an explanatory model. Nevertheless, they did not explicitly isolate debt literacy as a moderating construct. As a result, the existing evidence does not establish whether the benefits of positive debt-management behaviour become stronger when entrepreneurs possess greater debt-specific knowledge.

The international literature provides a similar pattern of evidence. Lusardi and Tufano (2015) demonstrated that debt knowledge is relevant to individuals' ability to understand borrowing costs and manage credit-related risks, while Zaniarti et al. (2022) found that debt-related knowledge was associated with more prudent borrowing decisions among Indonesian participants. These findings reinforce the view that knowledge can influence how individuals approach credit and financial risk. However, the studies focus mainly on individual borrowing and repayment decisions rather than on SME growth sustainability. Moreover, they do not directly examine whether debt literacy changes the effect of behavioural debt-management practices on firm-level outcomes. Thus, although the evidence establishes the importance of debt knowledge, its moderating role within SME debt-management behaviour remains insufficiently explored.

A further issue emerging from the literature concerns whether behavioural and cognitive characteristics should be treated as independent determinants or as complementary influences. Studies focusing on self-efficacy and repayment

discipline emphasize the behavioural capacity of entrepreneurs to regulate financial decisions, whereas studies on financial and debt literacy emphasize the knowledge required to understand and evaluate those decisions (Agyei, 2018; Orobia et al., 2020; Razak et al., 2020). These perspectives are not necessarily contradictory. Rather, they suggest that effective debt management may require both the behavioural disposition to act responsibly and the cognitive capacity to understand the consequences of alternative debt decisions. The literature therefore provides a rationale for examining an interaction between debt management behaviour and debt literacy instead of assuming that either construct independently explains SME growth sustainability.

Despite this emerging convergence, important empirical inconsistencies remain. Some studies report that financial behaviour, repayment discipline and self-efficacy are associated with better financial outcomes (Badi & Ishengoma, 2021; Kintu et al., 2019; Razak et al., 2020), while others show that financial knowledge influences loan utilization and repayment decisions (Agyei, 2018; Orobia et al., 2020; Zaniarti et al., 2022). Yet these two strands of evidence have largely been examined separately. Consequently, the literature does not adequately explain whether entrepreneurs with similar levels of debt-management behaviour achieve different growth outcomes because they possess different levels of debt literacy. This represents a substantive gap because behavioural effectiveness may depend on whether entrepreneurs understand the financial implications of the actions they undertake.

From the researcher's perspective, the evidence therefore supports a shift from viewing debt management behaviour and debt literacy as separate predictors towards examining their potential interaction. Effective repayment discipline, monitoring, financial control and self-efficacy may enable entrepreneurs to manage borrowed funds responsibly, but debt literacy may determine how effectively these behaviours are applied to specific debt obligations and financial risks (Buyinza et al., 2018; Kintu et al., 2019; Lusardi & Tufano, 2015). Accordingly, debt literacy may strengthen the contribution of positive debt-management behaviour to SME growth sustainability, while limited debt

knowledge may constrain the benefits of otherwise appropriate behavioural practices. This perspective is particularly relevant to the present study because debt management behaviour is represented by lifestyle pattern, religiosity and financial self-efficacy, while debt literacy captures debt-related knowledge and skills.

The emerging gap is therefore both conceptual and empirical. Conceptually, previous studies have examined behavioural characteristics and financial knowledge largely as direct determinants, with limited attention to debt literacy as a factor that conditions the relationship between debt-management behaviour and SME growth sustainability. Empirically, there is limited evidence, particularly in the Ugandan SME context, on whether debt literacy changes the strength of the relationship between lifestyle pattern, religiosity and financial self-efficacy and sustainable business growth. The present study addresses this gap by conceptualizing debt literacy as a moderator, rather than a mediator, and by testing the interaction between debt management behaviour and debt literacy using Structural Equation Modelling. The study therefore proposes that the contribution of debt management behaviour to SME growth sustainability varies according to the level of debt literacy possessed by SME owners and managers. Accordingly, the following hypothesis is formulated:

H_4: Debt literacy has a statistically significant moderating effect on the relationship between debt management behaviour and the growth sustainability of SMEs.

2.4 Identified Research Gap

The review of empirical literature reveals several unresolved issues concerning the relationship between debt financing, debt management behaviour, debt literacy and the growth sustainability of SMEs. First, although previous studies have examined individual characteristics of debt financing, including loan size, interest rate and loan maturity, the evidence remains fragmented regarding their combined relationship with SME growth sustainability (Badi & Ishengoma, 2021; Kassegn & Endris, 2022; Mamaro & Legotlo, 2020).

Studies have generally considered particular loan characteristics separately or have focused on specific financing outcomes such as profitability, liquidity, repayment or investment. Consequently, limited empirical evidence explains how these dimensions collectively relate to sales growth, profitability and employment growth within a single analytical framework. This represents a conceptual gap that the present study addresses by examining debt financing as a multidimensional construct comprising loan size, interest rate and loan maturity.

Second, a contextual and geographical gap is evident in the existing literature. Much of the empirical evidence reviewed originates from Tanzania, Ethiopia, Kenya, South Africa and other settings, while Ugandan studies have often focused on Kampala or other urban settings. Although these studies provide useful evidence on debt financing and SME performance, their findings cannot automatically be assumed to apply to SMEs operating in Lira City because financing conditions, business environments and entrepreneurs' experiences may vary across locations. More importantly, the reviewed literature provides limited empirical evidence specifically examining the relationship between debt financing and growth sustainability among SMEs in Lira City. The present study therefore provides location-specific evidence by examining SMEs operating within Lira City.

Third, the review identifies a conceptual and theoretical gap concerning debt management behaviour. Existing studies have increasingly recognized the importance of financial control, repayment discipline, loan monitoring and financial planning, but relatively limited attention has been given to the individual behavioural dimensions that may shape how SME owners manage debt. In particular, lifestyle pattern, religiosity and financial self-efficacy have rarely been integrated into a single empirical model of SME debt management and growth sustainability (Badi & Ishengoma, 2021; Nuwagaba et al., 2021; Orobia et al., 2020; Razak et al., 2020). The existing evidence therefore provides insufficient explanation of how these behavioural characteristics, considered collectively, relate to sustainable SME growth. This study addresses the gap

by operationalizing debt management behaviour through lifestyle pattern, religiosity and financial self-efficacy and examining its relationship with SME growth sustainability.

Fourth, an important moderation gap concerns the role of debt literacy. The reviewed literature indicates that financial knowledge and debt-related knowledge are associated with loan utilisation, repayment decisions and financial outcomes (Lusardi & Tufano, 2015; Orobia et al., 2020; Porzak et al., 2021). However, most studies treat financial literacy or debt knowledge as a direct explanatory variable rather than examining whether it changes the strength of relationships between financing or behavioural factors and SME growth. In particular, limited empirical evidence tests whether debt literacy moderates the relationship between debt financing and growth sustainability or between debt management behaviour and growth sustainability. The present study addresses this theoretical and empirical gap by treating debt literacy as a moderator and testing its interaction with both debt financing and debt management behaviour. Fifth, a methodological gap emerges from the predominance of descriptive analyses, qualitative studies and conventional regression approaches in the reviewed literature. While such approaches provide important evidence on individual relationships, they provide more limited opportunities to examine the simultaneous relationships among multidimensional latent constructs and moderation effects. The present study therefore employs Structural Equation Modelling (SEM) to examine the relationships among debt financing, debt management behaviour, debt literacy and growth sustainability, including the hypothesized interaction effects. The use of SEM provides a systematic approach for examining the proposed relationships among the study constructs; however, given the cross-sectional quantitative design, the findings are interpreted as statistical relationships rather than definitive causal effects.

Sixth, the review reveals an explanatory gap that cannot be adequately addressed through quantitative evidence alone. Quantitative analysis can establish the statistical relationships among debt financing, debt management behaviour, debt literacy and growth sustainability, but it provides limited insight into how

SME owners interpret and respond to debt conditions in their actual business environments. In particular, it does not fully explain why SMEs exposed to similar financing conditions may respond differently, how owners adapt their debt-management practices, or how behavioural considerations influence their experiences of managing debt. The qualitative phase of this sequential explanatory mixed-methods study therefore addresses this gap by exploring SME owners' perspectives and experiences concerning (i) the influence of debt financing on business sustainability and (ii) the influence of debt management behaviour on enterprise growth sustainability. The qualitative findings are intended to explain and contextualize the quantitative results rather than replace them.

Overall, the literature demonstrates substantial knowledge about individual aspects of SME financing and financial behaviour, but important gaps remain in their integration, context and explanation. The present study addresses these gaps by developing an integrated framework that examines (i) the relationship between debt financing and SME growth sustainability, (ii) the relationship between debt management behaviour and SME growth sustainability, (iii) the moderating role of debt literacy in the debt financing–growth sustainability relationship, and (iv) the moderating role of debt literacy in the debt management behaviour–growth sustainability relationship. The study further addresses the contextual and explanatory gaps by focusing on SMEs in Lira City and using a sequential explanatory mixed-methods design in which qualitative evidence provides deeper understanding of the quantitative findings. In this way, the study contributes context-specific empirical evidence on how financing conditions, behavioural characteristics and debt-related knowledge jointly relate to the growth sustainability of SMEs.

2.5 Conclusion

This chapter reviewed the theoretical, conceptual, and empirical foundations underpinning the relationship between debt financing, debt management behaviour, debt literacy, and the growth sustainability of SMEs. The theoretical

review established that no single theoretical perspective adequately explains the complex relationship among these constructs. Therefore, the study integrates Trade-Off Theory, Theory of Planned Behaviour, Sustainable Growth Theory, and the Financial Capability perspective to provide a comprehensive explanation of how financing decisions, behavioural characteristics, and financial knowledge interact to influence SME growth sustainability. Trade-Off Theory explains the benefits and costs associated with debt financing, Theory of Planned Behaviour provides insight into behavioural influences on debt management practices, Sustainable Growth Theory explains the capacity of SMEs to achieve sustained expansion, while the Financial Capability perspective provides the basis for understanding the conditioning role of debt literacy.

The conceptual review examined the key constructs of the study, including debt financing, debt management behaviour, growth sustainability, and debt literacy. Debt financing was conceptualized through loan size, interest rate, and loan maturity, recognizing that the consequences of borrowing depend not only on access to finance but also on the conditions attached to credit. Debt management behaviour was conceptualized as a multidimensional construct reflected through lifestyle pattern, religiosity, and financial self-efficacy, acknowledging that entrepreneurs differ in how they perceive, utilize, and manage debt obligations. Growth sustainability was considered through sales growth, profitability growth, and employment growth, while debt literacy was positioned as a moderating construct that may influence the extent to which financing decisions and behavioural practices translate into sustainable business outcomes.

The empirical literature revealed that although previous studies provide valuable insights into SME financing and financial behaviour, significant gaps remain. Existing evidence provides mixed findings regarding whether debt financing supports or constrains SME growth, suggesting that the effects of borrowing depend on loan characteristics, business conditions,

and the capacity of entrepreneurs to manage financial obligations. Similarly, previous studies have examined debt management practices and behavioural characteristics separately, with limited attention to the combined influence of lifestyle pattern, religiosity, and financial self-efficacy as a broader behavioural construct. Furthermore, although financial literacy and debt knowledge have been associated with improved financial decisions, limited empirical evidence has examined debt literacy as a moderating mechanism that changes the relationships between debt financing, debt management behaviour, and SME growth sustainability.

The review further identified contextual, methodological, and explanatory gaps within existing literature. Much of the available evidence originates from countries outside Uganda or focuses on different SME environments, limiting its applicability to SMEs operating in Lira City. Methodologically, previous studies have predominantly relied on descriptive analysis and conventional regression approaches, providing limited understanding of the relationships among multidimensional latent constructs and moderation effects. Additionally, quantitative evidence alone cannot fully explain how SME owners experience and interpret debt financing and debt management challenges within their business contexts. These limitations justify the adoption of a sequential explanatory mixed-methods approach, where quantitative analysis establishes statistical relationships among the study constructs and qualitative inquiry provides contextual explanations of the quantitative findings.

Based on the identified gaps, this study develops an integrated framework examining: (i) the relationship between debt financing and SME growth sustainability; (ii) the relationship between debt management behaviour and SME growth sustainability; (iii) the moderating effect of debt literacy on the relationship between debt financing and growth sustainability; and (iv) the moderating effect of debt literacy on the relationship between debt management behaviour and growth sustainability. The next chapter presents the research methodology adopted to empirically investigate these relationships, including

the philosophy, research design, population, sampling procedures, data collection methods, measurement of constructs, and analytical techniques.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This study adopted a pragmatic research philosophy, which supports the integration of quantitative and qualitative approaches to address complex research problems and achieve the study objectives. Pragmatism emphasizes the use of appropriate methods based on the research questions and recognizes that knowledge can be developed through both objective measurement and the interpretation of human experiences. This philosophical orientation was appropriate for the present study because it sought to quantitatively examine the relationships among debt financing, debt management behaviour, debt literacy, and SME growth sustainability while also exploring the experiences and perspectives of SME owners in Lira City (Creswell & Creswell, 2018; Kaushik & Walsh, 2019).

Guided by the pragmatic philosophy, the study employed a sequential explanatory mixed-methods approach, where quantitative data collection and analysis preceded qualitative inquiry. The quantitative phase enabled the identification of statistical relationships among the study constructs and testing of the proposed hypotheses, while the qualitative phase provided deeper explanations of the quantitative findings by exploring SME owners' experiences, perceptions, and financial practices. The integration of both approaches allowed the study to generate a more comprehensive understanding of the factors influencing SME growth sustainability. The pragmatic paradigm therefore supported methodological flexibility and the integration of multiple sources of evidence to enhance the depth, credibility, and practical relevance of the findings (Žukauskas et al., 2018).

3.2 Research Philosophy

This study was guided by the pragmatic research philosophy, which provides a

practical and pluralistic foundation for addressing complex research problems. Pragmatism emphasizes the use of appropriate research approaches and methods that best address the research problem and generate meaningful knowledge for practical application (Creswell & Creswell, 2018). This philosophical orientation was appropriate for examining the influence of debt financing and debt management behaviour on the sustainable growth of SMEs in Lira City, as the research problem required both empirical measurement of relationships among variables and contextual understanding of the experiences underlying those relationships.

The adoption of pragmatism enabled the integration of quantitative and qualitative approaches within a sequential explanatory mixed-methods design. The quantitative phase provided measurable evidence regarding the relationships among debt financing, debt management behaviour, debt literacy, and sustainable SME growth, while the qualitative phase provided contextual explanations that enhanced interpretation of the quantitative findings. This combination was considered appropriate because financial practices within SMEs involve both observable economic behaviours and experiences shaped by business conditions, decision-making processes, and financial challenges.

From an ontological perspective, pragmatism recognizes that reality can be understood through both objective measurement and subjective interpretation. In this study, the quantitative phase assumed that aspects of SME financing and growth sustainability could be objectively measured through indicators such as debt financing practices, debt management behaviour, debt literacy, and growth outcomes. The qualitative phase complemented this understanding by exploring how SME owners and financial decision-makers experienced and interpreted financing decisions, debt management challenges, and sustainability issues (Cazeaux & Cazeaux, 2017; Ganesha & Aithal, 2022).

From an epistemological perspective, pragmatism acknowledges that knowledge can be generated through empirical investigation as well as contextual understanding. Accordingly, this study generated quantitative

knowledge through structured questionnaires and statistical analysis, including hypothesis testing using SEM and regression analysis. The qualitative follow-up phase generated contextual knowledge through semi-structured interviews and thematic analysis, which were used to explain and elaborate on the patterns identified during the quantitative analysis (Kaushik & Walsh, 2019).

Pragmatism also recognizes the role of axiology, acknowledging that research is influenced by the practical concerns and values that motivate investigation. This study was motivated by the need to generate evidence-based insights into SME financing challenges and factors influencing sustainable business growth in Lira City. However, the researcher maintained objectivity and ethical integrity throughout the research process by adhering to principles of informed consent, confidentiality, and methodological rigor (Saunders; et al., 2016).

In summary, the pragmatic research philosophy provided the foundation for the sequential explanatory mixed-methods design adopted in this study. It enabled the integration of quantitative analysis, which established relationships among the study variables, with qualitative exploration, which provided deeper explanations of the quantitative findings. Through this approach, the study developed a comprehensive understanding of how debt financing, debt management behaviour, and debt literacy influence sustainable SME growth.

3.4 Research Design

This study employed a sequential explanatory mixed-methods research design to investigate the relationship between debt financing, debt management behaviour, debt literacy, and sustainable growth of small and medium enterprises (SMEs). A mixed-methods research design involves the deliberate integration of quantitative and qualitative approaches within a single study to obtain a more comprehensive understanding of a research problem than could be achieved through either approach independently (Creswell & Plano, 2018). The sequential explanatory design is a two-phase mixed-methods approach in which the researcher initially collects and analyses quantitative data, followed

by the collection and analysis of qualitative data to explain, interpret, and expand upon the quantitative findings (Creswell & Plano, 2018).

The selection of a mixed-methods approach was guided by the pragmatic research philosophy adopted in this study, which emphasizes the use of methods that best address the research problem and research objectives (Creswell & Creswell, 2018; Kaushik & Walsh, 2019). The nature of SME financing and sustainable growth requires both quantitative assessment of relationships among measurable constructs and qualitative understanding of the experiences, perceptions, and contextual factors influencing SME owners' financial decisions. While quantitative methods provide evidence regarding the magnitude and significance of relationships among debt financing, debt management behaviour, debt literacy, and sustainable SME growth, they do not sufficiently explain why such relationships exist or how SME owners experience and interpret financing-related challenges. Therefore, integrating qualitative inquiry with quantitative analysis was considered necessary to develop a deeper and more complete understanding of the phenomenon.

The study specifically adopted a sequential explanatory rather than a concurrent mixed-methods design because the purpose of the qualitative phase was to explain and provide contextual meaning to the findings generated from the quantitative phase. In a concurrent design, quantitative and qualitative data are collected and analyzed during the same period, with both strands contributing independently to the interpretation of findings. However, in this study, the qualitative phase was dependent on the outcomes of the quantitative analysis. Conducting the quantitative phase first enabled the researcher to identify significant relationships, unexpected patterns, and areas requiring further explanation, which subsequently informed the focus of the qualitative investigation. Thus, the sequential approach ensured that the qualitative component was purposeful and directly connected to explaining the statistical results rather than functioning as a separate parallel inquiry.

The implementation of the research design followed the sequence QUAN →

QUAL → Integration/Triangulation. The first phase involved a cross-sectional quantitative investigation conducted between January and March 2025. During this phase, data were collected from SME owners through a structured questionnaire designed to measure debt financing practices, debt management behaviour, debt literacy, and sustainable SME growth. The quantitative phase addressed the main research objectives by examining the relationships among the study variables and testing the proposed hypotheses through statistical analysis. The results from this phase established empirical patterns regarding the influence of financing-related factors on SME growth sustainability.

Although the quantitative phase provided important statistical evidence, certain findings required further contextual interpretation. For instance, statistical relationships could indicate the influence of debt financing, debt management behaviour, and debt literacy on sustainable SME growth; however, they could not fully explain the experiences, decision-making processes, and contextual circumstances that shape SME owners' financing behaviours. Therefore, a qualitative follow-up phase was conducted to explore these issues in greater depth.

The qualitative phase was conducted between June and July 2025 using a phenomenological approach to explore the lived experiences and perspectives of SME owners regarding debt financing and debt management practices. The qualitative inquiry was designed specifically to explain, complement, and deepen the quantitative findings by exploring the reasons underlying the observed statistical patterns. It provided insights into how SME owners access and manage debt, the challenges encountered in financial decision-making, and the factors that influence the relationship between financing practices and sustainable business growth. Thus, the qualitative component did not represent an independent research phase with separate objectives; rather, it served as an explanatory extension of the quantitative findings.

Following completion of both phases, the findings were integrated and interpreted between August and September 2025. The integration process

involved comparing and connecting quantitative results with qualitative explanations to develop a comprehensive understanding of SME financing behaviour and sustainable growth. The quantitative findings provided evidence of relationships among the variables, while qualitative findings provided contextual explanations for those relationships. This integration enhanced methodological triangulation, strengthened the credibility of the findings, and ensured that the conclusions reflected both empirical patterns and the practical experiences of SME owners.

3.5 Study Population

The study population refers to the complete set of units from which data relevant to the research objectives are obtained. In this study, the population comprised registered Small and Medium-Sized Enterprises (SMEs) operating in Lira City, Uganda. The population was considered in relation to the two phases of the sequential explanatory mixed-methods design, namely the quantitative phase and the qualitative follow-up phase.

3.5.1 Population for Quantitative Study

The population for the quantitative phase consisted of 699 registered Small and Medium-Sized Enterprises (SMEs) operating in Lira City, Uganda. The SME was considered the unit of analysis because the study examined how debt financing, debt management behaviour, and debt literacy influence sustainable SME growth. Therefore, the population was defined based on the number of eligible enterprises rather than the number of individuals employed within those enterprises.

The quantitative population was identified from official records obtained from the Lira City Commercial Office and the Uganda National Chamber of Commerce and Industry – Lira Branch. The SMEs included in the study operated in sectors such as trade, hospitality, education, agro-processing, manufacturing, and other service-related activities. These sectors were selected because they represent important areas of SME activity where financing decisions, debt utilization,

and financial management practices influence business sustainability.

The inclusion of SMEs from different sectors provided a broader understanding of financing practices and debt management experiences within the SME sector in Lira City. Although SMEs operate under different sectoral conditions, including variations in capital requirements, operational structures, and revenue patterns, these differences provided valuable insights into how financing-related factors influence sustainable growth across diverse business environments. The distribution of SMEs across the selected sectors is presented in Table 3.1.

Table 3.1: Study Population

Categories of SMEs	Number of SMEs
Radio Stations	08
Funeral Services	04
Wholesale Merchants	35
Motor spares and garages	68
Agro Input service providers	21
Gas and oil stations	50
Catering and hotel services	136
Millers	58
Supermarkets	50
Book and Stationery Hub	14
Private schools	246
Manufacturing firms	11
Total	**699**

Source: Ouni (2024)

Data for the quantitative phase were obtained from respondents selected from these SMEs based on their knowledge and involvement in financial decision-making processes. Eligible respondents included SME owners, managers, and other individuals responsible for decisions related to debt acquisition, utilization of borrowed funds, repayment practices, and business growth strategies. The selection of respondents was guided by their ability to provide relevant information regarding the financial practices examined in the study.

3.5.2 Population for Qualitative Study

The qualitative phase focused on owners and key financial decision-makers of registered SMEs operating in Lira City. These participants were selected because they possessed direct experience and knowledge regarding SME financing decisions, debt management practices, and strategies employed to sustain business growth.

The qualitative population was derived from the SME population used in the quantitative phase, with participants selected purposively to provide deeper explanations of the quantitative findings. The purpose of this phase was to explore the experiences, perceptions, and contextual factors underlying the statistical relationships identified during the quantitative analysis.

Semi-structured interviews were conducted with selected SME owners and financial decision-makers until data saturation was achieved. The qualitative findings provided contextual explanations of how and why debt financing practices and debt management behaviours influence sustainable SME growth. These findings were subsequently integrated with the quantitative results to develop a comprehensive interpretation of the research problem.

3.6 Study Sample Size

3.6.1 Sample Size for Quantitative Study

The sample size for the quantitative phase was determined using Yamane's (1967) formula, as cited in Glenn (1992). The formula was selected because it provides an appropriate method for calculating sample sizes from finite populations where a 95% confidence level and a 5% margin of error are applied.

The quantitative phase targeted registered Small and Medium-Sized Enterprises (SMEs) operating in Lira City. The study population consisted of 699 SMEs, which represented the unit of analysis. Data were collected from owners, managers, and other individuals involved in financial decision-making processes within these SMEs. Based on the identification of eligible respondents from the selected enterprises, the accessible respondent population comprised 1,398 individuals.

The required sample size was calculated using Yamane's formula as follows:

$$n=\frac{N}{1+N(e)^2}$$

Where:

n = sample size

N = Accessible respondent population (1,398)

e = margin of error (0.05)

$$n=\frac{1398}{1+1398\,(0.05)^2}=\frac{1398}{1+3.495}=\frac{1398}{4.495}\approx 311$$

Therefore, the quantitative phase involved 311 respondents. Proportionate sampling was applied to ensure representation across SME categories, followed by simple random sampling to select respondents within each category. The distribution of the quantitative sample across the different SME categories is

presented in Table 3.2.

Table 3.2 Distribution of Quantitative Sample by SME Category

Categories of SMEs	Number of SMEs	Potential Respondents	Sample Size
Funeral Services	4	8	2
Wholesale Merchants	35	70	16
Motor spares and garages	68	136	30
Agro-input service providers	21	42	9
Gas and oil stations	50	100	22
Catering and hotel services	136	268	60
Millers	58	116	26
Supermarkets	50	100	22
Book and stationery businesses	14	28	6
Private schools	246	492	109
Manufacturing firms	11	22	5
Total	**699**	**1,398**	**311**

Source: Ouni (2024)

As shown in Table 3.2, the quantitative sample consisted of 311 respondents proportionally distributed across the different SME categories. Private schools contributed the largest proportion of respondents (109), followed by catering and hotel services (60), reflecting their relatively larger representation within the SME population. Smaller categories, such as funeral services and manufacturing firms, contributed fewer respondents due to their smaller population sizes.

The proportional distribution ensured that different SME sectors were represented according to their presence within the study population. The use of simple random sampling within each category further enhanced fairness in respondent selection and reduced potential selection bias.

3.6.2 Sample Size for Qualitative Study

The qualitative phase involved nine SME owners and key financial decision-makers from registered SMEs operating in Lira City. Participants were selected using purposive sampling because they possessed direct knowledge and experience regarding debt financing decisions, debt management practices, and factors influencing sustainable SME growth.

The qualitative phase was conducted after the quantitative phase as part of the sequential explanatory mixed-methods design. Its purpose was to provide deeper explanations and contextual understanding of the quantitative findings by exploring the experiences, perceptions, and practices of SME owners in relation to debt financing and debt management behaviour.

The number of qualitative participants was determined based on thematic saturation, where interviews continued until additional participants no longer generated new themes or significant insights relevant to the study objectives. Participants were selected from different SME categories included in the quantitative phase to ensure that the qualitative findings reflected diverse financing experiences across the SME sector. The characteristics of the qualitative study participants are presented in Table 3.3.

Table 3.3: Characteristics of Qualitative Study Participants

Participant ID	Gender	Age (Years)	SME Category	Loan Source	Number of Employees	SME Category Classification
QP01	Male	45	Agro-input service provider	SACCO	10	Small
QP02	Female	38	Catering and hotel services	Commercial Bank	12	Small
QP03	Male	50	Wholesale merchant	Micro-finance Institution	8	Small
QP04	Female	32	Supermarket	SACCO	6	Small
QP05	Male	28	Motor spares and garage	Commercial Bank	5	Small
QP06	Female	54	Private school	SACCO	52	Medium
QP07	Male	36	Gas and oil station	Micro-finance Institution	9	Small
QP08	Female	42	Manufacturing firm	Commercial Bank	60	Medium
QP09	Male	40	Miller	SACCO	15	Small

Source: Researcher's field data (2025)

As shown in Table 3.3, the qualitative participants were drawn from different SME categories included in the study population. The selected categories included agro-input service providers, catering and hotel services, wholesale merchants, supermarkets, motor spares and garages, private schools, gas and oil stations, manufacturing firms, and millers. This variation enabled the study to capture diverse experiences relating to debt financing, debt management practices, and business sustainability.

The participants comprised five males and four females, with ages ranging from 28 to 54 years. The diversity in participant characteristics provided a range

of perspectives regarding SME financing decisions and challenges. Based on the Uganda Investment Authority (UIA, 2017) classification criteria, seven enterprises were classified as small enterprises and two as medium enterprises according to the number of employees.

All participants had experience obtaining credit from financial institutions, including commercial banks, SACCOs, and microfinance institutions. Their experiences provided valuable insights into loan acquisition processes, debt utilization, repayment challenges, and the contribution of financing practices to sustainable SME growth. These qualitative insights were subsequently integrated with the quantitative findings to provide a more comprehensive interpretation of the research problem.

3.7 Response Rate

3.7.1 Quantitative Phase

During the quantitative phase, a total of 311 questionnaires were distributed to selected SME owners, managers, and individuals responsible for financial decision-making within SMEs in Lira City. All questionnaires distributed were returned, resulting in a return rate of 311 out of 311 questionnaires (100%). Each returned questionnaire was reviewed for completeness and consistency before analysis. No questionnaires were excluded because all returned questionnaires contained usable responses for the study variables.

Therefore, the final dataset comprised 311 usable questionnaires, representing the complete sample analyzed in the quantitative phase. The complete return of questionnaires was achieved through the researcher's direct engagement with respondents, including physical administration of questionnaires, clarification of items where required, and follow-up during the data collection period. The selected respondents were individuals with relevant knowledge of SME financing practices, debt management behaviour, and business growth strategies, which supported their ability and willingness to provide the required information.

The final sample of 311 respondents was therefore used for statistical analysis to examine the relationships among debt financing, debt management behaviour, debt literacy, and sustainable SME growth.

3.7.2 Qualitative Phase

The qualitative phase of the study involved in-depth interviews with 9 SME owners, all of whom consented to participate, resulting in a 100% participation rate. The adequacy of the sample was validated through thematic saturation, as no new themes or insights emerged from the last two interviews. This indicates that the essential concepts concerning debt financing, debt management behavior, and SME growth sustainability were thoroughly captured (Fusch et al., 2018). The comprehensive involvement of all chosen participants, along with evidence of saturation, confirmed that the qualitative data were credible and adequately rich to elucidate and contextualize the quantitative findings (Fusch & Ness, 2015).

3.8 Sampling Techniques

3.8.1 Sampling Techniques for Quantitative Study

The quantitative phase employed a stratified random sampling technique. This technique was considered appropriate because the study population consisted of SMEs operating in different sectors with varying operational characteristics, financing needs, and business structures. The SMEs were therefore divided into relatively homogeneous groups (strata) based on their business categories, including catering and hotel services, private schools, manufacturing firms, millers, wholesale merchants, motor spares and garages, agro-input service providers, gas and oil stations, supermarkets, and book and stationery businesses.

Stratification ensured that SMEs from different sectors were adequately represented in the sample according to their proportion within the study population. Following the allocation of the sample across the different SME categories, simple random sampling was applied within each stratum to

select eligible respondents. This ensured that each eligible respondent within a particular SME category had an equal opportunity of being selected while maintaining representation of the diverse SME sectors included in the study.

The sampling frame consisted of eligible respondents identified from the 699 registered SMEs operating in Lira City. Respondents included SME owners, managers, and individuals responsible for financial decision-making, particularly those involved in debt financing, debt utilization, repayment practices, and business growth decisions. The final quantitative sample consisted of 311 respondents, determined using Yamane's (1967) formula at a 95% confidence level and a 5% margin of error.

The use of stratified random sampling followed by simple random selection within each category reduced potential sampling bias and enhanced the representativeness of the sample by ensuring that different SME sectors were appropriately reflected in the study.

3.8.2 Sampling Techniques for Qualitative Study

The qualitative phase employed purposive sampling, which involves selecting participants based on their ability to provide relevant and meaningful information related to the research objectives. This approach was appropriate because the purpose of the qualitative phase was not statistical generalization but rather to obtain deeper explanations of the quantitative findings within the sequential explanatory mixed-methods design.

Participants were selected from SME owners and key financial decision-makers who had direct experience with debt financing, debt management practices, and business sustainability decisions. Selection criteria included ownership or management responsibility, involvement in financial decisions, experience with external financing sources, and willingness to share detailed experiences regarding debt utilization and repayment practices.

Participants were drawn from different SME categories included in the

quantitative phase to capture diverse perspectives across the SME sector. The number of participants was not predetermined statistically; rather, interviews continued until thematic saturation was achieved, whereby additional interviews no longer generated new themes or significant insights.

3.9 Sampling Procedure

3.9.1 Sampling Procedure for Quantitative Study

The quantitative sampling procedure followed a multi-stage stratified random sampling approach. First, the registered SMEs were grouped into strata according to their business categories as presented in Table 3.1. This step was necessary because SMEs in Lira City operate within diverse sectors that differ in terms of business operations, financing requirements, and financial management practices.

Second, the required sample size of 311 respondents was proportionally allocated across the SME categories based on the size of each stratum within the population. This ensured that sectors with a larger number of SMEs contributed a proportionately larger number of respondents, while smaller sectors remained represented within the sample.

Third, respondents were selected through simple random sampling within each SME category. A list of eligible respondents was developed from the identified SMEs, and participants were selected randomly from each category. Eligible respondents included SME owners, managers, or individuals directly involved in financial decision-making processes.

This procedure ensured that the sample reflected the diversity of SMEs operating in Lira City while maintaining fairness and objectivity in respondent selection. The approach was appropriate because it combined the advantages of stratification, which improves representation of heterogeneous populations, with simple random selection, which reduces researcher selection bias within each category.

3.9.2 Sampling Procedure for Qualitative Study

The qualitative sampling procedure involved purposive identification of SME owners and financial decision-makers who could provide detailed explanations of the quantitative findings. Potential participants were identified from the registered SME population and selected based on their experience with debt financing, debt management practices, and business growth decisions.

Nine SME owners participated in the qualitative phase. Participants were selected from different SME categories to capture variation in financing experiences and business contexts. Interviews continued until saturation was reached, ensuring that sufficient depth and richness of information were obtained to explain the quantitative results.

3.10. Unit of Analysis, Unit of Inquiry, and Subject of Analysis

This study focused on Small and Medium-Sized Enterprises (SMEs) operating in Lira City, Uganda, with the aim of examining how debt financing, debt management behaviour, and debt literacy influence sustainable SME growth. To ensure methodological consistency, the study distinguished between the unit of analysis, the unit of inquiry, and the subject of analysis.

The unit of analysis in this study was the SME as an organizational entity. This was because the study sought to examine firm-level outcomes, including financing practices, debt management approaches, and sustainable growth indicators such as sales performance, profitability, and employment growth. The SME was therefore the entity to which the research findings and conclusions were applied.

The unit of inquiry consisted of SME owners, managers, and individuals responsible for financial decision-making within the selected enterprises. These individuals were selected because they possessed relevant knowledge and experience regarding debt acquisition, utilization of borrowed funds, repayment practices, and financial management decisions. Although information was collected from individual respondents, their responses represented the

experiences and practices of the SMEs they managed or owned.

The subject of analysis comprised the key constructs examined in the study, namely debt financing, debt management behaviour, debt literacy, and sustainable SME growth. Debt financing was assessed through indicators related to access to credit, loan characteristics, and utilization of borrowed funds. Debt management behaviour included practices and behavioural factors influencing financial decisions, while debt literacy focused on financial knowledge and skills related to managing debt. Sustainable SME growth was examined through indicators such as business performance, profitability, sales growth, and employment growth.

3.10.1 Quantitative Phase

In the quantitative phase, the SME was treated as the unit of analysis, while SME owners, managers, and financial decision-makers served as respondents and units of inquiry. Data were collected through structured questionnaires administered to individuals with sufficient knowledge of their enterprises' financing practices and financial management decisions.

The responses obtained from these respondents were used to examine relationships among debt financing, debt management behaviour, debt literacy, and sustainable SME growth. The collected data were analyzed using Structural Equation Modeling (SEM) with bootstrapping to test the hypothesized relationships among the study constructs. Although responses were obtained from individuals, the interpretation of findings was directed towards understanding SME-level financing practices and growth sustainability.

3.10.2 Qualitative Phase

In the qualitative phase, the SME remained the unit of analysis, while SME owners and key financial decision-makers constituted the unit of inquiry. Participants were purposively selected because of their direct involvement in financing decisions, debt management practices, and business growth strategies.

Semi-structured interviews were conducted to obtain deeper insights into the experiences and contextual factors underlying the quantitative findings. The interview data were analyzed thematically to identify patterns related to debt acquisition, debt utilization, repayment challenges, financial decision-making, and strategies for sustaining SME growth.

The qualitative findings were used to explain and complement the quantitative results by providing contextual understanding of how financing practices and debt management behaviours influence SME sustainability. The integration of both phases enabled a comprehensive understanding of the relationship between financial practices and sustainable SME growth.

3.11 Measurement of the Study Variables

The constructs examined in this study debt financing, debt management behavior, debt literacy, and the sustainability of SME growth were assessed through structured instruments that were adapted from previously validated scales, with adjustments made to align with the specific context of Ugandan SMEs. The questionnaire was systematically organized into sections that aligned with the study variables, with data gathered predominantly through the application of Likert-type scales. A preliminary examination was undertaken to ascertain both face and content validity, while reliability and construct validity were subsequently affirmed.

3.11.1 Dependent Variable: SME Growth Sustainability

SME growth sustainability was measured across three performance dimensions:

i. Sales Growth: measured by 14 items (SSG1–SSG14) capturing changes in customer base, expansion into new markets, adoption of sales techniques, product innovation, and pricing strategies.
ii. Profitability Growth: measured by 13 items (SPG1–SPG13) assessing cost efficiency, supply chain optimization, reinvestment, stability of profit margins, and diversification of revenue streams.
iii. Employment Growth: measured by 12 items (SEG1–SEG12) covering

changes in staff numbers, recruitment strategies, retention rates, training, and workforce adaptability.

All elements were evaluated using a 5-point Likert scale (1 = very low extent, 5 = very high extent).

3.11.2 Independent Variable: Debt Financing

Debt financing was operationalized using three dimensions:

i. Loan Size: measured by 7 items (ILS1–ILS7) assessing adequacy of loan amounts, impact on capitalization, sales volume, and profitability (Sangwan & Nayak, 2021).
ii. Interest Rate: measured by 7 items (INR1–INR7) capturing affordability, impact on loan uptake, repayment burden, and business growth (Nassoro & Jaraj, 2022)percentages, pie charts and tabulation to show differences in frequencies. Statistical Package for Social Sciences (SPSS.
iii. Loan maturity/Maturity: measured by 11 items (LOR1–LOR11) focusing on repayment timeliness, flexibility, cash flow alignment, and appropriateness of repayment periods (Bob et al., 2018; Gomera & Ngollo, 2023).

Responses were recorded using a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree).

3.11.3 Independent Variable: Debt Management Behaviour

Debt management behaviour was conceptualized as a multidimensional construct, captured through:

i. Lifestyle Pattern: measured by 10 items (LIS1–LIS10) covering saving habits, shopping habits, and short-/long-term financial planning (Allgood & Walstad, 2012; Zulaihati et al., 2020).
ii. Religiosity: measured by 8 items (REL1–REL8) capturing both religious beliefs and practices influencing financial behaviour (Ji &

Ibrahim, 2007; Lestari & Silvy, 2022).

iii. Financial Self-Efficacy: measured by 9 items (FSE1–FSE9) assessing confidence in financial planning, debt repayment, savings, and investment decisions (Lown, 2011; Xiao et al., 2016).

All items were evaluated using a 5-point Likert scale.

3.11.4 Moderating Variable: Debt Literacy

Debt literacy was assessed along two dimensions:

i. Debt Knowledge: measured by 10 true/false items (KNO1–KNO10) testing understanding of credit terms, interest rates, loan default, collateral, and refinancing (Allgood & Walstad, 2012; Mitchell & Lusardi, 2022). Correct answers were scored as 1, incorrect as 0.

ii. Debt Skills: measured by 5 items (SKI1–SKI5) requiring practical application of financial numeracy, such as calculating interest payments and repayment schedules. A 4-point Likert scale was used to score the items (1 being strongly disagree and 4 being strongly agree).

3.12 Data Collection Methods, Instruments and Administration

This study employed a sequential explanatory mixed-methods design**,** involving two connected phases of data collection: an initial quantitative phase followed by a qualitative follow-up phase. The quantitative phase generated empirical evidence regarding the relationships among debt financing, debt management behaviour, debt literacy, and sustainable SME growth. The subsequent qualitative phase was conducted to provide deeper contextual explanations of the quantitative findings by exploring the experiences and perspectives of SME owners and financial decision-makers.

3.12.1 Quantitative Data Collection

Quantitative data were collected using a structured self-administered questionnaire designed to measure the key constructs examined in the study,

namely debt financing, debt management behaviour, debt literacy, and sustainable SME growth. The questionnaire items were adapted from previous empirical studies and contextualized to suit the Ugandan SME environment.

The questionnaire consisted of four main sections: demographic characteristics of respondents, debt financing practices, debt management behaviour, debt literacy, and sustainable SME growth. Debt financing was measured through indicators related to loan access, loan characteristics, and utilization of borrowed funds. Debt management behaviour included dimensions related to financial practices, lifestyle factors, religiosity, and financial self-efficacy. Debt literacy was assessed through measures of debt-related knowledge and financial skills, while sustainable SME growth was examined through indicators including sales growth, profitability, and employment growth.

The questionnaire employed Likert-type measurement scales, including a five-point scale ranging from strongly disagree to strongly agree and a four-point scale for selected skill-based measures. The instrument included an introductory section explaining the purpose of the study, voluntary participation, confidentiality, and informed consent procedures. Prior to the main data collection, the questionnaire was pilot tested with 30 SME operators from a neighbouring district to assess clarity, reliability, and internal consistency of the instrument.

The final questionnaire was administered to selected respondents between February and March 2025. Respondents were selected from registered SMEs operating in Lira City using a stratified random sampling approach, where SMEs were first grouped according to their business categories and respondents were subsequently selected from each category. The respondents included SME owners, managers, and individuals involved in financial decision-making processes. Throughout the data collection process, ethical principles were observed, including obtaining informed consent, maintaining confidentiality, and ensuring voluntary participation.

3.12.2 Qualitative Data Collection

The qualitative phase was conducted as a follow-up to the quantitative phase in accordance with the sequential explanatory mixed-methods design. The purpose of this phase was to provide contextual explanations for the relationships identified during the quantitative analysis. While the quantitative phase established the statistical relationships among debt financing, debt management behaviour, debt literacy, and sustainable SME growth, the qualitative phase sought to understand the experiences and circumstances underlying these relationships.

Data were collected through semi-structured interviews with purposively selected SME owners and key financial decision-makers in Lira City. Participants were selected based on their direct involvement in financial decisions, including accessing credit, managing debt obligations, and implementing business growth strategies. Their experiences provided insights into the practical factors that influenced the quantitative results.

The interviews were conducted during June and July 2025. Each interview lasted approximately 45–60 minutes and was conducted at a time convenient for participants. With participants' consent, interviews were audio-recorded, transcribed verbatim, and supplemented with field notes to support accurate interpretation of the information provided.

The qualitative data were analyzed by identifying recurring explanations and contextual factors related to the quantitative findings. The emerging explanations were then integrated with the quantitative results to clarify why particular relationships were observed and to enhance the overall interpretation of the study findings.

3.13 Validity and Reliability for Quantitative Study

This section details the measures taken to ensure the validity and reliability of the quantitative instruments used in this study. The procedure includes pilot research to assess instrument functionality, an analysis of internal consistency

through Cronbach's Alpha, and evaluations of face, content, and construct validity.

3.13.1 Pilot Study

The pilot study has been successfully conducted in Soroti City, a comparable area, in alignment with best practices for ensuring the dependability and accuracy of research instruments. Following Taber (2018), an initial sample was utilized to assess the robustness of the primary survey, while Fraser et al. (2018) underscore the importance of pilot studies in mitigating potential biases and validating data collection instruments (Fraser et al., 2018; Taber, 2018).

For the pilot, 31 participants (approximately 10% of the total sample size of 311) were selected based on Baker's (1994) guideline that recommends using 10–20% of the total sample. These participants will be excluded from the final study to prevent overlap (Baker, 1994). Table 3.4 presents a detailed breakdown of the sample size for the pilot study by SME categories.

Table 3.4: The sample size for the pilot study

Categories of SMEs	Main Sample Size	Sample Size for the pilot study
Radio Stations	4	
Funeral Services	2	
Wholesale Merchants	16	2
Motor spares and garages	30	3
Agro Input service providers	9	1
Gas and oil stations	22	2
Catering and hotel services	60	6
Millers	26	3
Supermarkets	22	2
Book and Stationery Hub	6	1
Private schools	109	11
Manufacturing firms	5	
Total	**311**	**31**

Source: Ouni(2024)

The findings from the pilot study were employed to evaluate the reliability of the questionnaire, encompassing both external and internal aspects, as well as its face and content validity. The survey questions were adjusted in accordance with the findings derived from the pilot test.

3.13.2 Reliability

A researcher must employ a valid measurement instrument to guarantee the collection of reliable data. This study assessed the reliability of the data collection instrument to validate the outcomes. Taber (2018) highlighted the importance of evaluating the instrument to ascertain its accuracy. The Cronbach's Alpha coefficient served as the standard metric for this reliability assessment. The Alpha coefficient was employed to assess the degree of association among the different metrics evaluating each variable. Cronbach's Alpha varies between 0 and 1, with a value of 0 representing no internal consistency and a value of 1 indicating perfect internal consistency.

According to Taber (2018), an Alpha value of 0.70 or greater indicates acceptable internal consistency among variables, whereas a value below 0.70 signifies inadequate internal consistency. The reliability analysis results for the variables in this study are presented in Table 3.5.

Table 3.5: Reliability Test

Variable	Component	Number of Items	Anchor Points	Cronbach's alpha value (α)
Debt Financing	Loan Size	7	Five Point	0.782
	Interest Rate	7	Five Point	0.731
	Loan maturity	11	Five Point	0.861
Debt Management Behaviour	Lifestyle pattern	10	Five Point	0.812
	Religiosity	8	Five Point	0.818
	Financial Self Efficacy	9	Five Point	0.853
Debt Literacy	Debt Knowledge	10	Dichotomous	0.902
	Debt Skills	5	Four Point	0.751
Growth Sustainability	Sales Growth	14	Five Point	0.922
	Profitability Growth	13	Five Point	0.873
	Employee Growth	12	Five Point	0.876

Source: Researcher's field data (2025)

The reliability analysis for Debt Financing indicated that all three components Loan Size (α = 0.782), Interest Rate (α = 0.731), and Loan maturity (α = 0.861) surpassed the threshold of 0.70, demonstrating strong internal consistency. Loan maturity demonstrated the greatest reliability, indicating a high level of consistency among the measurement items employed. The findings substantiate the reliability and validity of Debt Financing measurement.

In the context of Debt Management Behaviour, the three components demonstrated strong reliability: Lifestyle Pattern (α = 0.812), Religiosity (α = 0.818), and Financial Self-Efficacy (α = 0.853). The Financial Self-Efficacy scale demonstrated the highest Cronbach's Alpha value, indicating superior internal consistency among its items. The results indicate that the items for all components of Debt Management Behaviour demonstrated consistency and

reliability.

Debt Literacy exhibited strong reliability, with Debt Knowledge attaining a Cronbach's Alpha of 0.902, and Debt Skills producing an acceptable Alpha of 0.751. The results demonstrate that both components of Debt Literacy displayed adequate internal consistency, confirming that the items effectively measured the construct.

The components of Growth Sustainability demonstrated high reliability: Sales Growth ($\alpha = 0.922$), Profitability Growth ($\alpha = 0.873$), and Employee Growth ($\alpha = 0.876$). Sales Growth exhibited the highest reliability among all components in this study, indicating remarkable internal consistency. The results indicate that the instruments assessing Growth Sustainability demonstrated high consistency and reliability.

According to Taber (2018), all variables and their components attained Cronbach's Alpha values exceeding the recommended threshold of 0.70, signifying acceptable internal consistency. The results indicate that the measurement instrument demonstrated reliability and was effective in generating valid data for this study. The elevated reliability scores for the variables bolster confidence in the validity of the study's findings, thereby facilitating an accurate assessment of the relationships among the study variables.

3.13.3 Validity

Improving the probability of reducing errors related to measurement issues in quantitative research is greatly supported by a robust confidence in the reliability and validity of the instrument specifically, the accuracy and dependability of a measurement method (Cazeaux & Cazeaux, 2017). The correspondence between the variables evaluated by the research instrument and the questions addressed is a critical component of validity. In the pilot study, the researcher evaluated three types of validity: face validity, content validity, and construct validity (Saunders; et al., 2016).

Face Validity

Face validity was evaluated via expert review and participant feedback to confirm that the questionnaire items ostensibly measured their intended constructs. Consistent with the findings of Saunders et al. (2016), three finance subject matter experts were consulted to assess the adequacy of the questionnaire items in capturing the study's constructs. A small group of target participants from the study population reviewed the questionnaire to assess its clarity, relevance, and appropriateness.

Participants' feedback facilitated the identification of ambiguous or unclear items, leading to revisions that improved the clarity of the questionnaire. This process confirmed the instrument's technical validity while ensuring its relevance and comprehensibility for the target population. The experts confirmed that the items aligned with the study objectives and adequately addressed the key constructs being measured.

Content Validity

Content validity was systematically evaluated to ensure the questionnaire items adequately represented the constructs of the study. In accordance with Lynn's (1986) recommendation, three finance experts were consulted to evaluate the relevance and completeness of the items (Lynn, 1986) A four-point scale proposed by Davis (1992) was utilized to remove the option of a neutral midpoint, with the following ratings: 1 = not relevant, 2 = somewhat relevant, 3 = quite relevant, and 4 = highly relevant(Davis, 1992).

The Item Content Validity Index (I-CVI) was determined for each item by categorizing the scale into relevant (ratings of 3 or 4) and not relevant (ratings of 1 or 2). The I-CVI was calculated by dividing the number of experts who rated the item as relevant by the total number of experts. The feedback from experts and the research supervisor was utilized to enhance the instrument, ensuring that all identified issues were resolved in the final version.

The content validity of each construct was evaluated through the Average

Congruency Percentage (ACP), representing the mean Content Validity Index (CVI) of all items within the construct. All constructs achieved a CVI greater than 0.70, demonstrating robust content validity. Table 3.6 displays the findings for the constructs and their respective components.

Table 3.6: Content Validity Indices

Variable	Component	Component CVI	Variable CVI
Debt Financing	Loan Size	0.857	0.840
	Interest Rate	0.714	
	Loan maturity	0.909	
Debt Management Behaviour	Lifestyle pattern	0.900	0.889
	Religiosity	0.875	
	Financial Self Efficacy	0.889	
Debt Literacy	Debt Knowledge	1.000	0.833
	Debt Skills	0.667	
Growth Sustainability	Sales Growth	0.800	0.933
	Profitability Growth	1.000	
	Employee Growth	1.000	

Source: Computed by the researcher based on expert ratings, following the guidelines of Lynn (1986) and Davis (1992)

The content validity assessment revealed that all constructs achieved a CVI greater than 0.70, confirming the adequacy and relevance of the instrument. Growth Sustainability had the highest overall CVI (0.933), demonstrating excellent content validity for its components. Debt Financing and Debt Management Behaviour followed with CVIs of 0.840 and 0.889, respectively. Although Debt Literacy met the threshold with a CVI of 0.833, variability was observed among its components, with Debt Training having a lower CVI (0.667).

All issues raised by the experts and the research supervisor were addressed in the final instrument, ensuring that the questionnaire was refined and

comprehensive. The results affirmed that the instrument was valid and reliable for collecting meaningful data aligned with the study's objectives

3.14 Trustworthiness of the Qualitative Study

Trustworthiness in qualitative research refers to the extent to which findings are credible, dependable, confirmable, and transferable. Unlike quantitative research, where validity and reliability are commonly used to assess research quality, qualitative research applies the criteria of credibility, transferability, dependability, and confirmability to ensure methodological rigor and authenticity (Nowell et al., 2017). In this study, these principles guided the collection, analysis, and interpretation of qualitative data obtained through in-depth interviews with SME owners and managers in Lira City.

Credibility refers to the extent to which qualitative findings accurately represent participants' experiences and perspectives. Credibility was enhanced through the use of in-depth interviews, which allowed participants to provide detailed descriptions of their experiences, perceptions, and practices regarding debt financing, debt management behaviour, and SME growth sustainability. An interview guide was used to maintain consistency across interviews while allowing flexibility to probe emerging issues. Data triangulation was achieved through comparison of interview narratives, researcher field notes, and relevant documentary information. Additionally, member checking was conducted by sharing summaries of key interpretations with participants to confirm whether their views had been accurately represented. These strategies strengthened the authenticity and credibility of the qualitative findings (Noble & Heale, 2019; Nowell et al., 2017).

Transferability concerns the extent to which findings may be applicable to other similar contexts. This study enhanced transferability by providing a detailed description of the research setting, participants, sampling procedures, and data collection processes. Purposive sampling was employed to select SME owners and managers from diverse business sectors, including retail,

agro-processing, services, and light manufacturing in Lira City. The detailed contextual description enables readers and researchers to assess the relevance and applicability of the findings to other SME contexts with comparable characteristics (Amankwaa, 2016).

Dependability refers to the consistency and transparency of the research process. Dependability was ensured through the maintenance of an audit trail documenting all stages of the qualitative inquiry, including participant selection, development of the in-depth interview guide, interview procedures, transcription, coding, and interpretation of themes. The interview transcripts were systematically analysed using NVivo 12 software. The analysis involved repeated reading of transcripts, identification of meaningful statements, assignment of codes, grouping of related codes into categories, and development of themes that provided explanations for the quantitative findings. Continuous refinement and comparison of codes ensured consistency in interpretation. A reflexive journal was also maintained to record analytical decisions, methodological reflections, and possible researcher biases throughout the study process (Nowell et al., 2017).

Confirmability relates to ensuring that findings are derived from participants' accounts rather than researcher assumptions. Confirmability was strengthened through the preservation of original interview transcripts, coding records, field notes, and reflective memos. Direct quotations from participants were used to demonstrate the connection between the data and the reported themes. In addition, discussions with supervisors and qualitative research peers provided external review of the interpretations and coding decisions. These procedures ensured that the findings remained grounded in participants' lived experiences and that the analytical process was transparent and traceable (Forero et al., 2018).

Overall, the strategies employed enhanced the trustworthiness of the qualitative component of the study by ensuring that the findings generated from in-depth interviews were credible, contextually relevant, consistent, and supported by

evidence from SME owners' experiences in Lira City. The rigorous qualitative procedures strengthened the explanatory role of the qualitative phase within the sequential explanatory mixed-methods design by providing deeper insights into the quantitative findings.

3.15 Data Entry

Data entry represents a crucial phase in the research process, serving as the link between raw data collection and systematic analysis. The process entails precise documentation, systematic organization, and validation of data to guarantee the dataset's reliability and its preparedness for statistical or thematic analysis (Kumar, 2018). Accurate data entry minimizes errors, maintains the integrity of responses, and establishes a basis for valid conclusions (M. N. . Saunders et al., 2019). This study utilized distinct procedures for the quantitative and qualitative strands, adhering to the sequential explanatory mixed-methods design to ensure accuracy, consistency, and methodological rigor (Creswell & Plano, 2018).

3.15.1 Quantitative Data Entry

Quantitative data from the 311 completed questionnaires were entered into Stata 17**,** which served as the primary statistical software for analysis. To ensure accuracy, a double-entry verification process was employed, where the data were independently entered and cross-checked to minimise typographical or transcription errors (Kumar, 2018). The dataset was then screened for inconsistencies, including out-of-range responses and duplicate cases, which were corrected or excluded following standard data cleaning procedures (Saunders et al., 2019). Coding schemes were applied consistently to categorical variables (e.g., assigning numerical values to Likert scale responses), and composite indices were created for multi-item constructs such as debt management behaviour and debt literacy. These steps ensured that the dataset was accurate, reliable, and ready for subsequent diagnostic tests and model estimation in Stata (Field, 2018).

3.15.2 Qualitative Data Entry

During the qualitative phase, manual field notes were recorded during and immediately after each of the nine in-depth interviews with SME owners. The researcher expanded these notes into detailed written transcripts on the same day of each interview to preserve accuracy, contextual meaning, and participants' expressions (Nowell et al., 2017). Each transcript was carefully reviewed and compared with the field notes to ensure completeness and consistency with the original interview accounts. The transcripts were typed in Microsoft Word and subsequently imported into NVivo 12 for systematic qualitative data analysis. The analysis involved repeated reading of the transcripts, identification of meaningful statements, assignment of descriptive codes, grouping of related codes into categories, and development of themes that explained the quantitative findings. The emerging themes were continuously reviewed and refined to ensure that they accurately represented participants' experiences related to debt financing, debt management behaviour, and SME growth sustainability. Participants' identities were anonymized through the use of unique identification codes (QP01–QP09), thereby preserving confidentiality while maintaining the richness and traceability of participants' responses (Saunders & Townsend, 2018).

3.16 Data Entry and Cleaning

Data entry and cleaning procedures were undertaken separately for the quantitative and qualitative phases to ensure that all datasets were accurate, consistent, and suitable for analysis. For the quantitative survey, emphasis was placed on correcting wrong entries, handling missing values, and addressing outliers. For the qualitative interviews, procedures focused on expanding field notes into transcripts, ensuring completeness, and anonymising data. Together, these processes guaranteed the integrity of findings in both phases (Kumar, 2018; Saunders et al., 2019).

3.16.1 Quantitative Phase

3.16.1.1 Correction of Wrong Entries

Frequency checks, range checks, and descriptive analysis conducted in Stata 17 identified 12 potentially incorrect entries, primarily involving loan size, repayment structure, and financial self-efficacy variables. Each identified entry was traced back to the corresponding original questionnaire to verify the respondent's recorded response. As illustrated in Figure 3.1**,** eight entries were confirmed as data-entry or coding errors and were corrected to reflect the original questionnaire responses**,** while the remaining four entries could not be reliably reconciled with the original source records and were therefore recoded as missing rather than being assigned assumed values.

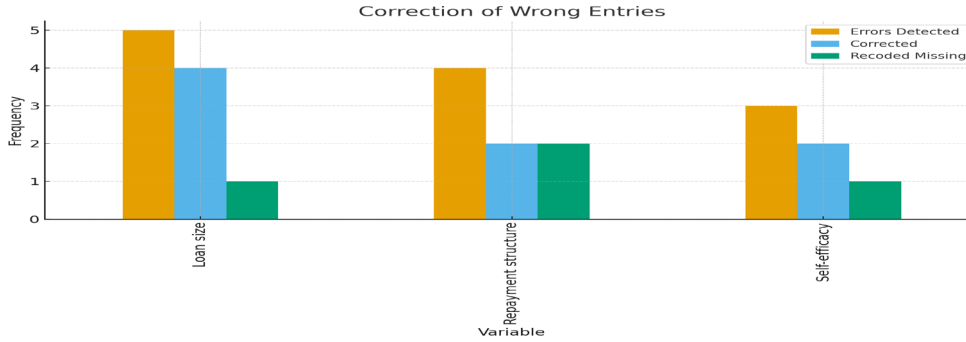


Figure 3.1: Correction of Wrong Entries

Source: Author's analysis, 2025

The correction procedure ensured that all amendments were based on verifiable information from the original questionnaires and did not involve altering valid respondent responses. Entries that could not be verified were treated conservatively as missing to avoid introducing unsupported values into the dataset. This procedure enhanced the accuracy, traceability, and analytical integrity of the dataset and provided a reliable basis for subsequent data analysis (Saunders et al., 2019).

3.16.1.2 Missing Value Analysis

Missingness was assessed using Stata's misstable summarize command. The analysis indicated that the proportion of missing data across the key study variables ranged from 2.5% to 6.1%**,** as presented in Figure 3.2. Specifically, sales growth recorded the lowest proportion of missing values at 2.5%, followed by religiosity at 4.8%**.** Debt literacy and Loan maturity recorded comparatively higher levels of missingness at 6.1% and 5.7%**,** respectively. The observed variation in the extent of missing data informed the treatment approach adopted for each variable.

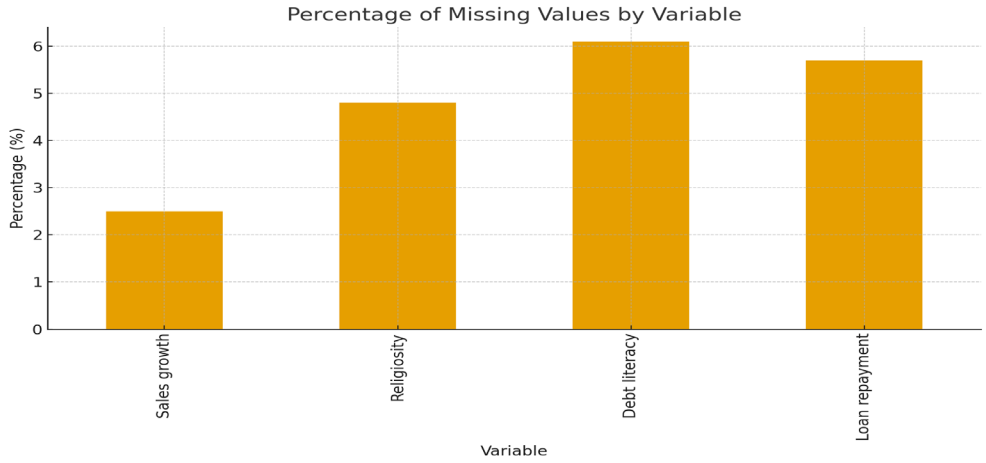


Figure 3.2: Percentage of Missing Values by Variable

Source: Author's analysis, 2025

Variables with less than 5% missingness, namely sales growth and religiosity, were treated using mean substitution, whereby missing observations were replaced with the respective observed mean of the variable. Given the relatively low proportion of missing observations for these variables, this approach was considered appropriate for retaining cases and minimising the loss of information. In contrast, variables with more than 5% missingness, namely debt literacy and Loan maturity, were treated using Multiple Imputation (MI)**.** Multiple Imputation was preferred for these variables because it uses

information from the observed data to estimate plausible values for missing observations while accounting for the uncertainty associated with the imputation process. The application of these approaches was consistent with recommended practices for handling missing data in quantitative research (Field, 2018; Hair et al., 2019).

3.16.1.3 Outlier Detection and Treatment

Outliers were assessed using both univariate and multivariate procedures to identify observations that could potentially exert undue influence on subsequent statistical analyses. The assessment was conducted after data cleaning and prior to the main inferential analyses using Stata 17. The purpose was to distinguish legitimate extreme observations from data errors and observations that could disproportionately influence the estimated relationships among debt financing, debt management behaviour, and growth sustainability.

At the univariate level, standardised z-scores and interquartile range (IQR)-based boxplots were examined to identify unusually extreme observations. Observations with absolute standardised z-scores exceeding 3.29 were considered potential extreme cases, consistent with the recommended criterion for identifying unusually large standardised scores (Field, 2018). In addition, IQR-based boxplots were used to provide a graphical assessment of observations falling outside the conventional lower and upper fences. The lower and upper fences were determined using (Q_1 - 1.5(IQR)) and (Q_3 + 1.5(IQR)), respectively, where (Q_1) and (Q_3) represent the first and third quartiles.

The univariate assessment identified nine potential outliers. These observations were further examined to determine whether they represented data-entry or coding errors, implausible responses, or legitimate extreme characteristics of the SMEs included in the study. The IQR-based boxplot used in the assessment is presented in Figure 3.3.

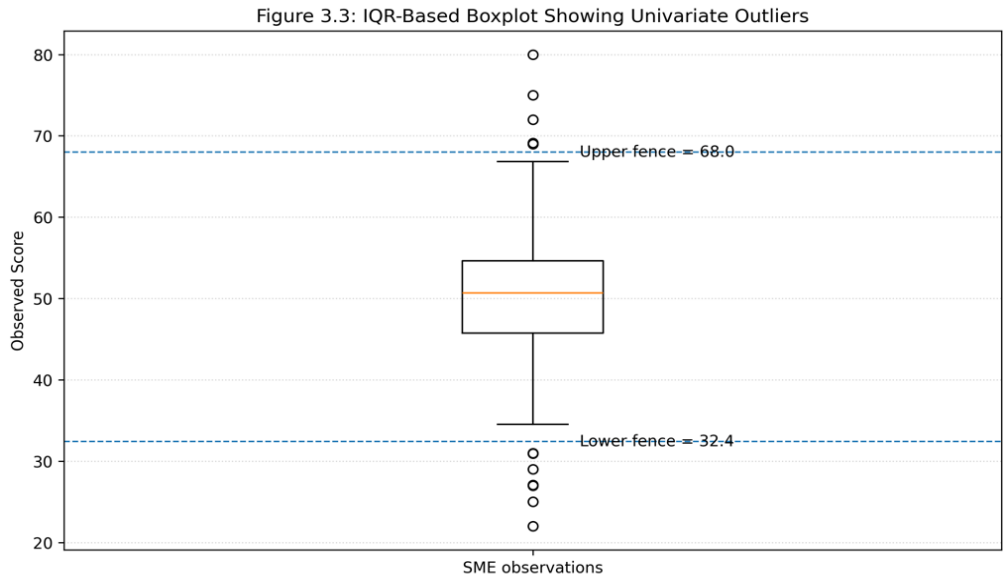


Figure 3.3: IQR-Based Boxplot Showing Univariate Outliers

Source: Author's analysis, 2025

As shown in Figure 3.3, observations occurring beyond the boxplot whiskers represented potential univariate outliers. Nine observations were identified through the univariate assessment. However, statistical extremity alone was not considered sufficient justification for deleting an observation. Each identified case was therefore examined against the original questionnaire responses and assessed for substantive and theoretical plausibility. This was particularly important because SMEs may legitimately differ considerably in their loan sizes, repayment arrangements, financial behaviour, and growth outcomes. Consequently, an observation that appears statistically extreme may still represent a valid characteristic of the population under investigation.

At the multivariate level, regression diagnostics were conducted using Stata 17 to determine whether observations had unusual combinations of predictor values or exerted disproportionate influence on the estimated regression relationships. Specifically, leverage values and Cook's distance were examined. Leverage was used to identify observations with unusual combinations of predictor

values, while Cook's distance was examined to assess the extent to which individual observations could influence the estimated regression coefficients (Field, 2018). This assessment identified three additional potentially influential observations that were not identified through the univariate procedures.

The three multivariate cases were subsequently subjected to the same verification process. Their corresponding questionnaire records were reviewed, and the observations were assessed for data-entry or coding errors, implausible responses, and substantive plausibility. The cases were not automatically removed merely because they exhibited relatively high leverage or Cook's distance. Instead, the decision to retain, correct, or otherwise treat an observation was based on evidence from the original data and its potential effect on the analysis.

Overall, the outlier assessment identified twelve potentially unusual observations, comprising nine cases identified through univariate procedures and three additional cases identified through multivariate regression diagnostics. The use of both procedures was considered appropriate because univariate and multivariate diagnostics identify different forms of unusual observations. An observation may be extreme on an individual variable without necessarily exerting substantial influence on a regression model, while another observation may have relatively ordinary individual values but become influential because of its particular combination of predictor values.

Following identification, each of the twelve cases was subjected to case-by-case verification and treatment. First, the recorded values were compared with the original questionnaire responses to determine whether any discrepancies resulted from data-entry or coding errors. Second, the substantive plausibility of the observations was assessed within the context of SMEs operating in Lira City. Third, the potential influence of the observations on the statistical estimates was considered before determining the appropriate treatment.

Importantly, outlier status alone was not used as a basis for deleting observations.

Where an extreme value was confirmed by the original questionnaire and was considered substantively plausible, the observation was retained because removing legitimate variation could result in loss of valuable information. Where an error was identified, the value was corrected using the original questionnaire as the reference. Where necessary, appropriate treatment was applied to minimize the potential influence of extreme observations while preserving valid information.

This procedure ensured that the final dataset retained legitimate characteristics of the sampled SMEs while reducing the risk that erroneous or disproportionately influential observations would distort the study findings. The combination of statistical diagnostics, visual inspection, verification against the original questionnaires, and substantive judgement enhanced the analytical integrity of the dataset and provided a sound basis for the subsequent regression and structural equation modelling analyses.

3.16.2 Qualitative Phase

Data entry in the qualitative strand relied on manual field notes recorded during and immediately after each of the nine in-depth interviews with SME owners. The researcher expanded these notes into detailed transcripts on the same day of each interview to preserve contextual accuracy and minimize loss of important information (Nowell et al., 2017). The transcripts were typed into Microsoft Word and subsequently imported into NVivo 12 for systematic qualitative analysis and coding.

Data cleaning in the qualitative phase involved three major procedures:

1. Completeness check – Each transcript was reviewed against the original field notes to ensure that all participant responses were accurately captured and that no important information was omitted.

2. Anonymization – Identifying information such as participants' names and specific business identities was removed and replaced with

participant codes (QP01–QP09) to protect confidentiality.

3. Transcript refinement – Transcripts were reviewed to remove unnecessary repetitions and improve readability while preserving the original meaning and expressions of participants.

Table 3.7 Presents an example of transcript cleaning and anonymization

Raw Notes Excerpt	Cleaned Transcript (Anonymized)
John, a retail SME owner, said his loan from Stanbic was too big to repay in time.	Participant 04, a retail SME owner, noted that the loan was too large to repay within the agreed period.

Source: Researcher's field data (2025)

Table 3.7 illustrates the process followed during qualitative data preparation before analysis. The raw interview notes contained direct references to the participant's name and financial institution, which could compromise confidentiality. During transcript cleaning, personal identifiers were removed and replaced with participant codes while retaining the substantive meaning of the participant's statement. This process ensured that the data remained ethically compliant while preserving the authenticity of participants' experiences.

The transcript refinement process did not involve altering participants' views or changing the meaning of their responses; rather, it focused on improving clarity, consistency, and organization of the interview data. The cleaned transcripts were then imported into NVivo 12, where they were systematically coded and organized into categories and themes related to debt financing, debt management behaviour, debt literacy, and SME growth sustainability. This procedure enhanced the transparency, traceability, and dependability of the qualitative analysis.

3.17 Assumption Testing for Parametric Data

Before conducting regression analysis and Structural Equation Modelling (SEM), diagnostic tests were performed to assess whether the data satisfied

the assumptions required for parametric analysis. These assumptions included linearity, homoscedasticity, normality of residuals, and absence of multicollinearity. Meeting these assumptions is important because violations may affect the accuracy and interpretation of regression estimates (Field, 2018; Hair et al., 2019).

The assumption tests were conducted for both regression models: (i) debt financing and growth sustainability, and (ii) debt management behaviour and growth sustainability. Table 3.8 presents a summary of the assumption testing results, while detailed statistical outputs and diagnostic graphs are provided in Appendix H**.**

Table 3.8: Summary of Parametric Assumption Testing Results

Assumption	Diagnostic Test	Findings	Decision/Remedial Action
Linearity	Component-plus-residual plots	Relationships between predictors and growth sustainability were approximately linear	Assumption considered satisfied
Homoscedasticity	Cameron and Trivedi Information Matrix (IM) test	Evidence of heteroscedasticity was detected	Robust standard errors applied
Normality of residuals	Shapiro–Wilk test	Residuals deviated from normal distribution	Large sample size justification and robust estimation applied
Multicollinearity	Variance Inflation Factor (VIF)	VIF values were below recommended thresholds	No multicollinearity concern

Source: Author's computation from survey data using Stata 17 (2025).

As presented in Table 3.8, the linearity assumption was assessed using component-plus-residual plots for all predictor variables. The results indicated that the relationships between the independent variables and growth sustainability were approximately linear. Although minor deviations were observed at some extreme values, no substantial non-linear patterns were identified. Therefore, the linearity assumption was considered acceptable for subsequent regression analysis. The complete component-plus-residual plots are presented in Appendix H1.

The homoscedasticity assumption was examined using Cameron and Trivedi's decomposition of the Information Matrix (IM) test. As summarized in Table 3.8, evidence of heteroscedasticity was identified in the regression models. Since unequal residual variance may affect standard errors and statistical inference, heteroscedasticity-robust standard errors were applied in the subsequent regression analyses. The complete Cameron and Trivedi test outputs are presented in Appendix H2.

The normality of residuals was assessed using the Shapiro–Wilk test. As shown in Table 3.8, the residuals deviated from normality. However, considering the sample size of 311 observations, the Central Limit Theorem supports the reliability of parameter estimates. In addition, robust estimation procedures were applied to minimize the potential effect of non-normal residual distribution on statistical inference. The complete Shapiro–Wilk test results are presented in Appendix H3.

Multicollinearity was assessed using the Variance Inflation Factor (VIF). The results presented in Table 3.8 indicate that all predictor variables recorded acceptable VIF values, confirming that multicollinearity was not a concern. Therefore, all independent variables were retained for subsequent regression

and SEM analyses. The detailed VIF calculations are provided in Appendix H4.

Overall, although some deviations from classical regression assumptions were identified, appropriate corrective measures were implemented. The application of robust standard errors and large-sample estimation procedures ensured that the regression results remained reliable and suitable for hypothesis testing. The detailed diagnostic evidence supporting these decisions is provided in Appendix A, including linearity plots (Appendix H1), heteroscedasticity tests (Appendix H2), normality assessments (Appendix H3), and multicollinearity diagnostics (Appendix H4).

3.18 Exploratory Factor Analysis

Following the assessment of data suitability and parametric assumptions, Exploratory Factor Analysis (EFA) was conducted to examine the underlying factor structure of the study constructs. The purpose of EFA was to determine whether the observed indicators adequately represented their respective latent constructs and to identify the dimensional structure of debt financing, debt management behaviour, debt literacy, and growth sustainability before conducting Confirmatory Factor Analysis (CFA).

Principal Component Analysis (PCA) with Varimax rotation was employed for factor extraction. The suitability of the dataset for factor analysis was evaluated using the Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy and Bartlett's Test of Sphericity. A KMO value above 0.60 and a statistically significant Bartlett's test indicate that the correlation matrix is suitable for factor extraction (Kaiser, 1974; Bartlett, 1954).

Table 3.9 presents a summary of the EFA results for all constructs, including sampling adequacy, number of retained components, and total variance explained. Detailed EFA outputs, including eigenvalues, rotated component matrices, and item-level factor loadings, are presented in Appendix I.

Table 3.9: Summary of Exploratory Factor Analysis Results

Construct	KMO Value	Bartlett's Test	Retained Factors	Cumulative Variance Explained
Debt Financing	0.732	Significant ($p < 0.001$)	6	64.05%
Debt Management Behaviour	0.728	Significant ($p < 0.001$)	5	57.40%
Debt Literacy	0.671	Significant ($p < 0.001$)	4	53.01%
Growth Sustainability	0.832	Significant ($p < 0.001$)	5	53.28%

Source: Author's computation from survey data using Stata 17 (2025).

3.18.1 Exploratory Factor Analysis of Debt Financing

The EFA results for the debt financing construct confirmed the suitability of the data for factor analysis. As presented in Table 3.9, the KMO value was 0.732, while Bartlett's Test of Sphericity was statistically significant ($p < 0.001$), indicating sufficient correlations among the observed indicators.

The PCA extraction retained six components with eigenvalues greater than one, explaining 64.05% of the total variance. The rotated component solution revealed six dimensions of debt financing: repayment flexibility, loan size adequacy, repayment scheduling, repayment behaviour, interest rate sensitivity, and interest rate structure.

The detailed variance explanation results and rotated component matrix, including individual item factor loadings, are provided in Appendix I1.

3.18.2 Exploratory Factor Analysis of Debt Management Behaviour

The EFA results for debt management behaviour demonstrated that the dataset was suitable for factor analysis. As indicated in Table 3.9, the construct recorded a KMO value of 0.728, while Bartlett's Test of Sphericity was significant ($p <$

0.001), confirming the presence of adequate inter-item correlations.

The PCA extraction retained five components, which collectively explained 57.40% of the total variance. The extracted dimensions represented financial planning and saving behaviour, religiosity, financial self-efficacy, financial control, and budgeting orientation.

The complete factor extraction results, including the total variance explained and rotated component matrix, are presented in Appendix I2.

3.18.3 Exploratory Factor Analysis of Debt Literacy

The EFA results for debt literacy confirmed the appropriateness of factor analysis. As shown in Table 3.9, the KMO value was 0.671 and Bartlett's Test of Sphericity was statistically significant ($p < 0.001$), demonstrating adequate sampling suitability and sufficient correlations among the indicators.

Four components were retained through PCA, explaining 53.01% of the total variance. The extracted dimensions represented computational interest skills, loan structure knowledge, credit consequences awareness, and understanding of compound interest and repayment.

The detailed EFA results, including variance explained and rotated component loadings, are provided in Appendix I3.

3.18.4 Exploratory Factor Analysis of Growth Sustainability

The growth sustainability construct also demonstrated suitability for factor analysis. As presented in Table 3.9, the construct recorded a KMO value of 0.832, indicating strong sampling adequacy, while Bartlett's Test of Sphericity was significant ($p < 0.001$).

The PCA extraction retained five components, accounting for 53.28% of the total variance. The extracted dimensions represented sales growth and market expansion, employment and profitability growth, customer engagement and diversification, productivity efficiency, and strategic financial planning.

The complete EFA outputs, including the rotated component matrix and individual factor loadings, are presented in Appendix I4.

3.19 Confirmatory Factor Analysis

Following the exploratory factor analysis (EFA), Confirmatory Factor Analysis (CFA) was conducted to validate the measurement models and assess whether the identified factor structures adequately represented the theoretical constructs. CFA was used to evaluate the reliability, convergent validity, discriminant validity, and overall model fit of the latent constructs before proceeding to structural model analysis.

The measurement models were assessed using standardized factor loadings, Composite Reliability (CR), Average Variance Extracted (AVE), Fornell–Larcker criterion, Heterotrait–Monotrait (HTMT) ratio, and model fit indices including χ^2/df, Comparative Fit Index (CFI), Tucker–Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Square Residual (SRMR).

The initial CFA assessment identified some indicators with weak factor loadings, particularly within the Debt Literacy and Growth Sustainability constructs. These indicators were reviewed, and the measurement models were refined through removal of items that did not adequately represent their intended latent constructs. The revised measurement models were subsequently reassessed to ensure acceptable reliability, validity, and model fit before structural model estimation.

Table 3.10 presents a summary of the CFA results for Measurement Model 1, while the complete CFA outputs, including initial models, standardized factor loadings, reliability and validity statistics, discriminant validity assessments, and revised measurement models, are presented in Appendix J.

3.19.1 Measurement Model 1: Debt Financing, Debt Literacy and Growth Sustainability

The first measurement model examined the relationships among debt financing, debt literacy, and growth sustainability. The initial CFA assessment identified limitations in some indicators, particularly those associated with Debt Literacy and Growth Sustainability, where factor loadings and convergent validity measures did not meet recommended thresholds.

Following assessment and refinement of the measurement model, indicators with inadequate contribution to their respective constructs were removed where statistically and theoretically justified. The revised model demonstrated improved measurement properties and was subsequently evaluated using reliability, validity, and model fit criteria. Table 3.10 presents the summary results of the final CFA assessment for Measurement Model 1.

Table 3.10: Summary of CFA Results – Measurement Model 1

Assessment	Recommended Criterion	Result	Decision
Factor loadings	≥0.50	Acceptable after refinement	Supported
Composite Reliability (CR)	≥0.70	Acceptable	Supported
Average Variance Extracted (AVE)	≥0.50	Acceptable after refinement	Supported
HTMT ratio	<0.85	Acceptable	Supported
χ^2/df	<3.0	Acceptable	Supported
CFI/TLI	≥0.90	Acceptable	Supported
RMSEA/SRMR	≤0.08	Acceptable	Supported

Source: Author's computation from survey data (2025).

The results presented in Table 3.10 indicate that the revised measurement model achieved acceptable reliability, convergent validity, discriminant validity, and model fit. Therefore, the validated measurement model was considered suitable for subsequent structural model analysis.

The detailed CFA outputs, including the initial and revised models, are provided in Appendix J1 and Appendix J2

3.19.2 Measurement Model 2: Debt Management Behaviour, Debt Literacy and Growth Sustainability

The second measurement model assessed the relationships among debt management behaviour dimensions, debt literacy, and growth sustainability.

Similar to Measurement Model 1, the initial CFA assessment identified weak indicators affecting the convergent validity of some constructs, particularly Debt Literacy and Growth Sustainability. These indicators were reviewed and the measurement model was refined by removing unsuitable items where appropriate.

Following refinement, the revised measurement model was reassessed using factor loadings, Composite Reliability, Average Variance Extracted, discriminant validity measures, and model fit indices. The final model demonstrated acceptable measurement properties and provided an appropriate foundation for structural equation modelling.

The summary CFA results for Measurement Model 2 are presented in Table 3.12, while detailed CFA outputs are provided in Appendix J3 and Appendix J4

3.19.3 Summary of Measurement Model Validation

The measurement validation process followed a systematic sequence beginning with Exploratory Factor Analysis (EFA) and progressing to Confirmatory Factor Analysis (CFA). EFA established the underlying dimensional structure of the study constructs, while CFA evaluated whether the identified measurement structures demonstrated adequate reliability, validity, and model fit.

The initial CFA results identified weaknesses in some indicators, particularly within the Debt Literacy and Growth Sustainability constructs. These issues were addressed through measurement model refinement before proceeding to structural model estimation. The revised measurement models demonstrated acceptable psychometric properties, providing a reliable foundation for

examining the hypothesized structural relationships among the study variables.

The complete CFA evidence, including initial models, refinement decisions, factor loadings, reliability assessments, validity assessments, and final model outputs, is presented in Appendix J.

3.20 Data Analysis

This study employed a sequential explanatory mixed-methods approach for data analysis, consistent with the research design and pragmatic philosophical orientation of the study. The analysis was conducted in two interconnected phases: a quantitative phase followed by a qualitative explanatory phase. Integration of the two strands occurred during the interpretation stage, where qualitative findings were used to explain, contextualize, and provide deeper understanding of the quantitative results (Creswell & Plano Clark, 2018).

3.20.1 Quantitative Phase

Quantitative data collected from 311 Small and Medium-sized Enterprises (SMEs) were analyzed using Stata Version 17. Before conducting the main analyses, data screening, cleaning, and preparation were undertaken. Diagnostic tests assessing linearity, normality, multicollinearity, and homoscedasticity were conducted to ensure the suitability of the data for parametric analysis.

The quantitative analysis was conducted in several stages. First, Exploratory Factor Analysis (EFA) was performed to identify the underlying dimensional structure of the measurement items. This was followed by Confirmatory Factor Analysis (CFA) to validate the measurement models and assess construct reliability, convergent validity, and discriminant validity.

After validation of the measurement models, descriptive statistics, including frequencies, means, and standard deviations, were used to summarize respondent characteristics and SME characteristics. Inferential analyses included Pearson correlation analysis, multiple regression analysis, and Structural Equation Modelling (SEM) with bootstrapping procedures to examine the hypothesized

relationships among debt financing, debt management behaviour, debt literacy, and SME growth sustainability.

3.20.2 Qualitative Phase

The qualitative phase was conducted after completion of the quantitative analysis and was designed to provide further explanation and contextual understanding of the quantitative findings. Consistent with the sequential explanatory mixed-methods design, qualitative data were not intended to generate an independent model or replace the quantitative analysis; rather, they were used to explain how and why the relationships identified during the quantitative phase occurred within the SME context.

Qualitative data were collected through semi-structured interviews with nine purposively selected SME owners in Lira City. Participants were selected based on their relevance to the quantitative findings and their ability to provide contextual explanations regarding debt financing practices, debt management behaviour, debt literacy, and SME growth sustainability experiences.

The interview data were analyzed using thematic analysis supported by NVivo Version 12. The analysis involved transcription of interview responses, familiarization with the data, initial coding, development of categories, refinement of emerging themes, and interpretation of themes in relation to the quantitative findings. NVivo was used to organise the transcripts, manage coding processes, identify recurring patterns, and maintain systematic documentation of the qualitative analysis. The NVivo coding structure, node classification, and supporting analytical outputs are presented in Appendix K.

The qualitative findings were subsequently integrated with the quantitative results during interpretation to provide deeper explanations of the statistical relationships among debt financing, debt management behaviour, debt literacy, and SME growth sustainability. Therefore, the qualitative component served as an explanatory extension of the quantitative findings rather than an independent analytical strand.

3.20.3 Integration of Quantitative and Qualitative Findings

Integration of the quantitative and qualitative findings occurred during the interpretation stage. The quantitative results provided empirical evidence regarding the relationships among debt financing, debt management behaviour, debt literacy, and SME growth sustainability, while the qualitative findings provided contextual explanations for these statistical relationships.

3.21 Model Specification

Model specification involves translating the conceptual framework of the study into empirically testable relationships. In this study, model specification was guided by the theoretical foundations of the Trade-Off Theory of Capital Structure, Theory of Planned Behaviour, Sustainable Growth Theory, and Financial Capability Theory. These theories informed the selection of variables and the hypothesized relationships among debt financing, debt management behaviour, debt literacy, and SME growth sustainability.

The proposed models were developed to examine the direct effects of debt financing and debt management behaviour on SME growth sustainability and to assess the moderating role of debt literacy in these relationships. The dependent variable was SME Growth Sustainability (GS), measured through indicators related to sales growth, profitability improvement, and employment growth. The independent variables included debt financing dimensions (loan size, interest rate, and loan maturity) and debt management behaviour dimensions (lifestyle pattern, religiosity, and financial self-efficacy). Debt literacy was incorporated as a moderating variable.

3.21.1 Quantitative Model Specification

The quantitative models were developed to test the hypothesised relationships among the study constructs. Four models were specified to examine direct relationships and the moderating effect of debt literacy.

Model 1: Effect of Debt Financing on Growth Sustainability

1. $GS = \beta_0 + \beta_1 LS + \beta_2 IR + \beta_3 LM + \varepsilon$……..…….. (Equation 1)

Where: GS = Growth Sustainability, LS = Loan Size, IR = Interest Rate, LM = Loan Maturity, $\boldsymbol{\beta_0}$ = Constant term, $\boldsymbol{\beta_1 – \beta_3}$ = Regression coefficients, $\boldsymbol{\varepsilon}$ = Error term

This model examines whether debt financing characteristics significantly influence SME growth sustainability.

Model 2: Effect of Debt Management Behaviour on Growth Sustainability

2. $GS = \beta_0 + \beta_4 LP + \beta_5 REL + \beta_6 FSE + \varepsilon$ …….. (Equation 2)

Where: LP = Lifestyle Pattern, REL = Religiosity, FSE = Financial Self-Efficacy

This model assesses the influence of behavioural dimensions of debt management on SME growth sustainability.

Model 3: Moderating Effect of Debt Literacy on the Relationship between Debt Financing and Growth Sustainability

3. $GS=\beta_0+\beta_1 LS+\beta_2 IR+\beta_3 LM+\beta_7 DL+(\beta_1 LS\times\beta_7 DL)+(\beta_2 IR\times\beta_7 DL)+(\beta_3 LM \times\beta_7 DL)+\varepsilon$……..... (Equation 3)

Where: DL = Debt Literacy, LS × DL, IR × DL, LM × DL = Interaction terms representing the moderating effect of debt literacy.

This model evaluates whether debt literacy changes the strength or direction of the relationship between debt financing and SME growth sustainability.

Model 4: Moderating Effect of Debt Literacy on the Relationship between

Debt Management Behaviour and Growth Sustainability

4. $GS = \beta_0 + \beta_4 LP + \beta_5 REL + \beta_6 FSE + \beta_7 DL + (\beta_4 LP \times \beta_7 DL) + (\beta_5 REL \times \beta_7 DL) + (\beta_6 FSE \times \beta_7 DL) + \varepsilon$.....(Equation 4)

This model examines whether debt literacy moderates the relationship between debt management behaviour dimensions and SME growth sustainability.

3.21.2 Structural Equation Model (SEM) Specification

In addition to regression models, Structural Equation Modelling (SEM) was employed to examine the relationships among latent constructs simultaneously. SEM was selected because the study involved multidimensional latent variables measured through multiple observed indicators.

The SEM incorporated the validated measurement models established through Confirmatory Factor Analysis (CFA) and examined the following structural relationships:

i. Debt Financing → Growth Sustainability

ii. Debt Management Behaviour → Growth Sustainability

iii. Debt Literacy as a moderating variable between predictor constructs and Growth Sustainability

The SEM estimation was conducted using maximum likelihood estimation with bootstrapping procedures to address potential non-normality and obtain reliable confidence intervals for the estimated relationships.

Model adequacy was evaluated using established goodness-of-fit indices, including:

i. Chi-square divided by degrees of freedom (χ^2/df)

ii. Comparative Fit Index (CFI)

iii. Tucker–Lewis Index (TLI)

iv. Root Mean Square Error of Approximation (RMSEA)

v. Standardized Root Mean Square Residual (SRMR)

The acceptable threshold values followed established SEM guidelines (Hair et al., 2021; Hu & Bentler, 1999)which includes using the maximum likelihood (ML.

3.21.3 Alignment of Qualitative Findings with the Model Framework

The qualitative phase did not involve the development or testing of an independent statistical model. Instead, it was aligned with the quantitative model framework to provide contextual explanations for the observed relationships.

The interview findings were used to explain how SME owners experienced debt financing decisions, debt management practices, financial knowledge, and growth-related challenges. Therefore, the qualitative evidence complemented the quantitative models by providing deeper understanding of the mechanisms and contextual factors underlying the statistical relationships identified through regression analysis and SEM.

3.22 Common Method Bias

Common Method Bias (CMB) refers to systematic variance attributable to the measurement method rather than the actual constructs being examined, which may artificially inflate or reduce the observed relationships among variables (Podsakoff et al., 2003; MacKenzie & Podsakoff, 2012). This concern is particularly relevant in behavioural and management research where data are collected through self-reported questionnaires from a single source. Since the quantitative phase of this study relied on responses obtained from SME owners and managers regarding debt financing, debt management behaviour, debt literacy, and growth sustainability, appropriate procedural and statistical measures were undertaken to assess and minimise the potential influence of common method bias.

3.22.1 Statistical Assessment of Common Method Bias in the Quantitative Phase

Beyond the procedural remedies implemented during questionnaire development and administration, statistical tests were conducted to assess whether common method bias represented a potential threat to the validity of the quantitative findings. Two approaches were employed: Harman's Single-Factor Test and Full Collinearity Assessment using Variance Inflation Factor (VIF). Table 3.11 presents the results of the common method bias assessment. The table summarizes the statistical criteria, observed results, and interpretation of the findings.

Table 3.11: Results of Common Method Bias Assessment

Test	Criterion (Threshold)	Result	Interpretation
Harman's Single-Factor Test	First factor should explain < 50% of variance	34.7% variance explained	No single factor dominated; CMB not a significant concern.
Full Collinearity (VIF)	VIF < 3.3 (Kock, 2015)	Range: 1.52–2.41	Acceptable range; no evidence of collinearity or CMB.

Source: Researcher's computation from field data (2025)

As shown in Table 3.11, the first factor extracted through Harman's Single-Factor Test accounted for 34.7% of the total variance, which is below the recommended 50% threshold. This indicates that the observed relationships among the constructs were unlikely to be substantially influenced by a single common factor.

Furthermore, the full collinearity assessment produced VIF values ranging from 1.52 to 2.41, which are below the recommended threshold of 3.3. Therefore, the

results suggest that common method bias was unlikely to represent a serious threat to the interpretation of the quantitative findings.

3.22.2 Quality Assurance Measures for the Qualitative Explanatory Phase

Although common method bias primarily concerns quantitative self-report studies, measures were also applied during the qualitative explanatory phase to ensure that interview responses provided credible and accurate explanations of the quantitative findings. Since the qualitative component was designed only to support interpretation of the quantitative results, these measures focused on enhancing credibility and reducing interviewer-related influences.

The following safeguards were implemented:

i. Structured interview guide: A consistent semi-structured interview guide was used to ensure that all participants were asked comparable questions while allowing clarification where necessary.

ii. Neutral interviewing approach: Interviews were conducted using neutral questioning techniques to minimize interviewer influence on participant responses.

iii. Confidentiality assurance: Participants were informed about confidentiality and voluntary participation to encourage open and honest responses.

iv. Contextual documentation: Field notes were maintained to capture relevant contextual information that supported interpretation of interview responses.

v. Triangulation: Interview explanations were considered alongside quantitative findings to enhance interpretation and contextual understanding.

These measures ensured that the qualitative phase effectively fulfilled its intended role of explaining and contextualizing the statistical relationships

identified in the quantitative analysis.

3.23 Community Engagement

This study incorporated community engagement to ensure that the research remained relevant to the experiences and challenges of SMEs within Lira City. Given that the study examined debt financing practices, debt management behaviour, debt literacy, and growth sustainability, engagement with SME stakeholders helped provide contextual understanding of the issues investigated.

The engagement approach followed four interconnected stages: consultation, participation, feedback integration, and dissemination. These stages supported the practical relevance of the research and ensured that the findings reflected the realities experienced by SME owners and managers.

3.23.1 Consultation Phase

During the initial stage of the research, consultations were undertaken with relevant SME stakeholders to understand the local context surrounding business financing, debt utilisation, repayment practices, and growth challenges. These consultations assisted in refining the research focus and ensuring that the study variables reflected practical issues affecting SMEs.

The consultation process helped establish contextual relevance and guided the development of research instruments suitable for the SME environment in Lira City.

3.23.2 Participation Phase

SME owners and managers participated in the study through the completion of quantitative questionnaires and participation in follow-up qualitative interviews. The survey responses constituted the primary source of evidence for testing the hypothesised relationships, while interviews provided additional explanations regarding the experiences and practices underlying the quantitative findings.

The participation of SME stakeholders ensured that the study incorporated both measurable relationships and contextual explanations regarding debt financing

decisions, financial behaviour, and business growth sustainability.

3.23.3 Feedback Integration Phase

Feedback integration focused on ensuring that the interpretation of findings remained connected to the experiences of SME stakeholders. The qualitative explanatory phase supported this process by providing additional insights into how SME owners understood and experienced the relationships identified through quantitative analysis.

The integration of quantitative findings with qualitative explanations strengthened the interpretation of results by providing contextual understanding of the statistical relationships.

3.23.4 Dissemination Phase

The findings of the study will be communicated to relevant stakeholders through academic and practitioner-oriented channels. These include scholarly publications, conferences, stakeholder engagement sessions, and accessible summaries for SME stakeholders.

The dissemination process aims to ensure that the knowledge generated from the study contributes to improved understanding of debt management practices and sustainable SME development.

3.24 Ethical Considerations

Ethical approval for this study was obtained from the relevant institutional authorities before commencement of data collection. Approval was granted by the Gulu University Research Ethics Committee (GUREC) under reference number GUREC-2024-1057. Additional clearance was obtained from the Uganda National Council for Science and Technology (UNCST) under reference number SS3676ES. Administrative permission was also obtained from the relevant local authorities in Lira City before conducting field activities.

Participation in the study was based on informed consent. Before participating, respondents received information explaining the purpose of the research,

procedures involved, expected participation, confidentiality arrangements, and their right to withdraw without any negative consequences. Separate consent procedures were applied for the quantitative survey and qualitative interviews.

Confidentiality and anonymity were maintained throughout the research process. Questionnaires and interview records were identified using codes rather than personal names. Interview transcripts were anonymized, and access to raw data, including recordings and field notes, was restricted to the researcher and supervisory team.

All electronic research data were stored securely using password-protected systems, while physical documents were maintained in secure storage. Data will be retained according to institutional requirements and securely destroyed after completion of the required retention period.

The study was designed to minimize potential discomfort or harm to participants. Respondents were informed that participation was voluntary and that they could decline to answer any question they considered uncomfortable. The research instruments were reviewed to ensure cultural appropriateness and clarity.

Given the importance of financial practices and religious considerations within the study context, participants were approached with respect and neutrality. The study maintained ethical sensitivity when examining constructs such as religiosity and financial behaviour.

No financial incentives were provided to participants. This approach reduced potential response bias and ensured that participation was based on willingness to contribute to the research.

3.25 Dissemination Plan

The dissemination of research findings represents an important stage in ensuring that knowledge generated through the study contributes to academic advancement and practical understanding among relevant stakeholders. This study adopts a dissemination approach that prioritises accessibility,

transparency, and relevance.

The academic dissemination of findings will include submission of manuscripts to peer-reviewed journals focusing on SME development, finance, entrepreneurship, and business management. Findings will also be presented through academic conferences, seminars, and research forums to facilitate scholarly discussion and knowledge exchange.

To support practical application, findings will be shared with SME stakeholders and relevant institutions through stakeholder engagement activities and accessible summary materials. These activities will communicate key findings regarding debt financing practices, debt management behaviour, debt literacy, and sustainable SME growth.

The final thesis will also be made available through the institutional repository of Gulu University, allowing wider academic access. Additional professional communication channels may be used to share key insights with practitioners, entrepreneurs, and development organizations.

The dissemination process will ensure that the findings extend beyond academic audiences and contribute to evidence-based understanding of SME financing practices and growth sustainability.

3.26 Limitations, Delimitations, and Assumptions of the Study

This section presents the limitations, delimitations, and assumptions that guided the methodological approach of the study. The limitations describe the methodological constraints that may influence the interpretation of the findings, while the delimitations explain the boundaries intentionally established by the researcher to maintain focus and feasibility. The assumptions outline the conditions considered necessary for the successful implementation of the study and interpretation of the results.

3.26.1 Limitations of the Study

Although this study was carefully designed to examine the influence of debt

financing, debt management behaviour, and debt literacy on the growth sustainability of small and medium-sized enterprises (SMEs) in Lira City, several methodological limitations should be acknowledged.

First, the study adopted a cross-sectional research design, where data were collected at a single point in time. This design was appropriate for examining the relationships among debt financing, debt management behaviour, debt literacy, and SME growth sustainability; however, it limits the ability to examine changes in these relationships over time. SME growth sustainability is a dynamic process influenced by changing economic conditions, financial environments, and business decisions. Therefore, a longitudinal study could provide additional insights into how debt-related practices influence sustainability outcomes over extended periods.

Second, the study relied partly on self-reported information obtained from SME owners and managers. Since constructs such as debt management behaviour, financial self-efficacy, lifestyle patterns, personal values, and debt literacy involve individual perceptions and experiences, respondents' answers may be influenced by recall limitations or the desire to provide socially acceptable responses. To minimize this limitation, the study used appropriate research instruments and incorporated qualitative interviews to obtain deeper explanations of respondents' experiences and financial practices.

Third, the study was geographically limited to SMEs operating in Lira City, Uganda. The findings provide valuable insights into the relationship between debt-related factors and SME sustainability within this specific context; however, caution should be exercised when generalizing the findings to SMEs operating in other regions of Uganda or other countries. Differences in economic conditions, financial institutions, regulatory environments, and entrepreneurial characteristics may influence SME financing decisions and sustainability outcomes.

Fourth, although the study examined key financial and behavioural factors influencing SME sustainability, other possible determinants were beyond the

scope of the research. Factors such as market competition, entrepreneurial orientation, innovation capability, digital financial services, government support programmes, and broader macroeconomic conditions may also influence SME growth sustainability. Their exclusion means that the study does not capture all possible factors affecting enterprise sustainability.

Fifth, the measurement of debt literacy focused specifically on entrepreneurs' knowledge and understanding of debt-related decisions, including borrowing conditions, repayment obligations, and financial risks. While this approach was appropriate for the objectives of the study, debt literacy represents only one dimension of broader financial capability. Other aspects of financial capability, such as investment knowledge, savings behaviour, and financial planning skills, were not included in the research framework.

Despite these limitations, the study employed a rigorous mixed-methods approach, combining quantitative and qualitative evidence, to provide a comprehensive understanding of how debt-related factors influence SME growth sustainability in Lira City.

3.26.2 Delimitations of the Study

Delimitations refer to the boundaries intentionally established by the researcher to define the scope and direction of the study. This study was delimited in terms of geographical area, study population, variables examined, and methodological approach.

First, the study was deliberately limited to small and medium-sized enterprises operating in Lira City, Uganda. The geographical focus was selected because SMEs in this area provide an appropriate context for examining challenges related to access to finance, debt management practices, and sustainable enterprise growth. Limiting the study to one location enabled the researcher to obtain context-specific evidence and conduct an in-depth investigation of the research problem.

Second, the study focused on SME owners and managers as the primary

respondents. This delimitation was based on the assumption that owners and managers possess direct knowledge of business financing decisions, loan acquisition, debt management practices, and enterprise performance. Employees and other stakeholders were excluded because they may not have adequate information regarding the financial decisions and debt obligations of the enterprises.

Third, the study was delimited to three main explanatory constructs: debt financing, debt management behaviour, and debt literacy, with growth sustainability as the outcome variable. The study specifically examined how these financial and behavioural factors influence the ability of SMEs to achieve sustainable growth. Other possible determinants of SME performance, such as marketing strategies, technological adoption, innovation, and competitive environment, were outside the scope of the study.

Fourth, the study adopted a sequential explanatory mixed-methods approach, involving quantitative and qualitative phases. The quantitative component examined statistical relationships among the study variables, while the qualitative component provided deeper explanations of entrepreneurs' experiences, perceptions, and practices related to debt management. This approach was selected to provide both measurable evidence and contextual understanding of the research problem.

Finally, the study focused on growth sustainability rather than short-term financial performance. The emphasis was placed on how SMEs maintain continuous growth through effective financial decisions, responsible debt utilization, and appropriate management practices.

These delimitations enabled the study to maintain a clear research focus while generating meaningful insights into the role of debt-related factors in SME sustainability.

3.26.3 Assumptions of the Study

The study was conducted based on several assumptions considered necessary

for achieving the research objectives.

First, the study assumed that SME owners and managers possess adequate knowledge of their business financial activities, including sources of finance, borrowing decisions, repayment practices, and financial management processes. Since these individuals are directly involved in enterprise decision-making, their responses were considered appropriate for assessing the study variables.

Second, the study assumed that respondents provided honest, accurate, and reliable information regarding their debt financing practices, debt management behaviour, and level of debt literacy. The researcher assumed that participants responded based on their actual experiences and business practices rather than providing inaccurate information.

Third, the study assumed that the measurement instruments used were appropriate for capturing the intended constructs. Specifically, it was assumed that the indicators used adequately represented debt financing, debt management behaviour, debt literacy, and SME growth sustainability.

Fourth, the study assumed that the relationships identified among the study variables reflect meaningful patterns within the SME context of Lira City. The researcher assumed that variations in debt practices and financial capabilities among SMEs contribute to differences in sustainability outcomes.

Fifth, the study assumed that the selected methodological procedures, including sampling techniques, data collection methods, and analytical approaches, were suitable for addressing the research objectives. The integration of quantitative and qualitative methods was assumed to provide a comprehensive understanding of the research problem.

Finally, the study assumed that the economic and financial environment within which SMEs operate remained sufficiently stable during the research period to allow meaningful interpretation of the findings.

3.27 Conclusion

This chapter presented the methodology adopted for examining the influence of debt financing, debt management behaviour, and debt literacy on the growth sustainability of small and medium-sized enterprises (SMEs) in Lira City. The chapter described the research philosophy, research design, study population, sample size determination, sampling procedures, data collection methods, research instruments, validity and reliability procedures, data analysis techniques, and ethical considerations that guided the study.

The study adopted a sequential explanatory mixed-methods research design, integrating quantitative and qualitative approaches to provide a comprehensive understanding of the research problem. The quantitative phase examined the relationships among debt financing, debt management behaviour, debt literacy, and SME growth sustainability through statistical techniques, while the qualitative phase provided deeper explanations of entrepreneurs' experiences and practices relating to debt management and financial decision-making.

The chapter further explained the procedures used to ensure the quality and credibility of the research findings, including instrument validation, reliability testing, ethical approval, informed consent, and confidentiality of participants' information. The limitations, delimitations, and assumptions of the study were also discussed to clarify the boundaries within which the findings should be interpreted.

The methodology described in this chapter provided the foundation for collecting and analysing data relevant to addressing the study objectives. The next chapter presents the findings of the study based on the data collected from SME owners and managers in Lira City. Chapter Four presents the demographic characteristics of respondents, descriptive findings, measurement model assessment, inferential statistical results, hypothesis testing, and qualitative findings. The results presented in the next chapter provide empirical evidence on the relationship between debt financing, debt management behaviour, debt literacy, and SME growth sustainability.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION OF FINDINGS

4.1 Introduction

This chapter presents the findings of the study on **"**Debt Financing, Debt Management Behaviour, and the Growth Sustainability of Small and Medium-Sized Enterprises in Lira City.**"** The chapter reports the quantitative and qualitative findings generated from the sequential explanatory mixed-methods design. The quantitative results present the descriptive findings, diagnostic assessments, measurement model evaluation, and structural model analysis examining the relationships between debt financing, debt management behaviour, debt literacy, and SME growth sustainability. The qualitative findings provide contextual explanations of the quantitative results by exploring SME owners' and managers' experiences regarding borrowing decisions, debt management practices, and factors influencing sustainable business growth. The findings are presented according to the study objectives, integrating quantitative evidence with qualitative insights to provide a comprehensive understanding of the factors influencing SME growth sustainability in Lira City.

4.2 Background Characteristics of Respondents

This section outlines the background characteristics of the study participants. The analysis examined essential demographic and enterprise-related variables such as gender, age group, marital status, educational attainment, business categories, business age, employee count, and primary sources of debt financing. The identified variables are essential for comprehending the characteristics of SME owners in Lira City and for contextualizing the findings associated with debt management behavior and the sustainability of business growth. The results are given in Table 4.1.

Table 4.1: 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 Employee		
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

Source: Researcher's field survey data (2025)

Table 4.1 indicates that male respondents comprised 64.3% of the sample, whereas female respondents accounted for 35.7%. This suggests a predominance of male ownership in SMEs within the study area. The age distribution of respondents indicated that the majority were within the 25–34 age bracket (43.1%), with the next largest group being those aged 35–50 (35.4%). The cohort aged 18–24 comprised 14.1% of respondents, whereas those over 50 years constituted merely 7.4%.

The majority of participants were married (76.8%), followed by single individuals at 20.3%, and widowed individuals at 2.9%. A significant proportion of respondents achieved undergraduate university education (48.2%), while 25.1% completed tertiary college education and 13.8% attained secondary-

level education. Only 3.2% possessed postgraduate qualifications, while 7.1% had received vocational, religious, or group-based training. A minimal percentage of respondents possessed only primary education (1.9%) or lacked formal education entirely (0.6%).

The data on business categories revealed that private schools represented the largest proportion at 35.0%, followed by catering and hotel services at 19.3%, motor spares and garages at 9.6%, and millers at 8.4%. Additional business categories comprised supermarkets (7.1%), petrol and oil stations (7.1%), and wholesale merchants (5.1%). Radio stations accounted for 1.3%, funeral services for 0.6%, and manufacturing firms for 1.6% of smaller representations.

A plurality of firms (39.5%) had been in operation for 6–10 years, followed by those operating for 1–5 years (21.5%) and 16–20 years (17.4%). Merely 2.6% of businesses have been in operation for over 21 years. A majority of businesses (80.7%) employed between 5 and 49 employees, reflecting a predominance of small-sized enterprises, whereas 19.3% employed between 50 and 100 employees.

Major sources of debt finance include banks as the predominant source at 40.2%, followed by microfinance institutions at 18.3%, SACCOs at 17.7%, and money lenders at 14.1%. Village Savings and Loan Associations (VSLAs) constituted 7.4% of reported sources, whereas friends and relatives represented the lowest percentage at 2.3%.

4.3 Descriptive Statistics on the nature of Study Variables

This section provides an overview of the descriptive statistics related to the study variables, specifically: Debt Financing, Debt Management Behaviour, Debt Literacy, and Growth Sustainability. The descriptive analysis encompassed measures of central tendency, specifically the mean, as well as dispersion metrics including standard deviation and coefficient of variation. Additionally, it addressed distributional properties such as skewness and kurtosis. The statistics served to deliver an overview of the dataset and to

evaluate its appropriateness for further factor analysis and structural equation modeling (SEM).

Table 4.2: Descriptive Statistics of Study Variables

Variable	N	Min	Max	Mean	SD	CV (%)	Skew-ness	Kurto-sis
Debt Financing								
Loan Size	311	1.429	5.000	3.830	0.702	0.183	-1.065	4.216
Loan Interest Rate	311	1.143	4.571	3.124	0.772	0.247	-0.267	2.273
Loan Maturity	311	1.727	4.818	3.430	0.607	0.177	-1.019	3.897
Debt Manage-ment Be-haviour								
Lifestyle Pat-tern	311	1.700	4.800	3.614	0.669	0.185	-0.910	3.123
Religiosity	311	1.375	5.000	4.042	0.679	0.168	-1.285	5.927
Financial Self Efficacy	311	1.444	4.788	3.880	0.564	0.145	-0.801	3.952
Debt Literacy								
Debt Knowl-edge	311	1.000	2.200	1.323	0.238	0.180	1.290	4.875
Debt Skills	311	1.000	4.000	2.419	0.629	0.260	1.002	3.859
Growth Sus-tainability								
Sales Growth	311	1.571	4.643	3.644	0.535	0.147	-0.592	3.049
Profitability Growth	311	1.923	4.692	4.441	0.553	0.161	-0.312	2.325
Employee Growth	311	1.500	4.583	3.516	0.588	0.167	-0.242	2.887

Source: Researcher's computation from field survey data using Stata 17 (2025)

4.3.1 Debt Financing

Debt financing was measured using loan size, loan interest rate, and loan

maturity. The average loan size was moderately high (M = 3.83, SD = 0.70, CV = 18.3%), with a negative skewness (–1.07) and leptokurtic distribution (Kurtosis = 4.22), suggesting that most SMEs accessed relatively large loans with clustering around higher values. Loan interest rates showed greater variability (CV = 24.7%) and were almost normally distributed (Skewness = –0.27, Kurtosis = 2.27), highlighting disparities in borrowing conditions. Loan maturity were consistent (CV = 17.7%), negatively skewed (–1.02), and leptokurtic (3.90), implying that SMEs perceived repayment pressures as relatively high and concentrated.

4.3.2 Debt Management Behaviour

Debt management behaviour was assessed through lifestyle patterns, religiosity, and financial self-efficacy. Lifestyle patterns had a mean of 3.61 (SD = 0.67, CV = 18.5%), with negative skewness (–0.91), reflecting a tendency towards stronger agreement on lifestyle's influence on debt management. Religiosity recorded the highest mean in this construct (M = 4.04, SD = 0.68, CV = 16.8%), with strong negative skew (–1.29) and high kurtosis (5.93), indicating a high concentration of responses at the upper end, reflecting deeply embedded religious influence in financial practices. Financial self-efficacy scored highly (M = 3.88, SD = 0.56, CV = 14.5%), with negative skewness (–0.80) and leptokurtic distribution (3.95), confirming that most SME owners were confident in their ability to manage debts effectively.

4.3.3 Debt Literacy

Debt literacy recorded the lowest means among all constructs, highlighting a major weakness in SME capability. Debt knowledge had a mean of 1.32 (SD = 0.24, CV = 18.0%), with positive skew (1.29) and high kurtosis (4.88), showing clustering of responses at the lower end, with a few outliers demonstrating higher knowledge. This finding supports Lusardi and Mitchell's (2017) assertion that financial literacy remains critically low among entrepreneurs in developing economies. Debt skills were slightly stronger (M = 2.42, SD = 0.63, CV = 26.0%), but had the highest variability across all variables, with

positive skew (1.00) and leptokurtic distribution (3.86).

4.3.4 Growth Sustainability

Growth sustainability was measured using sales growth, profitability growth, and employee growth. Sales growth averaged 3.64 (SD = 0.54, CV = 14.7%), with slight negative skew (–0.59) and near-normal kurtosis (3.05), indicating consistency among respondents. Profitability growth recorded the highest mean overall (M = 4.44, SD = 0.55, CV = 16.1%), with minimal skew (–0.31) and platykurtic distribution (2.33), showing strong agreement that debt financing enhanced profitability. Employee growth was moderate (M = 3.52, SD = 0.59, CV = 16.7%), with slight negative skew (–0.24) and near-normal kurtosis (2.89), suggesting less pronounced but steady workforce expansion.

4.3.5 Distributional Adequacy

The coefficient of variation values was all below 30%, confirming acceptable internal consistency and stability across measures. Skewness values ranged between –1.29 and +1.29, falling within the acceptable ±2 threshold, while kurtosis values ranged between 2.27 and 5.93, within the acceptable ±7 range for SEM and CFA applications (Byrne, 2016). These results confirm that the dataset reasonably approximates normal distribution, thereby satisfying key assumptions for multivariate analysis, including factor analysis, regression, and structural modelling.

4.4 Correlation Analysis

Correlation analysis was conducted to examine the degree and direction of linear associations between the independent constructs (debt financing and debt management behaviour) and the dependent construct (growth sustainability of SMEs). Pearson's correlation coefficients were computed using Stata Version 17, with statistical significance evaluated at conventional thresholds. The results are presented in Tables 4.3 and 4.4, accompanied by detailed interpretation and discussion in line with prior empirical findings.

4.4.1 The correlation between the constructs of debt financing and growth sustainability

Table 4.3 presents the correlation analysis examining the relationship between debt financing variables (loan size, interest rate, and loan maturity) and SME growth sustainability. The analysis was conducted to determine the direction and strength of relationships between debt financing characteristics and sustainability outcomes, including sales growth, profitability, and employment development. The correlation results provide preliminary evidence regarding how different dimensions of debt financing are associated with SME growth sustainability before the application of subsequent regression analysis. The quantitative findings are further complemented by qualitative evidence obtained from interviews with SME owners, which provide deeper insights into how loan characteristics influence the ability of entrepreneurs to effectively utilize debt financing and sustain business growth.

Table 4.3: Pairwise Correlation Between Debt Financing and Growth Sustainability

Variables	**(1)**	**(2)**	**(3)**	**(4)**
(1) Growth Sustainability	1.000			
(2) Loan size	0.301*	1.000		
(3) Interest rate	0.299*	0.089	1.000	
(4) Loan maturity	0.351*	0.220*	0.502*	1.000
**** p<0.01, ** p<0.05, * p<0.1*				

Source: Researcher's computation from field survey data using Stata 17 (2025)

The findings indicate a statistically significant positive relationship between loan size and SME growth sustainability (r = 0.301, p = 0.050). This implies that SMEs accessing larger loan amounts tend to demonstrate better growth sustainability outcomes. Larger loans provide entrepreneurs with greater

financial capacity to invest in inventory, business expansion, productive assets, and operational improvements, thereby increasing their ability to achieve sustainable growth. The finding suggests that the availability of adequate financial resources is an important factor in determining whether debt financing can generate meaningful business outcomes.

The qualitative findings support this statistical relationship by demonstrating that the adequacy of loan amounts significantly influences the effectiveness of borrowed funds. SME owners explained that receiving loan amounts below their requested value often limited their ability to implement planned business activities and achieve growth targets. One participant explained that: "I applied for 15 million shillings, but they reduced it to 5 million, which could not meet my business target" (QP01). This evidence indicates that access to credit alone may not be sufficient to enhance SME sustainability; rather, the amount of financing obtained must correspond with the financial requirements and investment needs of the enterprise. When loan amounts are inadequate, SMEs may fail to fully exploit available growth opportunities.

Similarly, interest rate demonstrates a statistically significant positive correlation with SME growth sustainability ($r = 0.299$, $p = 0.050$). Although interest rates represent the cost associated with borrowing, the positive association observed in this study may indicate that SMEs accessing formal credit facilities with structured lending arrangements may also possess stronger financial capacity and more established relationships with financial institutions. However, the effect of interest rates on sustainability depends on whether the returns generated from borrowed funds exceed the cost of borrowing. Excessively high interest rates may increase financial pressure, reduce profitability, and limit the productive use of credit.

The qualitative findings provide further explanation of how interest rates influence SME financing decisions. Participants emphasized that borrowing costs affect their willingness to access loans, their investment decisions, and their ability to manage repayment obligations. One participant stated:

“I thoroughly analyse the interest rate prior to application… elevated rates undermine the business” (QP02). Another participant explained: “When the interest rate is high, most businesses fear the loan because you will pay more to the bank” (QP02). These responses demonstrate that interest rates remain a critical consideration in debt financing decisions, as SMEs must balance the potential benefits of additional capital against the financial burden created by repayment obligations.

Among the debt financing variables, Loan maturity records the strongest positive and statistically significant correlation with SME growth sustainability ($r = 0.351$, $p = 0.029$). This finding suggests that SMEs with effective repayment practices are more likely to maintain sustainable growth. Effective repayment behaviour reflects financial discipline, proper cash-flow management, and responsible utilization of borrowed resources. SMEs that successfully manage repayment obligations are also more likely to maintain positive relationships with lenders and improve their future access to financing opportunities.

The qualitative evidence strongly reinforces this relationship by highlighting the importance of repayment discipline among SME owners. Participants explained that proper repayment planning was necessary to maintain business stability and avoid financial difficulties. One participant stated: “I developed a Loan repayment plan where I save a percentage of sales weekly towards loan payments” (QP07). Similarly, another participant noted: “Saving every day to pay back the loans” (QP08). These findings demonstrate that repayment behaviour is not only a financial obligation but also an important component of effective business management that contributes to long-term sustainability.

The correlation analysis also reveals significant relationships among the debt financing variables themselves. Loan size has a positive and significant correlation with Loan maturity ($r = 0.220$, $p = 0.023$), indicating that larger loans are associated with greater repayment responsibilities. Furthermore, interest rate shows a relatively stronger positive relationship with Loan maturity ($r = 0.502$, $p = 0.000$), suggesting that higher borrowing costs increase

the financial obligations associated with loan servicing. These relationships highlight the interconnected nature of debt financing characteristics, where the amount borrowed, cost of borrowing, and repayment requirements collectively influence SME financial outcomes.

The qualitative findings provide further clarification regarding these relationships by showing that repayment challenges often occur when loan conditions are not aligned with business cash-flow patterns. One participant explained: “It is hard when the bank gives a short time to pay; sometimes sales are slow, and you cannot meet the repayment” (QP03). This suggests that while larger loans may provide opportunities for business expansion, the sustainability of such financing depends on appropriate repayment periods, manageable interest rates, and alignment between loan conditions and enterprise cash-flow capacity.

Overall, the correlation analysis demonstrates that loan size, interest rate, and Loan maturity are positively associated with SME growth sustainability. The integration of quantitative and qualitative findings indicates that debt financing contributes to sustainable SME development when businesses obtain adequate financing, understand the implications of borrowing costs, and maintain effective repayment practices. These findings emphasize that the impact of debt financing depends not only on access to external funds but also on the ability of SMEs to manage financing conditions effectively and transform borrowed resources into productive business outcomes.

4.4.2 The correlation between debt management behaviour and growth sustainability

Table 4.4 presents the correlation analysis examining the relationship between debt management behaviour constructs (lifestyle pattern, financial self-efficacy, and religiosity) and SME growth sustainability. The analysis was conducted to determine whether behavioural characteristics of SME owners influence the sustainability of their enterprises. Specifically, the analysis assessed the extent to which personal financial habits, confidence in financial decision-making,

and value-based orientations are associated with SME growth outcomes. The correlation findings provide preliminary evidence on the contribution of non-financial owner-related factors to enterprise sustainability and provide a basis for subsequent multivariate analysis. The quantitative results are further complemented by qualitative evidence from SME owners' interviews, which explain how behavioural characteristics influence practical debt management practices, including spending decisions, borrowing behaviour, and repayment management.

Table 4.4: Pairwise Correlation Between Debt Management Behaviour Constructs and Growth Sustainability

Variables	**(1)**	**(2)**	**(3)**	**(4)**
(1) Growth Sustainability	1.000			
(2) Lifestyle Pattern	0.154*	1.000		
(3) Financial Self-efficacy	0.454*	0.047	1.000	
(4) Religiosity	0.216*	0.084	-0.056	1.000
**** p<0.01, ** p<0.05, * p<0.1*				

Source: Researcher's computation from field survey data using Stata 17 (2025)

The findings indicate that lifestyle pattern has a weak but statistically significant positive relationship with SME growth sustainability ($r = 0.154$, $p < 0.1$). This suggests that SME owners who demonstrate disciplined lifestyle behaviours, such as controlling personal expenditure and avoiding unnecessary consumption, are more likely to achieve improved business sustainability outcomes. Although the strength of the relationship is relatively small, the finding indicates that personal financial habits can influence the allocation of resources between personal needs and business requirements. Entrepreneurs who maintain moderate lifestyles may preserve more financial resources for business operations, investment, and debt repayment, thereby supporting enterprise continuity and growth.

The qualitative findings provide further support for this relationship by demonstrating that borrowing responsibilities encouraged some SME owners

to adopt more controlled spending behaviours. Participants explained that after accessing loans, they became more cautious about personal expenses and prioritized business-related needs. One participant stated, "After getting the loan, I wasted less money… I drove a bodaboda" (QP01). Another participant explained, "I have reduced my daily expense on items that do not add value in the business" (QP05). These responses indicate that lifestyle adjustment among SME owners contributes to improved financial discipline, allowing entrepreneurs to direct available resources towards productive business activities and debt obligations.

Financial self-efficacy demonstrates the strongest positive correlation with SME growth sustainability among the debt management behaviour constructs ($r = 0.454$, $p < 0.1$). This finding indicates that SME owners who possess greater confidence in their ability to understand, manage, and make financial decisions are more likely to achieve sustainable business growth. Financial self-efficacy reflects entrepreneurs' confidence in evaluating financial options, planning resource utilization, managing risks, and fulfilling financial responsibilities. Higher levels of financial confidence may enable SME owners to make more informed borrowing decisions and ensure that borrowed funds are utilized effectively to generate business returns.

The qualitative findings strongly reinforce this relationship by showing that financially confident entrepreneurs engage in careful evaluation before obtaining and using loans. Participants explained that they considered business performance indicators such as sales levels, profitability, affordability of repayment obligations, and loan conditions before making financial decisions. One participant stated, "I normally consider my daily sales and profits to determine the business loan" (QP03). Another participant explained, "I always review the terms and conditions for the loan prior to applying and assess whether my business can afford repayment" (QP06). These findings provide practical evidence that financial self-efficacy enhances entrepreneurs' ability to manage debt effectively and transform borrowed resources into sustainable

business outcomes.

Religiosity also shows a positive and statistically significant relationship with SME growth sustainability ($r = 0.216$, $p < 0.1$). Although the relationship is relatively modest compared with financial self-efficacy, the finding suggests that religious values may influence entrepreneurs' financial attitudes and behaviours. Religiosity may encourage responsible financial practices by promoting values such as discipline, moderation, honesty, and avoidance of excessive consumption. These values can contribute indirectly to SME sustainability by shaping how entrepreneurs approach borrowing, spending, and financial responsibility.

The qualitative findings further explain the relationship between religiosity and debt management behaviour. Participants indicated that religious principles influenced their financial decisions by encouraging responsible resource utilization and discouraging unproductive lifestyles. One participant stated, "Our religion strictly forbids unproductive lifestyles" (QP02). Another participant explained, "We are also advised by our religion to avoid borrowing but use profit to invest in our business" (QP06). These responses demonstrate that religious values may influence financial discipline and promote behaviours that support sustainable enterprise management.

The correlation analysis also reveals weak relationships among the independent constructs of debt management behaviour. The relationship between lifestyle pattern and financial self-efficacy is very weak and statistically insignificant ($r = 0.047$), while lifestyle pattern and religiosity also demonstrate a weak association ($r = 0.084$). Furthermore, financial self-efficacy and religiosity show a weak negative correlation ($r = -0.056$). These findings indicate that lifestyle pattern, financial self-efficacy, and religiosity represent distinct dimensions of debt management behaviour rather than measuring the same underlying concept. Therefore, the inclusion of all three constructs in subsequent regression analysis is appropriate, with limited concerns regarding multicollinearity.

Overall, the correlation analysis demonstrates that debt management behaviour is significantly associated with SME growth sustainability. Financial self-efficacy emerges as the strongest behavioural factor associated with sustainable growth, highlighting the importance of entrepreneurs' confidence and capability in managing financial decisions. Lifestyle patterns and religiosity also contribute to sustainability by promoting responsible spending, disciplined financial behaviour, and cautious resource management. The integration of quantitative and qualitative findings demonstrates that SME sustainability is influenced not only by access to financial resources but also by the behavioural characteristics and financial management practices of business owners.

4.5 Robust Regression Analysis

The direct effects of debt financing and debt management behaviour on SME growth sustainability were examined using robust regression analysis. Diagnostic tests conducted in Chapter Three revealed violations of some Ordinary Least Squares (OLS) assumptions, particularly heteroskedasticity and non-normality of residuals. Therefore, robust estimation procedures using heteroskedasticity-consistent standard errors were applied to improve the reliability of coefficient estimates and statistical inferences under these conditions. Robust regression is appropriate when the assumption of constant error variance is violated because it provides more reliable estimates without requiring strict adherence to all OLS assumptions (Asteriou & Hall, 2019).

In line with the sequential explanatory mixed-methods design adopted in this study, the quantitative regression findings were further complemented with qualitative evidence obtained from SME owners' interviews. The qualitative phase provided additional explanations of the mechanisms underlying the statistical relationships by exploring how SME owners experience loan conditions, repayment obligations, and debt management practices in their daily business activities. The following subsection presents the robust regression findings on the relationship between debt financing variables and SME growth sustainability.

4.5.1 Robust regression results for debt financing and growth sustainability

In response to the identified violations of OLS assumptions, robust regression analysis was conducted to examine the influence of debt financing variables, namely loan size, interest rate, and Loan maturity, on SME growth sustainability. The analysis assessed whether these debt financing characteristics significantly predict sustainable growth outcomes among SMEs. The regression coefficients, standard errors, t-values, p-values, and confidence intervals obtained from the robust estimation procedure are presented in Table 4.5.

Table 4.5: Robust regression analysis of debt financing variables and SME growth sustainability

Growth Sustainability	Coef.	St. Err.	t-value	p-value	[95% CI]
Loan size	0.16	0.031	5.12	0.000	0.10 - 0.22
Interest rate	0.11	0.031	3.39	0.001	0.04 - 0.17
Loan maturity	0.17	0.047	3.54	0.000	0.07 - 0.26
Constant	2.03	0.167	12.17	0.000	1.70 - 2.36

**Significant at 0.05*

Source: Researcher's computation from field survey data using Stata 17 (2025)

The robust regression results indicate that all three debt financing variables have statistically significant and positive effects on SME growth sustainability. The findings demonstrate that access to adequate financing, appropriate borrowing conditions, and effective repayment practices contribute positively to sustainable enterprise development.

Loan size has a positive and statistically significant effect on SME growth sustainability ($\beta = 0.16$, $p = 0.000$). This finding indicates that SMEs accessing

larger amounts of financing are more likely to achieve improved growth outcomes. Larger loans may provide enterprises with sufficient financial resources to increase inventory, expand business operations, acquire productive assets, and invest in activities that enhance competitiveness. The result suggests that the availability of adequate financial capital enables SMEs to undertake productive investments and improve their long-term sustainability.

The qualitative findings provide further explanation for this relationship by demonstrating that the effectiveness of debt financing depends greatly on whether the amount borrowed corresponds with the actual financial requirements of the enterprise. Participants explained that receiving loan amounts below their requested values often restricted their ability to implement planned expansion strategies. One participant stated, "I applied for 15 million shillings, but they reduced it to 5 million, which could not meet my business target" (QP01). This evidence confirms that loan adequacy is an important pathway through which debt financing influences SME growth sustainability. Although access to credit provides opportunities for business expansion, insufficient financing may prevent SMEs from fully exploiting available investment opportunities.

Interest rate also demonstrates a positive and statistically significant effect on SME growth sustainability ($\beta = 0.11$, $p = 0.001$). Although interest rates are commonly considered a cost associated with borrowing, the positive coefficient observed in this study may indicate that SMEs accessing loans with higher interest charges may also be those with stronger financial capacity, established relationships with financial institutions, and greater ability to utilize borrowed resources productively. However, the effect of interest rates depends on whether the returns generated from borrowed funds are sufficient to offset borrowing costs without creating excessive financial pressure.

The qualitative findings provide additional insight into the relationship between interest rates and SME sustainability. Participants emphasized that borrowing costs influence loan decisions, investment choices, and repayment capacity. SME owners explained that they carefully evaluate interest rates

before accepting loans because high borrowing costs may negatively affect profitability. One participant explained, “I thoroughly analyze the interest rate prior to application… elevated rates undermine the business” (QP02). Another participant noted, “When the interest rate is high, most businesses fear the loan because you will pay more to the bank” (QP02). These responses demonstrate that interest rates influence SME sustainability through their effects on credit accessibility, financial planning, profitability, and repayment obligations.

Loan maturity demonstrates the strongest positive effect among the debt financing variables ($\beta = 0.17$, $p = 0.000$). This finding indicates that SMEs with effective repayment practices are more likely to achieve sustainable growth. Effective repayment behaviour reflects broader financial management capabilities, including proper cash-flow planning, financial discipline, and responsible utilization of borrowed resources. SMEs that successfully manage repayment obligations are better positioned to maintain operational stability, strengthen lender relationships, and improve future access to financial resources.

The qualitative findings strongly support this result by highlighting the importance of repayment discipline among SME owners. Participants explained that maintaining consistent repayment practices was essential for business continuity and avoiding financial challenges. Some entrepreneurs described adopting structured repayment strategies, such as allocating portions of sales revenue towards loan servicing. One participant stated, “I developed a Loan repayment plan where I save a percentage of sales weekly towards loan payments” (QP07). Another participant explained, “Saving every day to pay back the loans” (QP08). These experiences explain why Loan maturity emerged as the strongest predictor of SME growth sustainability. Effective repayment practices enhance financial stability, demonstrate responsible debt management, and improve entrepreneurs’ ability to sustain business operations.

The overall explanatory power and statistical adequacy of the regression model are presented in Table 4.6.

Table 4.6: Model summary

Mean dependent var	3.537	SD dependent var	0.472
Adjusted R-squared	0.197	Number of obs	311
F-test	30.628	Prob > F	0.000
Akaike crit. (AIC)	354.455	Bayesian crit. (BIC)	369.414

Source: Researcher's computation from field survey data using Stata 17 (2025)

The model summary results indicate that the adjusted R-squared value is 0.197, implying that approximately 19.7% of the variation in SME growth sustainability is explained by loan size, interest rate, and Loan maturity. The significant F-statistic value (30.628, p = 0.000) confirms that the overall regression model provides meaningful explanatory power in predicting SME growth sustainability. This indicates that debt financing characteristics significantly contribute to explaining differences in SME sustainability outcomes among the sampled enterprises.

The remaining variation in SME growth sustainability may be explained by other factors not included in the model, such as managerial capability, market conditions, entrepreneurial experience, financial literacy, and institutional factors. The qualitative findings provide further explanation for this variation by demonstrating that access to finance alone does not automatically guarantee sustainable growth. Participants emphasized that the benefits of borrowing depend on how effectively entrepreneurs manage financial resources, control expenditures, and align borrowing decisions with business requirements.

The model selection criteria, including the Akaike Information Criterion (AIC = 354.455) and Bayesian Information Criterion (BIC = 369.414), provide additional measures of model adequacy and allow comparison with alternative model specifications. The statistically significant coefficients, robust F-statistic, and model fit indicators collectively demonstrate the relevance of debt financing variables in explaining SME growth sustainability.

The findings are consistent with the Trade-Off Theory of Capital Structure,

which suggests that firms balance the benefits of debt financing, such as increased investment capacity and business expansion, against the costs associated with borrowing and repayment obligations. The positive effects of loan size and repayment behaviour indicate that debt financing can serve as a strategic resource when appropriately structured and effectively managed. The findings also support Sustainable Growth Theory, which emphasizes that long-term enterprise development requires maintaining financial practices that balance growth objectives with financial stability.

The qualitative findings further strengthen these theoretical interpretations by demonstrating that debt financing contributes to sustainable SME growth when entrepreneurs receive adequate financing, understand borrowing conditions, and maintain responsible repayment practices. Therefore, the integration of quantitative and qualitative evidence confirms that debt financing is not merely a source of external capital but also an important strategic factor influencing SME resilience and sustainable development in the context of Lira City.

4.5.2 Robust regression results for debt management behaviour and growth sustainability

A robust regression approach utilizing heteroskedasticity-consistent standard errors was employed to address the issues of heteroskedasticity and non-normality in the residuals identified through diagnostic testing. This approach follows the recommendation of Asteriou and Hall (2019), who emphasize the importance of robust estimators when classical regression assumptions, particularly constant variance and normally distributed residuals, are violated. The robust regression model was used to examine the influence of debt management behaviour constructs, namely lifestyle pattern, religiosity, and financial self-efficacy, on SME growth sustainability.

Consistent with the sequential explanatory mixed-methods design adopted in this study, the quantitative regression findings were further complemented with qualitative evidence obtained from SME owners' interviews. The qualitative

findings provide contextual explanations of how behavioural characteristics are translated into practical financial actions, including spending control, responsible borrowing, financial planning, and repayment management, which ultimately influence enterprise sustainability. The regression results for debt management behaviour variables and SME growth sustainability are presented in Table 4.7.

Table 4.7: Robust regression analysis of debt management behaviour variables and SME growth sustainability

Growth Sustainability	Coef.	St. Err.	t-value	p-value	[95% CI]
Lifestyle Pattern	0.080	0.034	2.32	0.021*	0.012-0.147
Religiosity	0.162	0.034	4.76	0.000*	0.095-0.228
Financial Self-efficacy	0.387	0.041	9.49	0.000*	0.306-0.467
Constant	1.095	0.240	4.57	0.000*	0.624-1.567

**Significant at 0.05*

Source: Researcher's computation from field survey data using Stata 17 (2025)

The robust regression findings indicate that all three dimensions of debt management behaviour have positive and statistically significant effects on SME growth sustainability. The results demonstrate that behavioural characteristics, including disciplined lifestyle practices, ethical values, and confidence in financial decision-making, contribute significantly to sustainable enterprise development.

Lifestyle pattern has a positive and statistically significant effect on SME growth sustainability ($\beta = 0.080$, $p = 0.021$). Although the magnitude of this effect is relatively modest compared with other predictors, the finding indicates that SME owners who demonstrate disciplined lifestyle behaviours are more likely to achieve improved growth outcomes. This suggests that personal financial habits, such as controlling expenditure, reducing unnecessary consumption, and allocating resources responsibly, influence business sustainability by

enabling entrepreneurs to preserve financial resources for productive activities and debt obligations.

The qualitative findings provide further explanation for this relationship. SME owners indicated that obtaining loans encouraged them to adopt more controlled lifestyles because repayment responsibilities required greater financial discipline. Participants explained that they reduced unnecessary personal expenses and prioritized business-related needs to maintain adequate cash flow. One participant stated, "After getting the loan, I wasted less money… I drove a bodaboda" (QP01). Another participant explained, "I have reduced my daily expense on items that do not add value in the business" (QP05). These narratives demonstrate that lifestyle moderation functions as an important debt management mechanism by helping entrepreneurs maintain financial discipline, support repayment commitments, and sustain business operations.

Religiosity also demonstrates a positive and statistically significant effect on SME growth sustainability ($\beta = 0.162$, $p = 0.000$). This finding suggests that religious and ethical values may influence financial responsibility, cautious borrowing decisions, and long-term business orientation. Religious beliefs may encourage behaviours associated with moderation, honesty, responsibility, and avoidance of excessive consumption, which can contribute to sustainable enterprise management.

The qualitative findings support this statistical relationship by demonstrating that some SME owners perceive religious values as guiding principles for responsible financial behaviour. Participants explained that religious teachings encouraged moderation, productive use of resources, and avoidance of unnecessary expenditure. One participant stated, "Our religion strictly forbids unproductive lifestyles" (QP02). Another participant explained, "We are also advised by our religion to avoid borrowing but use profit to invest in our business" (QP06). These responses provide further explanation for the

positive regression coefficient by showing that religiosity influences debt management through behavioural discipline and ethical financial choices, thereby contributing to business resilience and sustainable growth.

Financial self-efficacy emerges as the strongest predictor in the regression model, with a positive and statistically significant coefficient ($\beta = 0.387$, $p = 0.000$). This finding indicates that SME owners who possess greater confidence in their financial management abilities are substantially more likely to achieve sustainable growth outcomes. Financial self-efficacy reflects entrepreneurs' confidence in their ability to evaluate financial alternatives, manage debt obligations, plan resources, and make effective financial decisions. Entrepreneurs with higher levels of financial self-efficacy are better positioned to assess borrowing requirements, manage repayment responsibilities, and utilize borrowed resources strategically.

The qualitative findings strongly reinforce this result. Participants explained that effective financial management involved evaluating loan affordability, monitoring business performance, assessing repayment capacity, and making informed borrowing decisions. One participant stated, "I normally consider my daily sales and profits to determine the business loan" (QP03). Another participant explained, "I always review the terms and conditions for the loan prior to applying and assess whether my business can afford repayment" (QP06). In addition, participants highlighted the importance of collective financial practices in strengthening their confidence and ability to manage financial pressure. One participant noted, "I have managed financial pressure by involving myself in group savings" (QP04). These findings explain why financial self-efficacy emerged as the strongest predictor in the regression model, as confidence in financial decision-making enables entrepreneurs to make appropriate borrowing choices and manage debt more effectively. The summary statistics and overall performance of the regression model are presented in Table 4.8.

Table 4.8 presents the summary statistics of the regression model.

Mean dependent var	3.537	SD dependent var	0.472
Adjusted R-squared	0.277	Number of obs	311
F-test	39.274	Prob > F	0.000
Akaike crit. (AIC)	321.789	Bayesian crit. (BIC)	336.748

Source: Researcher's computation from field survey data using Stata 17 (2025)

The model summary results indicate that the adjusted R-squared value is 0.277, implying that approximately 27.7% of the variation in SME growth sustainability is explained by lifestyle pattern, religiosity, and financial self-efficacy. The significant F-test statistic (39.274, p = 0.000) confirms that the overall regression model provides a statistically meaningful explanation of SME growth sustainability. This indicates that debt management behaviour constructs jointly contribute significantly to explaining differences in sustainability outcomes among SMEs.

The model fit indicators further support the adequacy of the regression model. The Akaike Information Criterion (AIC = 321.789) and Bayesian Information Criterion (BIC = 336.748) indicate satisfactory model performance and provide measures for comparison with alternative model specifications. The mean dependent variable (3.537) and standard deviation (0.472) provide information regarding the average level and variation of SME growth sustainability within the sample.

The qualitative findings further explain the behavioural mechanisms underlying the explanatory power of the model. Although the regression analysis identifies lifestyle pattern, religiosity, and financial self-efficacy as significant predictors, participants' experiences demonstrate that these factors influence sustainability through practical financial behaviours. These include controlled spending, responsible borrowing, repayment planning, financial evaluation, and strategic resource allocation. Therefore, sustainable growth depends not only on access to financial resources but also on entrepreneurs' behavioural capacity to manage those resources effectively.

Overall, the robust regression results confirm that lifestyle pattern, religiosity, and financial self-efficacy significantly influence SME growth sustainability. Among the three behavioural dimensions, financial self-efficacy demonstrates the strongest effect, highlighting the importance of entrepreneurs' confidence and capability in managing financial responsibilities. The findings align with the Theory of Planned Behavior, which emphasizes the role of attitudes, perceived behavioural control, and intentions in shaping individual actions and outcomes. The strong influence of financial self-efficacy supports the argument that entrepreneurs who perceive greater control over financial decisions are more likely to engage in effective debt management practices.

Similarly, the positive effects of lifestyle discipline and religiosity correspond with Financial Capability Theory, which emphasizes that behavioural skills, values, confidence, and responsible financial practices contribute to improved financial decision-making and resilience. The qualitative findings reinforce these theoretical interpretations by demonstrating that debt management behaviour is not merely a collection of financial practices but a behavioural process shaped by psychological confidence, ethical values, discipline, and decision-making capacity. Therefore, the sequential explanatory findings indicate that SME sustainability in Lira City depends not only on access to financial resources but also on the behavioural capabilities of entrepreneurs to manage those resources effectively.

4.6 Structural Equation Modelling (SEM) Analysis

This section presents the findings from the Structural Equation Modelling (SEM) analysis conducted to evaluate the hypothesized relationships among the study constructs. The analysis focuses on the structural model and the assessment of the moderating effect of debt literacy on the relationship between debt financing and SME growth sustainability. The evaluation of the measurement model, including construct reliability and validity, was comprehensively presented in Chapter Three; therefore, this section concentrates on the structural relationships and moderation effects.

Consistent with the sequential explanatory mixed-methods design adopted in this study, the SEM findings are interpreted alongside qualitative evidence obtained from SME owners' interviews. The qualitative findings provide contextual explanations of how entrepreneurs experience debt financing, apply financial knowledge, and manage borrowed resources in their daily business operations. However, since the qualitative interviews focused mainly on debt financing experiences and debt management practices rather than directly measuring moderation effects, they are used primarily to explain the mechanisms underlying the structural relationships identified through SEM.

The analysis is organized around the moderating effect of debt literacy on the relationship between debt financing and growth sustainability, followed by interpretation of the SEM model and the theoretical implications of the findings.

4.6.1 Moderating Effect of Debt Literacy on Debt Financing–Growth Sustainability

Structural Equation Modelling (SEM) was employed to examine whether debt literacy moderates the relationship between debt financing and SME growth sustainability. The analysis was guided by the Financial Capability Theory and the Trade-Off Theory of Capital Structure. The Trade-Off Theory suggests that debt financing can enhance enterprise performance when the benefits obtained from borrowed resources exceed the associated financial costs. Similarly, Financial Capability Theory emphasizes that financial knowledge, skills, and decision-making capabilities influence how effectively individuals manage and utilize financial resources.

The objective of this analysis was to determine whether debt literacy strengthens or weakens the contribution of debt financing toward SME growth sustainability in Lira City. The moderation results are presented in Table 4.9, while the SEM moderation model is illustrated in Figure 4.1.

Table 4.9: Moderation Results for Debt Financing–Growth Sustainability Relationship

Path	Standardized Coefficient	Std. Error	z-value	p-value	95% Confidence Interval
Debt Financing → Growth Sustainability	0.589	0.067	8.810	0.000	[0.458, 0.720]
Debt Literacy → Growth Sustainability	0.000 (constrained)	–	–	–	–
Debt Financing × Debt Literacy (Moderator1) → Growth Sustainability	0.158	0.142	1.110	0.267	[-0.121, 0.436]

Source: Author's computation from SEM analysis (2025).

Note: Moderation was tested using SEM with bootstrapped standard errors. Statistical significance was assessed at $p < 0.05$.

The SEM results indicate that the direct relationship between debt financing and growth sustainability is positive and statistically significant ($\beta = 0.589$, $z = 8.810$, $p < 0.001$). This finding demonstrates that debt financing significantly contributes to SME growth sustainability. Access to external financing enables SMEs to increase investment capacity, expand operations, improve productive activities, and strengthen their ability to sustain business growth. The finding supports the Trade-Off Theory of Capital Structure, which proposes that debt can enhance enterprise performance when financing benefits outweigh borrowing costs and when borrowed resources are effectively utilized.

The qualitative findings provide further support for this relationship by demonstrating how SME owners experience the benefits of debt financing in practice. Participants explained that appropriate financing enabled them to

expand business activities, increase sales, and improve operational capacity. However, they emphasized that the contribution of debt depends on whether funds are adequate and directed toward productive activities. One participant explained, “With proper debt management, the business was able to expand to other districts, increasing sales” (QP05). Another participant stated, “Effective debt management leads to business growth” (QP07). These responses provide contextual confirmation that debt financing serves as a strategic resource when entrepreneurs effectively manage and utilize borrowed funds.

The interaction effect between debt financing and debt literacy is positive but statistically insignificant ($\beta = 0.158$, $z = 1.110$, $p = 0.267$). This indicates that although debt literacy appears to strengthen the relationship between debt financing and growth sustainability in the expected direction, the effect is not strong enough to achieve statistical significance. Therefore, the findings do not provide sufficient empirical evidence to confirm that debt literacy significantly moderates the relationship between debt financing and SME growth sustainability.

The qualitative findings provide possible explanations for this result. Although SME owners demonstrated awareness of financial considerations, including evaluating loan conditions, assessing repayment capacity, and determining borrowing requirements, these practices appeared to influence debt management behaviour rather than significantly changing the strength of the financing-growth relationship. Participants explained that financial understanding helped them make better borrowing decisions, but the availability and suitability of financing remained important determinants of business outcomes.

For example, one participant stated, “I always review the terms and conditions for the loan prior to applying and assess whether my business can afford repayment” (QP06). Another participant explained, “I normally consider my daily sales and profits to determine the business loan” (QP03). These responses demonstrate that debt literacy contributes to responsible borrowing practices; however, knowledge alone may not be sufficient to substantially alter the

effect of debt financing on growth sustainability. Other factors, including loan adequacy, repayment conditions, market opportunities, and managerial capability, may influence the extent to which SMEs benefit from borrowed resources.

It is important to note that the direct path from debt literacy to growth sustainability was constrained to zero in this moderation model. This modelling decision was adopted to isolate the interaction effect and prevent the direct effect of the moderator from being confused with its moderating role (Byrne, 2016; Hayes, 2018). Therefore, the coefficient of 0.000 (constrained) reported in Table 4.9 should not be interpreted as evidence that debt literacy has no influence on SME growth outcomes. Instead, it reflects the methodological approach used to specifically examine whether debt literacy changes the strength of the relationship between debt financing and growth sustainability.

The qualitative findings further demonstrate the theoretical relevance of debt literacy by showing that financially aware entrepreneurs are more likely to evaluate borrowing conditions, plan repayment strategies, and utilize loans responsibly. However, these benefits appear to operate primarily through improved debt management practices rather than through a statistically significant moderating effect.

Overall, the SEM findings indicate that debt financing remains a significant determinant of SME growth sustainability, while debt literacy provides a positive but statistically insignificant strengthening effect. The positive direction of the interaction coefficient suggests that debt literacy may provide additional benefits by improving loan management practices, reducing repayment difficulties, and supporting responsible financial decisions, although the magnitude of this effect was not sufficient within the present sample to achieve statistical significance.

The qualitative evidence reinforces this interpretation by showing that sustainable outcomes depend largely on how entrepreneurs manage borrowed

resources. Participants emphasized the importance of repayment discipline, financial planning, and strategic use of loans. One participant stated, "I developed a Loan repayment plan where I save a percentage of sales weekly towards loan payments" (QP07). This illustrates that behavioural financial practices may represent an important pathway through which financial knowledge contributes to enterprise sustainability.

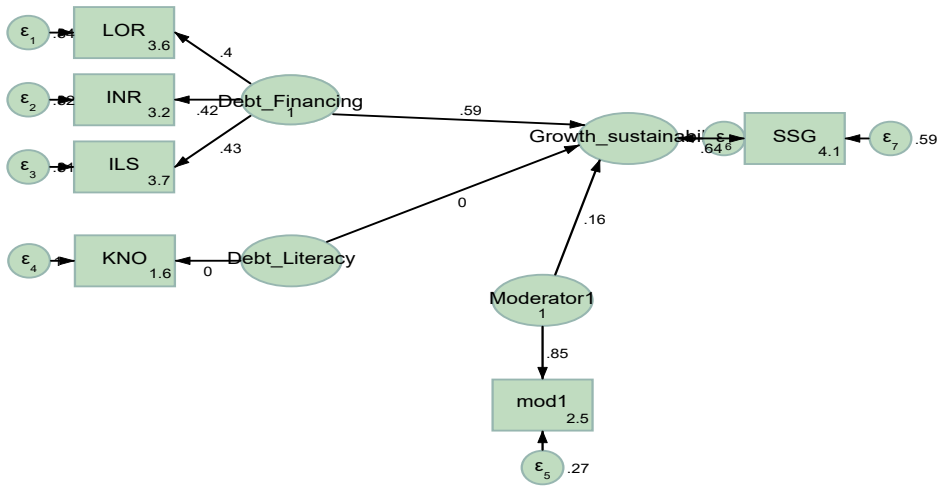


Figure 4.1: SEM Moderation Model for Debt Literacy on the Debt Financing–Growth Sustainability Relationship

Figure 4.1 presents the SEM moderation model examining the role of debt literacy in the relationship between debt financing and SME growth sustainability. The model consists of three main constructs: debt financing, debt literacy, and growth sustainability. Debt financing is represented by Loan maturity (LOR), interest rate (INR), and loan size (ILS), while growth sustainability is represented by the observed indicator SSG.

The structural component of the model demonstrates a positive and statistically significant direct relationship between debt financing and growth sustainability, which is consistent with the results presented in Table 4.9. This indicates that variations in debt financing are associated with corresponding changes in SME

growth sustainability. The model therefore provides graphical confirmation that debt financing represents an important contributor to enterprise growth outcomes.

The interaction pathway between debt financing and debt literacy is positive but statistically insignificant, indicating that debt literacy does not significantly alter the strength of the financing-growth sustainability relationship in the current model. Although theory suggests that financial knowledge can improve the effectiveness of borrowing decisions, the SEM results indicate that debt literacy functions mainly as a supporting capability rather than a statistically confirmed moderator.

The qualitative findings provide further interpretation by showing that SME owners apply financial knowledge when evaluating loans, managing repayment obligations, and planning business investments. However, participants also highlighted the importance of other factors, including loan accessibility, financing conditions, repayment requirements, and managerial discipline, in determining whether debt contributes to sustainable growth.

Overall, Figure 4.1 reinforces the SEM findings by illustrating the significant direct contribution of debt financing to SME growth sustainability and the non-significant moderating role of debt literacy. The findings suggest that while improving debt literacy remains valuable for strengthening financial management practices, sustainable SME growth depends on the combined influence of financing availability, responsible debt utilization, and effective entrepreneurial decision-making.

4.6.2 Moderating Effect of Debt Literacy on Debt Management Behaviour–Growth Sustainability

The objective of this analysis was to assess whether debt literacy modifies the strength and direction of the relationship between debt management behaviour and SME growth sustainability in Lira City. Specifically, the analysis examined whether financial knowledge and understanding of debt-related decisions

enhance the contribution of behavioural characteristics, including lifestyle patterns, religiosity, and financial self-efficacy, toward sustainable enterprise growth. The analysis was guided by the Financial Capability Theory, which emphasizes that financial knowledge and skills improve individuals' ability to make effective financial decisions, and the Theory of Planned Behavior, which highlights the influence of attitudes, perceived behavioural control, and behavioural tendencies on individual actions and outcomes.

Consistent with the sequential explanatory mixed-methods design adopted in this study, the SEM findings are interpreted alongside qualitative evidence obtained from SME owners' interviews. The qualitative findings provide contextual explanations of how behavioural characteristics influence debt management practices and how financial knowledge enables entrepreneurs to transform these behaviours into sustainable business outcomes. The moderation results are presented in Table 4.10, while Figure 4.2 illustrates the SEM moderation model and the structural pathways.

Table 4.10: Moderation Results for Debt Management Behaviour–Growth Sustainability Relationship

Path	Standardized Coefficient	Std. Error	z-value	p-value	95% Confidence Interval
Debt Management Behaviour → Growth Sustainability	-0.496	0.061	-8.160	0.000	[-0.616, -0.377]
Debt Literacy → Growth Sustainability	-0.331	0.120	-2.750	0.006	[-0.567, -0.095]
Debt Management Behaviour × Debt Literacy (Moderator2) → Growth Sustainability	0.802	0.069	11.600	0.000	[0.667, 0.938]

Source: Author's computation from SEM analysis (2025).

Note: Moderation tested using SEM with bootstrapped standard errors. Significance threshold set at $p < 0.05$. A positive coefficient indicates that the moderator strengthens the relationship, while a negative coefficient indicates a weakening effect.

The SEM results indicate that the direct relationship between debt management behaviour and SME growth sustainability is negative and statistically significant ($\beta = -0.496$, $z = -8.160$, $p < 0.001$). This finding suggests that debt management behaviour, when considered independently without the influence of debt literacy, may constrain SME growth sustainability. The result implies that behavioural characteristics such as lifestyle patterns, religiosity, and financial self-efficacy do not automatically generate positive growth outcomes unless they are supported by adequate financial knowledge and effective application of debt management principles.

The qualitative findings provide further explanation for this relationship. Although SME owners demonstrated behavioural practices associated with responsible financial management, participants indicated that personal discipline, cautious decision-making, and value-based financial choices become effective only when combined with practical financial understanding. For instance, some entrepreneurs explained that excessive caution or avoidance of borrowing may limit opportunities for business expansion when productive debt could have supported growth. One participant stated, "We are also advised by our religion to avoid borrowing but use profit to invest in our business" (QP06). While this approach promotes financial responsibility, it may also restrict access to growth-enhancing opportunities when entrepreneurs avoid borrowing despite having viable investment opportunities. Therefore, the negative direct effect suggests that behavioural characteristics alone may not be sufficient to enhance sustainability without appropriate financial capability.

The direct effect of debt literacy on SME growth sustainability is also negative and statistically significant ($\beta = -0.331$, $z = -2.750$, $p = 0.006$). This finding indicates that debt literacy, when considered independently, does not necessarily translate into improved growth outcomes. One possible explanation is that financially knowledgeable entrepreneurs may adopt more conservative borrowing strategies because they are more aware of financial risks, repayment pressures, and potential debt-related challenges. Consequently, debt literacy may encourage responsible financial behaviour while simultaneously reducing willingness to undertake borrowing decisions associated with aggressive business expansion.

The qualitative findings provide further interpretation of this result. Participants demonstrated awareness of loan conditions, repayment requirements, and financial risks, but they also emphasized the importance of carefully assessing whether borrowing decisions were appropriate for their business circumstances. One participant explained, "I always review the terms and conditions for the loan prior to applying and assess whether my business can afford repayment"

(QP06). Another participant stated, “I normally consider my daily sales and profits to determine the business loan” (QP03). These responses suggest that debt literacy encourages careful evaluation and responsible borrowing; however, when considered alone, such caution may not necessarily result in immediate growth because entrepreneurs may prioritize financial stability and risk reduction.

The most important finding from the moderation analysis is the positive and statistically significant interaction effect between debt management behaviour and debt literacy ($\beta = 0.802$, $z = 11.600$, $p < 0.001$). This finding demonstrates that debt literacy significantly strengthens the relationship between debt management behaviour and SME growth sustainability. In practical terms, the result indicates that when SME owners possess adequate debt literacy, behavioural characteristics that may otherwise have limited growth potential become more effective in supporting sustainable enterprise development.

The qualitative findings strongly reinforce this moderation effect by demonstrating that financial knowledge enables entrepreneurs to apply behavioural discipline more effectively. Participants explained that understanding loan conditions, repayment requirements, and financial risks helped them make better borrowing decisions and manage debt more strategically. One participant stated, “I developed a Loan repayment plan where I save a percentage of sales weekly towards loan payments” (QP07). Another participant explained, “I have managed financial pressure by involving myself in group savings” (QP04). These experiences demonstrate that debt literacy functions as an enabling mechanism that transforms behavioural characteristics into effective financial practices. In other words, disciplined lifestyles, ethical values, and financial confidence become more beneficial when entrepreneurs possess the knowledge required to apply them strategically.

The findings have important theoretical implications. The negative direct effect of debt management behaviour indicates that behavioural characteristics alone may not always generate positive enterprise outcomes, challenging

the assumption that responsible behaviours automatically lead to improved performance. Instead, the findings demonstrate that behavioural tendencies require financial capability to produce desirable results. However, the strong positive moderating effect of debt literacy provides strong support for the Financial Capability Theory, which argues that knowledge, skills, and confidence enhance the quality of financial decision-making and improve financial outcomes.

The findings also contribute to the Theory of Planned Behavior by demonstrating that behavioural characteristics influence outcomes through interaction with cognitive capabilities. Although attitudes, values, and perceived behavioural control shape entrepreneurial decisions, the ability to understand financial information and apply it effectively determines whether these behaviours contribute to sustainable enterprise growth.

From a practical perspective, the findings suggest that SME development interventions should not focus only on promoting responsible debt management practices but should also incorporate debt literacy training. Equipping entrepreneurs with knowledge regarding loan conditions, repayment strategies, financial risks, and investment decisions can enhance the effectiveness of behavioural characteristics and improve SME sustainability. Financial institutions and policymakers can therefore strengthen SME outcomes by combining financial education with appropriate financing opportunities.

The SEM moderation model illustrating the relationships among debt management behaviour, debt literacy, and growth sustainability is presented in Figure 4.2.

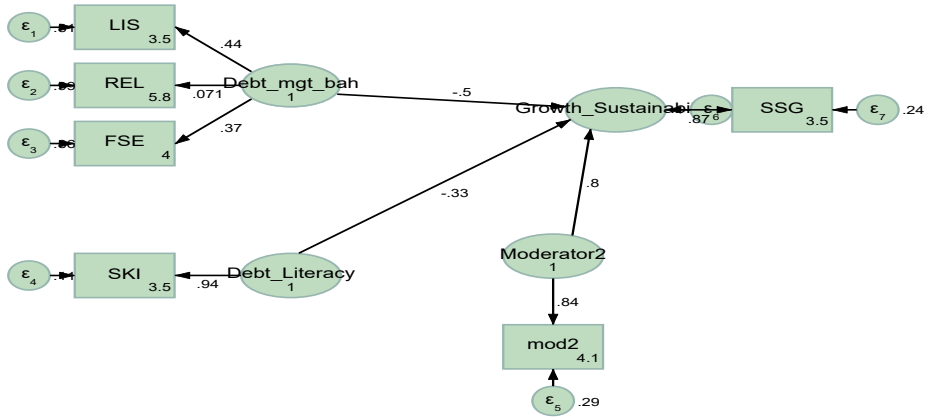


Figure 4.2: SEM Moderation Model for Debt Literacy on the Debt Management Behaviour–Growth Sustainability Relationship

Figure 4.2 presents the SEM moderation model examining the moderating role of debt literacy in the relationship between debt management behaviour and SME growth sustainability among SMEs in Lira City. The model consists of three major constructs: debt management behaviour, debt literacy, and growth sustainability. Debt management behaviour is represented by lifestyle pattern (LIS), religiosity (REL), and financial self-efficacy (FSE). The factor loadings indicate that all three dimensions contribute positively to the measurement of the latent debt management behaviour construct, with religiosity demonstrating the strongest contribution (0.71), followed by lifestyle pattern (0.44) and financial self-efficacy (0.37). These results indicate that behavioural values and financial confidence represent important dimensions of entrepreneurs' debt management practices.

Debt literacy is measured using the observed indicator SKI, which records a strong factor loading of 0.94, indicating that it provides a strong representation of the debt literacy construct. Similarly, growth sustainability is represented by the observed indicator SSG, which records a factor loading of 0.87, demonstrating a strong relationship between the indicator and the underlying

sustainability construct.

The structural component of Figure 4.2 illustrates the hypothesized relationships among debt management behaviour, debt literacy, and growth sustainability. The model visually demonstrates the negative direct effect of debt management behaviour, the negative direct effect of debt literacy, and the positive interaction effect between debt management behaviour and debt literacy. These relationships correspond with the statistical results presented in Table 4.10.

The qualitative findings provide further interpretation of the SEM model by demonstrating that behavioural characteristics and financial knowledge operate together in influencing SME outcomes. While disciplined lifestyles, ethical values, and financial confidence are important, their contribution to sustainability depends on entrepreneurs' ability to apply financial knowledge effectively when making borrowing, investment, and repayment decisions.

The structural component of Figure 4.2 illustrates the hypothesized relationships between debt management behaviour, debt literacy, and SME growth sustainability. Although the SEM diagram provides a visual representation of these relationships, the magnitude, direction, and statistical significance of the structural paths are more accurately assessed through the estimated coefficients and associated statistical tests. Therefore, Table 4.11 presents the standardized coefficients, standard errors, z-values, p-values, and 95% confidence intervals for the direct effects of debt management behaviour and debt literacy, as well as the interaction effect representing the moderating influence of debt literacy on the relationship between debt management behaviour and growth sustainability. The combined interpretation of Figure 4.2 and Table 4.11 provides a comprehensive assessment of the structural relationships specified in the model and facilitates evaluation of the hypothesized moderating role of debt literacy.

Table 4.11: Structural Estimates for the Moderating Effect of Debt Literacy on the Debt Management Behaviour–Growth Sustainability Relationship

		OIM				
Standardized	Coeffi-cient	std. err.	z	P>z	[95% conf.	interval]
Structural						
Growth Sustain-ability						
Debt Management Behaviour	-0.496	0.061	-8.160	0.000	-0.616	-0.377
Debt Literacy	-0.331	0.120	-2.750	0.006	-0.567	-0.095
Moderator2	0.802	0.069	11.600	0.000	0.667	0.938

Source: Author's computation from SEM analysis (2025).

The results presented in Table 4.11 provide evidence regarding the direct and moderating effects of debt management behaviour and debt literacy on SME growth sustainability. The direct relationship between debt management behaviour and growth sustainability is negative and statistically significant ($\beta = -0.496$, $z = -8.160$, $p < 0.001$). This finding suggests that debt management behaviour, when considered independently without the enabling influence of debt literacy, may not always translate into improved enterprise outcomes. The result indicates that behavioural tendencies related to personal spending patterns, financial values, and confidence in managing debt may constrain SME growth when they are not supported by adequate financial knowledge and effective financial decision-making capabilities.

The qualitative findings provide further explanation for this relationship. Although SME owners demonstrated behaviours associated with financial discipline, such as controlling expenditure, maintaining repayment commitments, and making cautious financial decisions, participants indicated that these practices become more effective when combined with appropriate financial understanding. For example, some entrepreneurs explained that excessive caution or avoidance of borrowing may limit business expansion

opportunities when productive debt could support investment and growth. One participant stated, “We are also advised by our religion to avoid borrowing but use profit to invest in our business” (QP06). While this approach promotes financial responsibility, it may also restrict access to external resources required for business expansion. Therefore, the negative direct effect suggests that behavioural characteristics alone may not be sufficient to promote sustainability unless they are supported by financial capability.

Debt literacy also demonstrates a negative and statistically significant direct effect on growth sustainability ($\beta = -0.331$, $z = -2.750$, $p = 0.006$). Although this finding appears contrary to the expectation that greater financial knowledge improves business outcomes, it may reflect the possibility that financially knowledgeable entrepreneurs adopt more cautious borrowing strategies. Entrepreneurs with greater awareness of debt risks may avoid excessive borrowing, delay investment decisions, or prioritize financial stability over aggressive expansion. In contexts where credit markets involve high borrowing costs or repayment pressures, increased awareness of financial risks may encourage conservative financial behaviour.

The qualitative findings provide further insight into this relationship. Participants demonstrated awareness of loan conditions, repayment requirements, and affordability considerations before accessing credit. One participant explained, “I always review the terms and conditions for the loan prior to applying and assess whether my business can afford repayment” (QP06). Another participant stated, “I normally consider my daily sales and profits to determine the business loan” (QP03). These responses indicate that debt literacy encourages careful financial assessment. However, when considered independently, such caution may limit the extent to which entrepreneurs use debt as a growth strategy.

The most significant finding in Table 4.11 is the positive and statistically significant interaction effect between debt management behaviour and debt literacy ($\beta = 0.802$, $z = 11.600$, $p < 0.001$). This result demonstrates that debt literacy significantly strengthens the relationship between debt management

behaviour and SME growth sustainability. The large positive coefficient indicates that debt literacy changes the role of behavioural characteristics by enabling entrepreneurs to apply their financial behaviours more effectively. In other words, behavioural attributes that may have limited positive effects when applied alone become more beneficial when combined with adequate knowledge of debt management.

The qualitative findings strongly support this moderating relationship. Participants explained that financial knowledge enabled them to make better borrowing decisions, manage repayment obligations, and allocate borrowed resources more strategically. For instance, one participant stated, “I developed a Loan repayment plan where I save a percentage of sales weekly towards loan payments” (QP07). Another participant explained, “I have managed financial pressure by involving myself in group savings” (QP04). These experiences demonstrate that debt literacy functions as an enabling mechanism that transforms behavioural characteristics into effective financial practices. Through improved understanding of loan conditions, repayment planning, and financial risks, entrepreneurs are better able to convert disciplined behaviours into sustainable business outcomes.

The findings have important theoretical implications. The negative direct effect of debt management behaviour suggests that behavioural characteristics alone may not automatically generate positive enterprise outcomes. This finding extends the Theory of Planned Behavior by demonstrating that attitudes, values, and perceived behavioural control require supporting capabilities before they can effectively influence business performance. Similarly, the negative direct effect of debt literacy suggests that knowledge alone may encourage caution and risk awareness rather than immediate business expansion. However, the strong positive moderating effect provides substantial support for Financial Capability Theory by demonstrating that financial knowledge becomes most

valuable when combined with behavioural discipline and effective decision-making.

From a practical perspective, the findings suggest that SME development interventions should move beyond promoting responsible debt behaviour alone and incorporate comprehensive debt literacy programmes. Training entrepreneurs on loan evaluation, repayment planning, financial risk management, and strategic use of credit can enhance the effectiveness of existing behavioural strengths. By combining financial knowledge with responsible financial practices, policymakers, financial institutions, and enterprise support organizations can help SMEs transform debt management behaviour into a stronger foundation for sustainable growth.

Overall, the SEM results demonstrate that debt literacy plays a critical moderating role in the relationship between debt management behaviour and SME growth sustainability. While behavioural characteristics and financial knowledge individually may produce mixed effects, their combination creates stronger conditions for sustainable enterprise development. The findings therefore confirm that debt literacy acts as a bridge through which entrepreneurs' financial behaviours are translated into effective debt management practices and improved growth outcomes among SMEs in Lira City.

4.6.3 Overall Model Fit and Theoretical Implications

The final moderated Structural Equation Model (SEM) was assessed to determine the overall adequacy of the proposed model using several model fit indices. These included the chi-square statistic, Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index (CFI), Tucker–Lewis Index (TLI), Standardized Root Mean Square Residual (SRMR), and the Coefficient of Determination (CD). These indices provide different perspectives regarding how well the hypothesized model reproduces the observed data structure. The results are presented in Table 4.12, while Figure 4.3 illustrates the integrated SEM model incorporating both direct and moderation effects.

Table 4.12: Overall Fit Indices for Final Moderated SEM Model

Fit Statistic	Value	Description
χ^2 (Baseline vs. Saturated)	2954.664	Chi-square test statistic for model fit
$p > \chi^2$	0.000	Model significantly differs from saturated model
RMSEA	0.000	Root Mean Square Error of Approximation (≤ 0.05 indicates good fit)
AIC	9397.364	Akaike's Information Criterion
BIC	9524.517	Bayesian Information Criterion
CFI	1.000	Comparative Fit Index (≥ 0.90 indicates excellent fit)
TLI	1.000	Tucker–Lewis Index (≥ 0.90 indicates excellent fit)
SRMR	0.233	Standardised Root Mean Square Residual (≤ 0.08 desirable)
CD	1.000	Coefficient of Determination

Source: Author's computation from SEM fit statistics (2025).

The results presented in Table 4.12 provide a mixed but generally supportive assessment of the overall model fit. The chi-square statistic was statistically significant ($\chi^2 = 2954.664$, $p < 0.001$), which would traditionally indicate differences between the estimated model and the saturated model. However, chi-square is highly sensitive to sample size, and significant values are common in SEM applications involving larger samples. Therefore, interpretation was based on multiple fit indices rather than relying exclusively on the chi-square statistic. Pasted markdown

The RMSEA value of 0.000 indicates an excellent approximation of the model to the observed covariance structure, as it falls below the recommended threshold of 0.05. Similarly, the CFI and TLI values of 1.000 indicate excellent incremental model fit, exceeding the commonly accepted criterion of 0.90. The Coefficient of Determination (CD = 1.000) further indicates that the model

accounts for the explained variance in the endogenous constructs. These indices collectively provide strong evidence that the proposed SEM structure adequately represents the relationships among debt financing, debt management behaviour, debt literacy, and growth sustainability. Pasted markdown

However, the SRMR value of 0.233 exceeds the recommended threshold of 0.08, indicating the presence of some residual discrepancies between the observed and model-implied relationships. This suggests that although the majority of fit indicators demonstrate strong model adequacy, some localized areas of misfit remain within the model. Therefore, the SEM results should be interpreted with consideration of both the supporting and limiting evidence provided by the different fit indices. Pasted markdown

The overall fit assessment demonstrates that the final moderated SEM provides a meaningful framework for examining the complex relationships among debt financing, debt management behaviour, debt literacy, and SME growth sustainability. The model fit results provide justification for proceeding with interpretation of the structural path coefficients, which explain the relative contribution of each construct and the conditional effects introduced through moderation. Table 4.13 presents the estimated structural relationships and their statistical significance.

Table 4.13: Structural Path Coefficients for Final Moderated SEM Model

Path	Standardized Coefficient	Std. Error	z-value	p-value	95% Confidence Interval
Debt Management Behaviour → Growth Sustainability	-0.187	0.087	-2.150	0.032	[-0.357, -0.016]
Debt Literacy → Growth Sustainability	0.311	0.389	0.800	0.424	[-0.452, 1.075]
Debt Financing → Growth Sustainability	0.258	0.039	6.590	0.000	[0.181, 0.335]
Debt Financing × Debt Literacy (Moderator1) → Growth Sustainability	-0.596	0.109	-5.480	0.000	[-0.809, -0.383]
Debt Management Behaviour × Debt Literacy (Moderator2) → Growth Sustainability	0.550	0.096	5.750	0.000	[0.363, 0.738]

Source: Author's computation from SEM structural estimates (2025).

The structural estimates presented in Table 4.13 provide important insights into the direct and moderating effects of debt financing, debt management behaviour, and debt literacy on SME growth sustainability. The path from

debt management behaviour to growth sustainability was negative and statistically significant ($\beta = -0.187$, $z = -2.150$, $p = 0.032$). This indicates that debt management behaviour, when considered independently, may constrain SME growth sustainability. Behavioural characteristics such as spending preferences, financial attitudes, and personal approaches to debt management may not automatically generate positive business outcomes unless they are supported by effective financial knowledge and appropriate application of financial practices. Pasted markdown

The qualitative findings provide further explanation for this relationship. SME owners demonstrated that behavioural practices such as disciplined spending, cautious borrowing, and repayment commitment are important; however, their effectiveness depends on how entrepreneurs apply them within specific business contexts. Participants indicated that excessive caution or avoidance of borrowing opportunities may limit expansion when productive debt could support business growth. For example, one participant explained that religious guidance encouraged avoiding unnecessary borrowing and using profits for investment (QP06). While such practices promote financial responsibility, they may also reduce access to growth-enhancing resources when applied without considering business opportunities.

Debt literacy demonstrated a positive but statistically insignificant relationship with SME growth sustainability ($\beta = 0.311$, $z = 0.800$, $p = 0.424$). This suggests that while financial knowledge may support better decision-making, it does not independently guarantee improved growth outcomes. The wide confidence interval indicates uncertainty around the estimate, suggesting that debt literacy may require complementary factors, such as access to suitable financing, effective managerial practices, and favourable business conditions, to translate into measurable growth improvements. Pasted markdown

The qualitative findings support this interpretation by showing that SME owners apply debt-related knowledge mainly through improved financial evaluation and decision-making processes. Participants explained that they

consider loan affordability, repayment obligations, and business capacity before accessing credit. One participant stated, “I always review the terms and conditions for the loan prior to applying and assess whether my business can afford repayment” (QP06). These practices demonstrate that debt literacy contributes to responsible financial behaviour, although its direct influence on growth depends on how effectively this knowledge is translated into business decisions.

Debt financing demonstrated a positive and statistically significant relationship with growth sustainability ($\beta = 0.258, z = 6.590, p < 0.001$). This finding confirms the important role of external financing in supporting SME development. Access to debt enables enterprises to increase investment capacity, expand operations, improve sales performance, enhance profitability, and support employment creation. The finding is consistent with the Trade-Off Theory of Capital Structure, which suggests that debt can enhance firm performance when the benefits of financing exceed the associated costs of borrowing. Pasted markdown

The qualitative evidence strongly supports this relationship. SME owners explained that access to appropriate financing enabled them to expand their businesses and improve operational performance. Participants highlighted that debt becomes beneficial when loan amounts are adequate, funds are directed toward productive activities, and repayment obligations are properly managed. One participant explained, “With proper debt management, the business was able to expand to other districts, increasing sales” (QP05). This demonstrates how debt financing functions as a strategic resource when effectively managed by entrepreneurs.

The moderation effects reveal important conditional relationships. The interaction between debt financing and debt literacy was negative and statistically significant ($\beta = -0.596, z = -5.480, p < 0.001$). This finding indicates that debt literacy weakens the positive relationship between debt financing and growth sustainability. One possible explanation is that financially knowledgeable

entrepreneurs may adopt more cautious borrowing strategies because of greater awareness of repayment risks, borrowing costs, and financial uncertainty. Although such caution may reduce financial risk exposure, it may also limit the extent to which SMEs exploit debt as a growth strategy. Pasted markdown

The qualitative findings provide further understanding of this relationship. Participants indicated that financial awareness encouraged careful evaluation of borrowing decisions. While such evaluation supports responsible financial management, some entrepreneurs may become more conservative in accessing credit because of concerns regarding repayment obligations and financial pressure. Therefore, debt literacy appears to influence not only the ability to use debt effectively but also entrepreneurs' willingness to undertake borrowing decisions.

In contrast, the interaction between debt management behaviour and debt literacy was positive and statistically significant ($\beta = 0.550$, $z = 5.750$, $p < 0.001$). This indicates that debt literacy strengthens the relationship between debt management behaviour and growth sustainability. Financial knowledge enables entrepreneurs to apply behavioural characteristics more effectively by improving spending discipline, repayment planning, and strategic financial decision-making. Pasted markdown

The qualitative findings strongly reinforce this result. Participants explained that financial understanding helped them transform behavioural practices into effective debt management strategies. For example, entrepreneurs described saving portions of income for repayment, evaluating loan affordability, and participating in group savings arrangements to manage financial pressure. These practices demonstrate that debt literacy provides the capability required to convert behavioural tendencies into sustainable business outcomes.

Overall, the SEM analysis demonstrates that SME growth sustainability is influenced by a combination of financial resources, behavioural practices, and financial knowledge. Debt financing emerges as the strongest direct contributor

to growth sustainability, while debt management behaviour alone shows a negative effect. Debt literacy does not have a significant direct effect but plays an important conditional role by weakening the financing-growth relationship while strengthening the contribution of debt management behaviour. These findings integrate several theoretical perspectives by supporting the Trade-Off Theory through the positive contribution of debt financing, extending the Theory of Planned Behavior by demonstrating that behavioural characteristics require supporting capabilities, and reinforcing Financial Capability Theory by showing that financial knowledge influences how entrepreneurs apply behavioural practices. Pasted markdown

From a practical perspective, the findings suggest that sustainable SME growth requires more than access to credit. Financial institutions and policymakers should combine financing support with debt literacy and behavioural development initiatives. Equipping entrepreneurs with knowledge about loan management, repayment planning, risk assessment, and responsible financial decision-making can improve the effectiveness of debt utilization and strengthen enterprise sustainability.

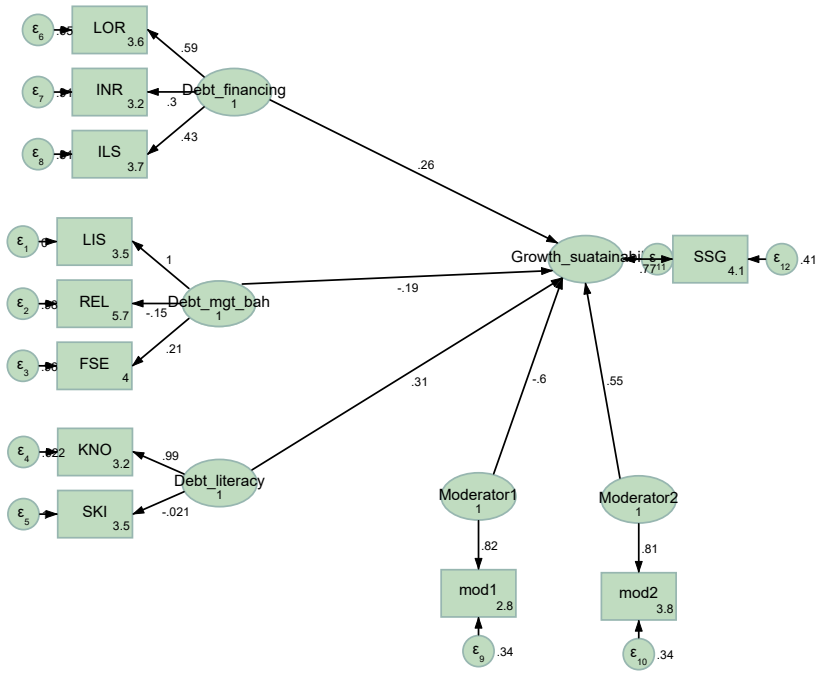


Figure 4.3: Integrated SEM Model of Debt Financing, Debt Management Behaviour, Debt Literacy, and Growth Sustainability (with Moderation Effects)

Figure 4.3 presents the integrated SEM moderation model examining the relationships among debt financing, debt management behaviour, debt literacy, and SME growth sustainability. The model integrates both measurement and structural components and illustrates the direct and moderating effects among the study constructs. Pasted markdown

The measurement component demonstrates that debt financing is represented by Loan maturity, interest rate, and loan size, while debt management behaviour is represented by lifestyle pattern, religiosity, and financial self-efficacy. Debt literacy is represented through its observed indicators, while growth sustainability is represented through the sustainability indicator. These measurement relationships demonstrate how the latent constructs are

operationalized within the SEM framework. Pasted markdown

The structural component of Figure 4.3 illustrates the direct and interaction effects among the study constructs. Debt financing shows a positive relationship with growth sustainability, indicating that access to external resources contributes to SME development. Debt management behaviour demonstrates a negative direct relationship, suggesting that behavioural characteristics require appropriate financial capability to generate positive outcomes. Debt literacy shows a positive but statistically insignificant direct relationship, indicating that financial knowledge alone may not be sufficient to drive growth.

The moderation pathways demonstrate that debt literacy has different effects depending on the relationship being examined. The interaction between debt financing and debt literacy weakens the positive contribution of financing, whereas the interaction between debt management behaviour and debt literacy strengthens the contribution of behavioural practices toward sustainability. Pasted markdown

Overall, Figure 4.3 provides a graphical synthesis of the SEM findings by demonstrating that SME growth sustainability results from the interaction between financial resources, behavioural practices, and financial capability. The model confirms that debt literacy functions primarily as a conditional mechanism that influences how debt financing and debt management behaviour translate into sustainable enterprise growth in Lira City.

4.7 Hypothesis Testing

This study tested four hypotheses derived from the conceptual framework and the reviewed literature. The hypotheses examined the direct effects of debt financing and debt management behaviour on SME growth sustainability, as well as the moderating role of debt literacy in these relationships. Growth sustainability was measured using indicators related to sales growth, profitability, and employment development, while debt financing and debt management behaviour were specified as the independent constructs. Debt

literacy was incorporated as a moderating variable to determine whether financial knowledge changes the extent to which financing and behavioural factors influence SME sustainability outcomes.

The first model examined the direct effect of debt financing on growth sustainability and was specified as:

Model 1: $GS = \beta_0 + \beta_1 LS + \beta_2 IR + \beta_3 LM + \varepsilon$

where LS represents loan size, IR represents interest rate, and LM represents loan maturity. This model was used to test H_1, which proposed that debt financing has a statistically significant effect on the growth sustainability of SMEs.

The second model assessed the effect of debt management behaviour on growth sustainability and was specified as:

Model 2: $GS = \beta_0 + \beta_4 LP + \beta_5 REL + \beta_6 FSE + \varepsilon$

where LP represents lifestyle pattern, REL represents religiosity, and FSE represents financial self-efficacy. This model tested H_2, which proposed that debt management behaviour has a statistically significant effect on SME growth sustainability.

The third model examined whether debt literacy moderates the relationship between debt financing and growth sustainability. The model incorporated both the direct effect of debt literacy and the interaction terms between debt financing dimensions and debt literacy:

Model 3: $GS = \beta_0 + \beta_1 LS + \beta_2 IR + \beta_3 LM + \beta_7 DL + (\beta_1 LS \times \beta_7 DL) + (\beta_2 IR \times \beta_7 DL) + (\beta_3 LM \times \beta_7 DL) + \varepsilon$

where DL represents debt literacy. This model was used to test H_3, which proposed that debt literacy significantly moderates the relationship between debt financing and SME growth sustainability.

The fourth model assessed the moderating role of debt literacy in the relationship between debt management behaviour and growth sustainability:

Model 4: $GS = \beta_0 + \beta_4 LP + \beta_5 REL + \beta_6 FSE + \beta_7 DL + (\beta_4 LP \times \beta_7 DL) + (\beta_5 REL \times \beta_7 DL) + (\beta_6 FSE \times \beta_7 DL) + \varepsilon$

This model tested H_4, which proposed that debt literacy significantly moderates the relationship between debt management behaviour and SME growth sustainability.

The results of hypothesis testing, including the models applied, statistical methods, estimated coefficients, and decisions reached, are summarized in Table 4.14.

Table 4.14: Summary of Hypothesis Testing Results

Hypothesis	Statement	Model	Method	Result	Decision
H_1	Debt financing has a statistically significant effect on the growth sustainability of SMEs	Model 1	Regression	$\beta = 0.258$, $p < 0.001$	H_0 rejected; H_1 accepted
H_2	Debt management behaviour has a statistically significant effect on the growth sustainability of SMEs	Model 2	Regression	$\beta = -0.187$, $p = 0.032$	H_0 rejected; H_2 accepted (negative effect)
H_3	Debt literacy moderates the relationship between debt financing and the growth sustainability of SMEs	Model 3	SEM (Bootstrap)	Interaction $\beta = -0.596$, $p < 0.001$	H_0 rejected; H_3 accepted

H_4	Debt literacy moderates the relationship between debt management behaviour and the growth sustainability of SMEs	Model 4	SEM (Bootstrap)	Interaction $\beta = 0.550$, $p < 0.001$	H_0 rejected; H_4 accepted

Source: Author's computation from study data (2025)

The findings presented in Table 4.14 indicate that all four hypotheses were supported, although the direction and nature of the relationships differed across the models. The first hypothesis (H_1) examined whether debt financing significantly influences SME growth sustainability. The results demonstrate a positive and statistically significant effect of debt financing on growth sustainability ($\beta = 0.258$, $p < 0.001$). This finding confirms that access to debt financing contributes positively to SME development by providing resources required for business expansion, improved operational capacity, increased sales, enhanced profitability, and employment creation. Therefore, the null hypothesis was rejected, and H_1 was accepted.

The qualitative findings provide further support for this result by demonstrating that SME owners perceive debt financing as an important resource when it is adequate and effectively managed. Participants explained that access to appropriate financing enabled them to expand operations and improve business performance. One participant stated, "With proper debt management, the business was able to expand to other districts, increasing sales" (QP05). These experiences confirm that debt financing contributes to sustainability when borrowed resources are directed toward productive business activities.

The second hypothesis (H_2) examined the effect of debt management behaviour on SME growth sustainability. The results indicate that debt management behaviour had a negative but statistically significant effect on growth sustainability ($\beta = -0.187$, $p = 0.032$). Although individual dimensions of debt management behaviour, including lifestyle pattern, religiosity, and financial

self-efficacy, demonstrated positive associations in the correlation analysis, the SEM results indicate that the overall latent construct had a constraining effect when considered independently. This suggests that behavioural characteristics alone may not automatically generate positive enterprise outcomes unless they are supported by adequate financial knowledge and effective application of debt management practices. Therefore, the null hypothesis was rejected, and H_2 was accepted, indicating a significant negative relationship.

The qualitative findings help explain this result by showing that behavioural practices can have different implications depending on how they are applied. Participants highlighted the importance of discipline and responsible financial decisions; however, they also indicated that excessive caution, avoidance of borrowing, or limited confidence in financial decision-making may restrict growth opportunities. Therefore, behavioural characteristics require complementary financial capabilities to contribute effectively to SME sustainability.

The third hypothesis (H_3) assessed whether debt literacy moderates the relationship between debt financing and SME growth sustainability. The results indicate that the interaction effect between debt financing and debt literacy was negative and statistically significant ($\beta = -0.596$, $p < 0.001$). This demonstrates that debt literacy significantly changes the relationship between financing and growth sustainability, although the moderating effect reduces the positive contribution of debt financing. The finding suggests that financially knowledgeable entrepreneurs may adopt more conservative borrowing strategies due to increased awareness of repayment obligations, borrowing costs, and financial risks. Consequently, while debt literacy promotes responsible financial decision-making, it may also reduce the extent to which SMEs use debt as a growth strategy. Therefore, the null hypothesis was rejected, and H_3 was accepted.

The qualitative findings provide additional interpretation of this result. SME owners explained that financial awareness encouraged careful assessment of

loan conditions, repayment capacity, and business affordability. One participant stated, “I always review the terms and conditions for the loan prior to applying and assess whether my business can afford repayment” (QP06). This suggests that debt literacy encourages responsible borrowing decisions, although such caution may influence entrepreneurs’ willingness to pursue debt-financed expansion.

The fourth hypothesis (H_4) examined whether debt literacy moderates the relationship between debt management behaviour and growth sustainability. The results show that the interaction effect between debt management behaviour and debt literacy was positive and statistically significant ($\beta = 0.550$, $p < 0.001$). This finding demonstrates that debt literacy strengthens the contribution of debt management behaviour toward SME sustainability. Specifically, financial knowledge enables entrepreneurs to apply behavioural characteristics, such as disciplined spending, responsible repayment, and financial confidence, in ways that support business growth. Therefore, the null hypothesis was rejected, and H_4 was accepted.

The qualitative findings strongly support this result by demonstrating that debt literacy enables SME owners to convert behavioural practices into effective financial strategies. Participants explained that understanding loan conditions and repayment requirements helped them manage financial obligations more effectively. One participant stated, “I developed a Loan repayment plan where I save a percentage of sales weekly towards loan payments” (QP07). This demonstrates that financial knowledge enhances the effectiveness of behavioural practices by improving planning, control, and responsible debt utilization.

Overall, the hypothesis testing results confirm that debt financing, debt management behaviour, and debt literacy interact in complex ways to influence SME growth sustainability. Debt financing consistently emerges as a positive driver of growth, confirming H_1 and supporting the view that external financing provides important resources for enterprise development. Debt management

behaviour has a significant but negative direct effect, indicating that behavioural characteristics require appropriate financial capability to generate positive outcomes. Debt literacy plays a conditional role by weakening the financing-growth relationship while strengthening the contribution of debt management behaviour.

These findings integrate the theoretical perspectives underpinning the study. The positive effect of debt financing supports the Trade-Off Theory of Capital Structure, which emphasizes the productive role of debt when benefits exceed borrowing costs. The findings also extend the Theory of Planned Behavior by demonstrating that behavioural tendencies alone may not be sufficient to generate desirable outcomes. Furthermore, the moderating effects of debt literacy provide strong support for Financial Capability Theory by showing that financial knowledge influences how entrepreneurs apply financial resources and behavioural practices. Consequently, sustainable SME growth in Lira City depends not only on access to finance but also on entrepreneurs' ability to understand, manage, and strategically utilize debt resources.

4.8 Conclusion

The findings presented in this chapter provide empirical evidence on the relationships among debt financing, debt management behaviour, debt literacy, and SME growth sustainability in Lira City. The results from the quantitative analyses, supported by qualitative insights from SME owners, have established the nature and direction of the relationships among the study variables and provided answers to the research objectives. The next chapter presents the discussion of the findings, where the empirical results are interpreted in relation to the existing literature, theoretical perspectives, and previous empirical studies. The chapter further examines the implications of the findings, highlights areas of agreement and divergence with earlier research, and explains how the results contribute to understanding SME sustainability within the context of Lira City and similar developing economy settings

CHAPTER FIVE

DISCUSSION

5.1 Introduction

This chapter discusses and interprets the findings of the study on the influence of debt financing, debt management behaviour, and debt literacy on the growth sustainability of small and medium-sized enterprises (SMEs) in Lira City. Rather than repeating the statistical results presented in Chapter Four, the chapter explains the meaning and implications of the findings by relating them to existing empirical literature and the theoretical perspectives underpinning the study. The discussion is structured according to the study objectives, focusing on how debt financing characteristics, debt management behaviour, and debt literacy contribute to SME growth sustainability. The findings are critically examined in relation to Trade-Off Theory, Theory of Planned Behaviour, Sustainable Growth Theory, and Financial Capability Theory to explain how financial structures, entrepreneurial behaviours, and financial capabilities interact in shaping sustainable enterprise growth. The chapter also highlights areas where the findings confirm, extend, or differ from previous studies and concludes by discussing the theoretical, practical, and policy implications arising from the study.

5.2 Debt Financing and Growth Sustainability of SMEs

The first objective of this study was to examine the influence of debt financing on the growth sustainability of SMEs in Lira City. The findings demonstrate that debt financing contributes positively to SME growth sustainability, indicating that external financial resources provide SMEs with the capacity to expand operations, invest in productive activities, and strengthen business continuity. This finding supports the broader argument in SME finance literature that access to appropriate external financing enables smaller enterprises to overcome internal resource limitations and pursue growth opportunities that may not

be possible through internally generated funds alone (Abor & Quartey, 2010; Badi & Ishengoma, 2021).

The positive relationship identified in this study is consistent with empirical evidence from developing economies. Badi and Ishengoma (2021), examining SMEs in Tanzania, found that access to debt finance improved enterprise performance by enabling firms to invest in business expansion and operational activities. Similarly, Manyanga et al. (2023) reported that debt financing positively influenced SME financial performance in Zimbabwe, emphasizing that external capital enhances firms' ability to exploit market opportunities. In the Ugandan context, Nuwagaba et al. (2021) also found that traditional debt financing contributes positively to small-business growth by providing resources required for investment and survival. The consistency between the present study and these studies suggests that debt financing remains an important growth mechanism for SMEs operating in resource-constrained environments.

However, the findings also contribute to the ongoing debate regarding whether debt financing enhances or constrains SME development. While some studies highlight the growth-enhancing role of debt, others argue that borrowing may create financial pressure when repayment obligations exceed enterprise capacity. For instance, Serrasqueiro et al. (2018) noted that excessive reliance on debt and high financing costs may restrict SME growth by reducing available cash flows for investment. The positive influence of debt financing observed in the present study suggests that, within the context of SMEs in Lira City, debt is functioning more as a productive resource than as a financial constraint. This may be explained by the ability of SMEs to utilize borrowed resources for productive purposes and manage repayment obligations effectively.

The findings provide support for the Trade-Off Theory of Capital Structure, which argues that firms determine their debt levels by balancing the benefits of borrowing against the costs associated with financial distress (Kraus & Litzenberger, 1973). The theory suggests that debt creates value when the

benefits derived from additional financial resources exceed the associated financial risks. The positive contribution of debt financing in this study indicates that SMEs in Lira City may be operating within a range where the advantages of borrowing, including increased investment capacity and business expansion, outweigh the potential costs of debt obligations. This extends the application of Trade-Off Theory beyond large corporations by demonstrating its relevance among SMEs in developing economy contexts where external financing is often necessary for growth.

The findings further reveal the importance of examining debt financing beyond a simple measure of whether SMEs have access to credit. Existing literature emphasizes that the impact of debt depends on specific financing conditions, including loan size, borrowing costs, and repayment arrangements. According to Yazdanfar and Öhman (2020), debt structure influences SME outcomes because different forms of borrowing create different levels of financial pressure and investment capacity. Similarly, Wasiuzzaman et al. (2020) argue that financing constraints among SMEs are not only related to the availability of funds but also the affordability and suitability of financing arrangements. Therefore, the current study contributes to this literature by demonstrating that debt financing characteristics represent important mechanisms through which borrowing influences sustainable SME growth.

The positive role of loan adequacy observed in this study is also supported by previous research showing that insufficient financing can prevent SMEs from achieving planned growth objectives. Nguyen et al. (2022) found that financing constraints limit SMEs' ability to invest, innovate, and expand, particularly in emerging economies. This suggests that the amount of financing obtained relative to enterprise requirements is critical in determining whether debt supports or restricts growth. In the context of Lira City, where many SMEs operate with limited internal resources, appropriate levels of debt financing may therefore provide an essential pathway for achieving sustainable expansion.

The relationship between debt financing and sustainability is also consistent

with the principles of Sustainable Growth Theory, which emphasizes that enterprises must achieve expansion while maintaining financial stability and operational capacity. Higgins' sustainable growth perspective argues that firms should balance growth ambitions with their ability to finance expansion without creating excessive financial strain. Although developed primarily within corporate finance, this perspective is relevant to SMEs because rapid growth supported by poorly structured debt may threaten long-term survival. The present study extends this argument by demonstrating that debt can contribute to sustainability when financing decisions are aligned with enterprise capacity and growth objectives.

The findings also have implications for understanding SME financing within developing urban contexts. Much of the existing literature on SME finance focuses on national-level evidence or larger commercial centres, while limited attention has been given to secondary cities such as Lira City. The current study contributes contextual evidence by showing that debt financing can support sustainable SME growth in a regional business environment where enterprises often face financial limitations and restricted access to alternative sources of capital. This extends previous research by highlighting the importance of examining financing relationships within specific economic and institutional contexts.

Overall, the findings confirm that debt financing represents an important resource for promoting SME growth sustainability. However, the contribution of debt is not automatic; it depends on the suitability of financing conditions, the productive utilization of borrowed funds, and the ability of entrepreneurs to manage financial obligations. The study therefore reinforces the argument that sustainable SME development requires not only improved access to finance but also responsible borrowing practices and financial management capabilities that enable enterprises to transform debt into productive investment.

5.3 Debt Management Behaviour and Growth Sustainability of SMEs

The second objective of this study was to examine the influence of debt

management behaviour on the growth sustainability of SMEs in Lira City. The findings demonstrate that entrepreneurs' behavioural characteristics are important in determining whether borrowed resources contribute to sustainable enterprise development. This supports the emerging perspective in SME finance literature that financial resources alone do not guarantee business growth; rather, the ability of entrepreneurs to make informed financial decisions, allocate resources efficiently, and manage repayment obligations determines the extent to which financing contributes to enterprise sustainability (Orobia et al., 2020).

The relationship between debt management behaviour and SME growth sustainability is consistent with previous studies emphasizing the importance of financial practices after accessing finance. While earlier SME financing research largely focused on access to credit as a primary determinant of enterprise performance, recent studies have shifted attention toward the behavioural and managerial capabilities that influence how financial resources are utilized. Graña-Alvarez et al. (2022) found that budgeting practices, repayment discipline, and reinvestment decisions enhance SME viability, while Serrasqueiro et al. (2023) demonstrated that financial planning and managerial practices contribute to improved SME growth outcomes. Similarly, Badi and Ishengoma (2021) argued that effective monitoring and management of debt obligations enable SMEs to derive greater benefits from external financing. These studies support the argument that debt management behaviour represents an important mechanism through which borrowed funds are transformed into productive enterprise outcomes.

The findings further highlight the importance of financial self-efficacy as a critical behavioural factor influencing SME sustainability. Financial self-efficacy reflects entrepreneurs' confidence in their ability to make financial decisions, solve financial problems, and manage financial obligations effectively. This finding is consistent with Razak et al. (2020), who demonstrated that entrepreneurs with higher financial self-efficacy were more likely to engage

in responsible borrowing and repayment practices. Similarly, Farrell et al. (2016) found that financial self-efficacy influences financial behaviour by shaping individuals' confidence in managing financial resources. Therefore, entrepreneurs who possess greater confidence in their financial abilities may be better positioned to evaluate loan conditions, determine appropriate borrowing levels, and align repayment commitments with business cash flows.

The role of financial self-efficacy can be explained through the Theory of Planned Behaviour, which proposes that behaviour is influenced by attitudes, subjective norms, and perceived behavioural control (Ajzen, 1991). In the context of SME debt management, perceived behavioural control reflects entrepreneurs' confidence in their ability to manage financial decisions and control borrowing outcomes. The findings therefore extend the application of the Theory of Planned Behaviour by demonstrating that psychological perceptions of financial capability influence not only individual financial actions but also enterprise-level sustainability outcomes.

The findings regarding lifestyle patterns are also supported by previous literature emphasizing the relationship between personal financial behaviour and enterprise outcomes. Entrepreneurs' spending habits, consumption preferences, and financial priorities influence how business resources are preserved, allocated, and reinvested. Orobia et al. (2020) argued that financial management behaviour among SMEs affects the effective utilization of resources and business performance. Similarly, financial discipline and prudent resource allocation have been identified as important conditions for maintaining business continuity, particularly among SMEs operating under resource constraints. The present study extends this literature by demonstrating that lifestyle patterns form part of the broader behavioural context through which entrepreneurs manage debt obligations.

The influence of religiosity on debt management behaviour also contributes to the behavioural finance perspective of SME decision-making. Existing research suggests that personal values and belief systems influence financial

attitudes, risk perceptions, and decision-making processes (Ajzen, 1991; Fishbein & Ajzen, 1975). Religious beliefs may encourage responsible borrowing, financial discipline, and avoidance of unnecessary expenditure, thereby supporting effective debt management. However, the relationship between religiosity and enterprise growth may depend on how religious values are translated into financial decisions. While responsible financial attitudes may enhance sustainability, excessive risk avoidance may potentially limit access to growth opportunities where external financing is necessary. Thus, the findings contribute to a more balanced understanding of religiosity as a behavioural factor within SME financial decision-making.

The findings also provide support for Financial Capability Theory, which emphasizes that positive financial outcomes result from the interaction between financial knowledge, skills, and the ability to apply them effectively in practice. Lusardi and Mitchell (2014) and Mitchell and Lusardi (2023) argue that financial capability influences how individuals evaluate financial choices and manage financial resources. Within the SME context, this implies that responsible debt management requires more than positive attitudes or intentions; entrepreneurs must possess the capability to evaluate borrowing conditions, monitor financial performance, and make appropriate repayment decisions. The findings therefore suggest that debt management behaviour produces sustainable outcomes when supported by adequate financial capability.

The study also contributes to existing literature by demonstrating that debt management behaviour should be understood as a multidimensional construct rather than a single financial practice. Previous studies have often examined individual aspects such as financial literacy, budgeting, or repayment behaviour separately. By incorporating lifestyle patterns, religiosity, and financial self-efficacy, this study provides a broader explanation of how entrepreneurs' behavioural characteristics influence debt utilization and enterprise sustainability. This integrated perspective is particularly relevant in developing economy contexts where informal financial practices, personal

values, and business decisions are often closely interconnected.

The findings further extend Sustainable Growth Theory by demonstrating that sustainable enterprise development depends not only on obtaining financial resources but also on maintaining the behavioural capacity required to manage those resources effectively. Growth opportunities created through borrowing must be balanced with responsible financial practices to ensure that expansion does not create future instability. Therefore, debt management behaviour represents an important link between financial resources and sustainable growth outcomes.

Overall, the findings demonstrate that debt management behaviour significantly influences SME growth sustainability by shaping how entrepreneurs acquire, utilize, and manage borrowed resources. The study confirms that sustainable SME growth requires more than access to finance; it requires entrepreneurs to possess the behavioural discipline, confidence, and financial capability necessary to convert debt into productive investment. By integrating behavioural perspectives with financial capability explanations, the study provides a more comprehensive understanding of how SME owners in Lira City manage debt to achieve sustainable growth.

5.4 Role of Debt Literacy in the Relationship Between Debt Financing, and Growth Sustainability

The third objective of this study was to examine the moderating role of debt literacy in the relationship between debt financing and the growth sustainability of SMEs in Lira City. The findings demonstrate that debt literacy influences how entrepreneurs translate borrowed resources into sustainable business outcomes. However, contrary to the expectation that greater debt literacy would strengthen the growth benefits associated with debt financing, the findings suggest that higher levels of debt literacy may encourage entrepreneurs to adopt more cautious borrowing decisions. This implies that debt literacy does not simply increase the positive effects of debt financing but influences how entrepreneurs evaluate borrowing opportunities, assess financial risks, and determine whether

external finance is appropriate for their business circumstances.

The finding contributes to the growing literature on SME finance, which increasingly recognizes that the outcomes of borrowing depend not only on access to financial resources but also on borrower characteristics and financial capabilities. Previous studies have demonstrated that debt financing produces different outcomes depending on loan conditions, enterprise characteristics, and the ability of entrepreneurs to manage financial obligations. Badi and Ishengoma (2021) found that favourable debt conditions improved SME performance by enabling enterprises to invest and expand, while Kassegn and Endris (2022) showed that appropriately structured financing supported business growth through improved liquidity and investment capacity. These studies indicate that the effectiveness of debt depends on the interaction between financial resources and the conditions under which borrowing occurs. The present study extends this argument by demonstrating that entrepreneurs' debt-related knowledge represents an additional factor that shapes the relationship between financing and sustainable growth.

The negative moderating influence of debt literacy can be understood from the perspective that financially knowledgeable entrepreneurs may become more selective in accepting external finance. Debt literacy enhances entrepreneurs' understanding of interest costs, repayment obligations, loan maturity periods, and potential financial risks. Consequently, entrepreneurs with greater debt knowledge may avoid borrowing arrangements that appear costly, unsuitable, or inconsistent with their business capacity. While this cautious approach may reduce reliance on debt, it may also protect enterprises from excessive borrowing and future financial difficulties. Therefore, the negative moderating effect should not be interpreted as indicating that debt literacy reduces sustainability; rather, it suggests that debt literacy influences the quality and appropriateness of borrowing decisions.

This interpretation is consistent with previous studies showing that financial knowledge affects how individuals and entrepreneurs evaluate financial

alternatives. Lusardi and Mitchell (2014) argue that financial literacy improves individuals' ability to understand financial products, assess risks, and make informed decisions. Similarly, Mitchell and Lusardi (2023) emphasize that financial capability influences financial resilience by enabling individuals to evaluate financial choices more effectively. Within the SME context, this suggests that debt-literate entrepreneurs may be more capable of identifying financing arrangements that support business objectives while avoiding borrowing conditions that may threaten financial stability.

The findings also extend existing evidence on the relationship between debt conditions and SME outcomes. Previous research indicates that high borrowing costs, short repayment periods, and unsuitable credit arrangements may constrain enterprise growth. Githaiga and Kabiru (2015) found that expensive and short-term borrowing increased financial pressure among SMEs, while Mamaro and Legotlo (2020) demonstrated that financing structures influence firms' ability to invest and expand. These findings suggest that entrepreneurs with stronger debt knowledge may recognize the limitations of unsuitable financing arrangements and consequently become more cautious in their borrowing decisions. The present study contributes to this literature by demonstrating that debt literacy influences not only debt management practices but also the extent to which debt financing translates into sustainable growth.

The findings provide important insights into the Ugandan SME context. Previous studies have shown that financial capability influences how entrepreneurs utilize borrowed resources and manage financial obligations. Orobia et al. (2020) found that financial literacy contributes to improved financial management practices and SME performance, while Namagembe and Mbago (2023) demonstrated that inadequate understanding of debt conditions may contribute to ineffective debt utilization among SMEs in Northern Uganda. However, much of the existing literature has examined financial literacy as a direct predictor of enterprise outcomes rather than as a factor that changes the relationship between financing decisions and growth

outcomes. By conceptualizing debt literacy as a moderating variable, this study provides a more nuanced understanding of how financial knowledge shapes the effectiveness of debt financing.

The study also contributes by distinguishing debt literacy from general financial literacy. While financial literacy involves broad knowledge of financial concepts and decision-making, debt literacy specifically concerns understanding borrowing conditions, repayment responsibilities, interest costs, and debt-related risks. This distinction is important because entrepreneurs may possess general financial knowledge but still lack the specific capability required to evaluate debt effectively. The findings therefore extend financial capability literature by demonstrating that debt-specific knowledge influences not only whether entrepreneurs borrow but also how they interpret and respond to financing opportunities.

The findings have important theoretical implications. From the perspective of Trade-Off Theory of Capital Structure, firms benefit from debt when the advantages of additional financial resources exceed the costs associated with borrowing (Kraus & Litzenberger, 1973). The moderating role of debt literacy extends this theory by demonstrating that borrower capability influences how entrepreneurs assess this balance. Debt-literate entrepreneurs may have greater awareness of borrowing costs and financial risks, enabling them to determine whether additional debt is likely to generate sufficient benefits relative to its obligations. Therefore, the value of debt depends not only on financing availability but also on the entrepreneur's ability to evaluate its strategic suitability.

The findings also support Financial Capability Theory, which emphasizes that positive financial outcomes depend on the interaction between knowledge, skills, and the ability to apply them in practice (Johnson & Sherraden, 2007). The study demonstrates that financial knowledge does not automatically increase the growth benefits of debt financing; rather, it influences decision-making processes through which entrepreneurs evaluate, accept, or reject

financing opportunities. This highlights the importance of developing financial capability alongside improving access to finance.

Overall, the findings demonstrate that debt literacy plays an important conditional role in the relationship between debt financing and SME growth sustainability. The results suggest that financially knowledgeable entrepreneurs may make more selective borrowing decisions by considering repayment capacity, financing costs, and expected business returns. Therefore, promoting sustainable SME growth requires not only improving access to debt financing but also strengthening entrepreneurs' debt literacy and ensuring that available financial products are affordable, appropriate, and aligned with enterprise growth needs.

5.5 Role of Debt Literacy in the Relationship Between Debt Management Behaviour, and Growth Sustainability

The fourth objective of this study was to examine the moderating role of debt literacy in the relationship between debt management behaviour and the growth sustainability of SMEs in Lira City. The findings indicate that debt literacy strengthens the contribution of debt management behaviour to sustainable SME growth. This suggests that behavioural practices such as financial discipline, repayment commitment, responsible borrowing, and effective control over business resources become more beneficial when entrepreneurs possess adequate knowledge of debt conditions and financial obligations.

The positive moderating role of debt literacy is consistent with the broader financial capability literature, which argues that financial knowledge enhances the ability of individuals and entrepreneurs to make effective financial decisions. Lusardi and Mitchell (2014) demonstrated that financial literacy improves individuals' understanding of financial products and enables better financial choices, while Mitchell and Lusardi (2023) further emphasized that financial capability contributes to financial resilience by improving individuals' ability to evaluate financial risks and opportunities. Within the SME context, these arguments suggest that entrepreneurs who understand loan conditions,

repayment obligations, and borrowing risks are better positioned to apply responsible debt management practices effectively.

The finding also supports previous empirical studies showing that financial knowledge enhances the effectiveness of financial behaviour. Orobia et al. (2020), in their study of Ugandan SMEs, found that financial literacy improves financial management practices and contributes to better enterprise outcomes. Similarly, Agyei (2018) reported that financial literacy influences entrepreneurs' ability to manage debt obligations and make appropriate financial decisions. These studies support the argument that debt management behaviour alone may not fully explain SME sustainability outcomes because the effectiveness of such behaviour depends on entrepreneurs' ability to interpret and apply financial information. The current study extends this evidence by demonstrating that debt literacy functions as a moderating mechanism that strengthens the relationship between debt management behaviour and growth sustainability.

The findings are also consistent with research emphasizing the importance of combining behavioural characteristics with financial knowledge. Previous studies have shown that repayment discipline, financial planning, and monitoring of borrowed funds contribute positively to SME performance (Badi & Ishengoma, 2021; Graña-Alvarez et al., 2022). However, these studies primarily examined debt management practices as direct predictors of enterprise outcomes and paid limited attention to the conditions under which such behaviours become more effective. The present study contributes to this gap by demonstrating that entrepreneurs may possess positive financial behaviours, but the sustainability benefits of these behaviours are enhanced when supported by debt-specific knowledge.

The role of debt literacy can also be explained through Financial Capability Theory, which argues that financial outcomes depend not only on access to financial resources but also on individuals' knowledge, skills, and ability to apply them effectively (Johnson & Sherraden, 2007). The findings provide support for this perspective by demonstrating that entrepreneurs require

more than financial discipline or willingness to repay loans; they also need the capability to understand loan terms, assess repayment capacity, and align borrowing decisions with business objectives. Thus, debt literacy acts as an enabling capability that allows entrepreneurs to transform responsible debt management practices into sustainable enterprise outcomes.

The findings further extend the Theory of Planned Behaviour (TPB) by demonstrating the interaction between behavioural intention and financial knowledge. Ajzen (1991) argues that behaviour is influenced by attitudes, subjective norms, and perceived behavioural control. In the context of SME debt management, financial discipline and confidence represent important behavioural characteristics that influence entrepreneurs' willingness to manage debt responsibly. However, the present study suggests that behavioural intention and perceived control are more likely to generate positive outcomes when supported by adequate debt knowledge. Therefore, debt literacy strengthens the pathway through which behavioural characteristics influence sustainable business outcomes.

The relationship between financial self-efficacy and debt literacy further supports this interpretation. Previous studies have shown that entrepreneurs with higher financial self-efficacy are more confident in managing financial obligations and making financial decisions (Farrell et al., 2016; Razak et al., 2020). However, confidence without sufficient knowledge may result in inappropriate financial decisions because entrepreneurs may underestimate borrowing risks or misunderstand loan conditions. The present study therefore extends previous research by suggesting that financial self-efficacy and debt literacy are complementary capabilities: self-efficacy provides the confidence to act, while debt literacy provides the knowledge required to act appropriately.

The findings also contribute to the understanding of SME financing within developing economies. Previous studies in Uganda have highlighted challenges related to financial management capacity, ineffective loan utilization, and limited understanding of credit conditions among SMEs (Nuwagaba et al.,

2021). Similarly, Buyinza et al. (2018) found that financial behaviour and financial literacy influence SME success. However, these studies generally examined financial literacy as an independent factor rather than considering its role in strengthening the effectiveness of debt management behaviour. By examining debt literacy as a moderator, this study provides a more refined explanation of why some SMEs achieve better outcomes from similar debt management practices.

The findings also have implications for Sustainable Growth Theory, which emphasizes that enterprise growth must be achieved while maintaining financial stability and operational continuity. Effective debt management contributes to sustainability when entrepreneurs possess the capability to balance growth opportunities with repayment responsibilities. Debt literacy strengthens this process by enabling entrepreneurs to make informed decisions regarding borrowing, investment, and financial commitments. Therefore, sustainable growth depends not only on access to finance or responsible behaviour but also on the knowledge required to manage financial resources strategically.

Overall, the findings demonstrate that debt literacy strengthens the relationship between debt management behaviour and SME growth sustainability. The results suggest that behavioural practices such as financial discipline, repayment commitment, and responsible resource management generate stronger sustainability outcomes when entrepreneurs possess adequate knowledge of debt management principles. This study therefore extends existing SME finance literature by demonstrating that debt literacy is not merely a direct financial capability but also a mechanism that enhances the effectiveness of entrepreneurial financial behaviour.

5.6 Integration of Findings with Theoretical Perspectives

This section integrates the findings of the study with the theoretical perspectives that guided the research, namely the Trade-Off Theory of Capital Structure, Sustainable Growth Theory, Theory of Planned Behaviour, and Financial Capability Theory. The integration demonstrates how the findings contribute

to existing theoretical explanations regarding the influence of debt financing, debt management behaviour, and debt literacy on the growth sustainability of small and medium-sized enterprises (SMEs) in Lira City.

5.6.1 Integration of Findings with Trade-Off Theory of Capital Structure

The findings of this study provide support for the Trade-Off Theory of Capital Structure, which explains that firms determine their preferred level of debt by balancing the benefits associated with borrowing against the potential costs arising from financial obligations (Kraus & Litzenberger, 1973; Myers, 1984). The theory suggests that debt can enhance firm value when the advantages derived from additional financial resources exceed the costs associated with interest payments, repayment obligations, and financial risk.

The findings revealed that debt financing has a positive and statistically significant effect on SME growth sustainability. This suggests that SMEs in Lira City benefit from debt financing when borrowed funds are appropriately structured and directed toward productive business activities. The results demonstrate that debt provides entrepreneurs with financial capacity to expand operations, improve business performance, and invest in growth opportunities that may not be achievable through internally generated resources alone.

The findings further support the argument of the Trade-Off Theory that the contribution of debt depends on the conditions under which borrowing occurs. Loan size, interest rates, and repayment conditions were found to influence SME sustainability outcomes, indicating that debt financing decisions involve a balance between obtaining adequate resources and managing associated financial commitments. Therefore, the study confirms that debt is not necessarily a constraint to SME growth; rather, its effect depends on whether entrepreneurs can generate sufficient returns from borrowed funds to offset borrowing costs.

However, the findings also extend the Trade-Off Theory by demonstrating that debt decisions among SMEs are influenced by entrepreneur-level capabilities, particularly debt literacy. The negative moderating effect of debt literacy on

the relationship between debt financing and growth sustainability suggests that financially knowledgeable entrepreneurs may become more cautious in accepting debt when they identify unfavourable loan conditions or excessive financial risks. Thus, the study extends the traditional perspective of the Trade-Off Theory by showing that optimal debt decisions are determined not only by financial costs and benefits but also by entrepreneurs' ability to evaluate and interpret borrowing conditions.

5.6.2 Integration of Findings with Sustainable Growth Theory

The findings of this study are also consistent with Sustainable Growth Theory, which emphasizes that firms must pursue expansion while maintaining financial stability and ensuring that growth is supported by effective resource management (Higgins, 1977). The theory proposes that sustainable growth occurs when businesses achieve an appropriate balance between investment opportunities, profitability, and financial capacity.

The study findings support this perspective by demonstrating that debt financing contributes positively to SME growth sustainability. Access to debt enables SMEs to acquire resources required for expansion, improve operational capacity, increase sales, and strengthen their competitive position. The results indicate that external financing can support sustainable growth when it is aligned with enterprise needs and repayment capacity.

Nevertheless, the findings also demonstrate that sustainable growth requires more than access to financial resources. The ability of SMEs to effectively manage debt obligations, maintain repayment discipline, and make appropriate financial decisions determines whether borrowed funds contribute positively to long-term sustainability. This suggests that debt alone does not guarantee growth; rather, sustainable outcomes emerge when financing decisions are combined with effective management practices.

The study therefore extends Sustainable Growth Theory by incorporating the role of financial capability and behavioural factors into the explanation of SME

sustainability. The findings demonstrate that sustainable growth among SMEs depends on the interaction between available financial resources, responsible debt management behaviour, and entrepreneurs' ability to make informed financial decisions.

5.6.3 Integration of Findings with Theory of Planned Behaviour

The findings provide support for the Theory of Planned Behaviour (TPB), which explains that individual behaviour is influenced by attitudes, subjective norms, and perceived behavioural control (Ajzen, 1991). The theory suggests that individuals' beliefs and perceptions influence their intentions, which subsequently shape their actions and decision-making processes.

The study found that debt management behaviour significantly influences SME growth sustainability. Specifically, financial self-efficacy, lifestyle patterns, and personal values were identified as important behavioural factors influencing how entrepreneurs manage borrowed resources. These findings support the argument that entrepreneurs' attitudes, beliefs, and confidence in their financial abilities shape their debt-related decisions.

The strong contribution of financial self-efficacy further supports the TPB concept of perceived behavioural control. Entrepreneurs who have confidence in their ability to evaluate financial decisions, manage repayment obligations, and control business resources are more likely to engage in effective debt management practices. Similarly, disciplined lifestyles and personal values contribute to responsible financial behaviour by influencing expenditure decisions, saving practices, and commitment to repayment.

However, the findings extend the Theory of Planned Behaviour by demonstrating that positive behavioural intentions and attitudes alone may not always produce sustainable financial outcomes. The results indicate that behavioural characteristics require support from financial knowledge and skills to translate into effective debt management practices. Therefore, the study suggests that responsible financial behaviour is strengthened when entrepreneurs possess

the capability to understand and apply appropriate financial strategies.

5.6.4 Integration of Findings with Financial Capability Theory

The findings strongly support Financial Capability Theory, which emphasizes that individuals require financial knowledge, skills, and confidence to make effective financial decisions and achieve desired financial outcomes (Sherraden, 2013; Lusardi & Mitchell, 2014). The theory recognizes that financial outcomes are shaped not only by access to financial resources but also by individuals' ability to understand and effectively use those resources.

The study findings demonstrate the importance of debt literacy in shaping SME sustainability outcomes. The positive moderating effect of debt literacy on the relationship between debt management behaviour and growth sustainability indicates that financial knowledge strengthens entrepreneurs' ability to apply responsible debt management practices. Entrepreneurs who understand loan conditions, interest obligations, repayment requirements, and borrowing risks are better positioned to make appropriate decisions regarding the use and management of debt.

The findings also reveal that debt literacy influences how entrepreneurs evaluate financing opportunities. The negative moderating effect of debt literacy on the relationship between debt financing and growth sustainability suggests that financially knowledgeable entrepreneurs may become more selective in borrowing decisions. Rather than increasing borrowing automatically, debt literacy enables entrepreneurs to assess whether financing conditions are suitable for their business circumstances.

Therefore, the study extends Financial Capability Theory by demonstrating that financial knowledge does not simply encourage access to finance but improves the quality of financial decisions. Debt literacy enables entrepreneurs to distinguish between productive borrowing opportunities and potentially harmful financing arrangements, thereby influencing the sustainability outcomes achieved from debt utilization.

5.6.5 Overall Theoretical Implications

Overall, the findings demonstrate that SME growth sustainability is influenced by the interaction between financial resources, entrepreneurial behaviour, and financial capability. The Trade-Off Theory explains how SMEs balance the benefits and costs of debt financing, while Sustainable Growth Theory highlights the importance of maintaining growth alongside financial stability. The Theory of Planned Behaviour explains the influence of entrepreneurs' attitudes, values, and perceived control on debt management practices, whereas Financial Capability Theory emphasizes the importance of knowledge and skills in improving financial decision-making.

The study contributes to existing theoretical understanding by demonstrating that debt financing outcomes among SMEs are not determined solely by the availability of financial resources. Instead, sustainability outcomes depend on how entrepreneurs evaluate financing opportunities, manage debt obligations, and apply financial knowledge in practice. The findings therefore provide an integrated theoretical perspective in which access to finance, responsible financial behaviour, and debt literacy collectively influence the ability of SMEs to achieve sustainable growth.

5.7 Contribution of the Study

This study contributes to existing knowledge by providing an integrated understanding of how debt financing, debt management behaviour, and debt literacy influence the growth sustainability of small and medium-sized enterprises (SMEs). While previous studies have largely examined access to finance, financial behaviour, or financial literacy as separate factors affecting SME performance, this study combines these dimensions within a single analytical framework. By examining the role of debt literacy in shaping the relationship between financial practices and sustainability outcomes, the study provides deeper insights into the conditions under which debt financing and debt management practices contribute to sustainable enterprise growth.

The study makes a conceptual contribution by extending existing SME sustainability perspectives beyond the traditional emphasis on access to finance. Previous research has often focused on debt financing as a direct determinant of SME performance, with limited attention to the processes through which entrepreneurs transform borrowed resources into sustainable business outcomes. This study demonstrates that the contribution of debt financing to SME sustainability is influenced by entrepreneurs' ability to understand, evaluate, and manage debt obligations. By integrating debt financing, debt management behaviour, and debt literacy into one analytical framework, the study provides a more comprehensive explanation of how SMEs convert financial resources into sustainable growth.

The study also makes an empirical contribution by providing evidence from the SME context of Lira City, Uganda, where limited empirical research has examined the combined influence of financing conditions, behavioural characteristics, and debt-related knowledge on enterprise sustainability. The findings demonstrate that debt financing contributes positively to SME growth sustainability; however, the effectiveness of financing depends on the conditions under which debt is obtained and the ability of entrepreneurs to make appropriate financial decisions. This provides context-specific evidence from a developing economy where SMEs operate under financial constraints, face challenges related to borrowing conditions, and must manage repayment obligations while pursuing growth opportunities.

A further empirical contribution arises from demonstrating that debt literacy performs different functions depending on the financial relationship being examined. The findings reveal that debt literacy does not operate as a uniformly positive factor but influences financial decisions in a context-dependent manner. While debt literacy may encourage more cautious borrowing decisions by increasing awareness of financial risks and repayment obligations, it also strengthens the effectiveness of debt management behaviour by enabling entrepreneurs to apply responsible financial practices more effectively.

This finding provides a more nuanced understanding of the role of financial knowledge by demonstrating that its influence depends on the specific financial decision context.

The study makes a theoretical contribution by extending the application of the Trade-Off Theory of Capital Structure, Sustainable Growth Theory, Theory of Planned Behaviour, and Financial Capability Theory within the SME sustainability context. The findings support the Trade-Off Theory by demonstrating that debt financing contributes to enterprise growth when the benefits obtained from additional financial resources exceed the associated costs and risks of borrowing. However, the study extends this perspective by showing that entrepreneurs' ability to evaluate financing conditions and manage debt obligations influences whether debt becomes a growth-enhancing resource or a potential constraint.

The study further contributes to Sustainable Growth Theory by demonstrating that SME sustainability depends not only on access to financial resources but also on the ability of enterprises to balance growth objectives with financial stability and responsible resource management. The findings show that debt can support sustainable expansion when it is aligned with business capacity, repayment ability, and productive investment opportunities.

The study also advances Financial Capability Theory by demonstrating that financial knowledge is not merely a direct predictor of enterprise outcomes but also an enabling mechanism that improves the effectiveness of financial behaviours. The significant role of debt literacy indicates that entrepreneurs require knowledge and skills to understand borrowing conditions, evaluate financial risks, and apply appropriate debt management practices. Therefore, financial capability influences not only whether entrepreneurs access finance but also how effectively they utilize and manage financial resources.

Furthermore, the study contributes to the Theory of Planned Behaviour by demonstrating that behavioural characteristics influence financial outcomes but

require supporting capabilities to achieve sustainable results. The findings show that lifestyle patterns, personal values, and confidence in financial decision-making shape debt management behaviour among SME owners. However, these behavioural characteristics become more effective when combined with adequate debt knowledge and financial skills.

The study provides a methodological contribution through the application of a sequential explanatory mixed-methods approach to investigate SME growth sustainability. The integration of quantitative techniques, including correlation analysis, robust regression analysis, and Structural Equation Modelling (SEM), with qualitative evidence from SME owners provided a more comprehensive understanding of the research problem. The quantitative analysis established the statistical relationships among debt financing, debt management behaviour, debt literacy, and sustainability outcomes, while the qualitative findings provided deeper explanations of how entrepreneurs experience, interpret, and manage debt within their business environments.

Overall, this study contributes to knowledge by demonstrating that SME growth sustainability is not determined by financial access alone. Instead, sustainable growth emerges from the interaction between appropriate financing conditions, responsible debt management behaviour, and entrepreneurs' financial capability. The study therefore provides a more comprehensive understanding of SME sustainability by showing that financial resources generate greater value when combined with the behavioural and cognitive capabilities required for effective debt management and informed financial decision-making.

5.8 Conclusion

The discussion presented in this chapter has interpreted the study findings in relation to existing empirical evidence and theoretical perspectives. The findings demonstrate that debt financing, debt management behaviour, and debt literacy jointly influence SME growth sustainability in Lira City, while highlighting the importance of borrower capability in determining how financial resources are utilized. The next chapter presents the summary of the study, conclusions

drawn from the findings, and recommendations arising from the research. The chapter further outlines the contribution of the study, implications for theory and practice, limitations of the research, and areas for future investigation.

CHAPTER SIX

SUMMARY, CONCLUSION, AND RECOMMENDATIONS

6.1 Introduction

This chapter presents the summary of the study, conclusions drawn from the findings, and recommendations arising from the research. The study examined the influence of debt financing and debt management behaviour on the growth sustainability of Small and Medium-Sized Enterprises (SMEs) in Lira City, with particular emphasis on the moderating role of debt literacy. The study was guided by four objectives: to examine the effect of debt financing on SME growth sustainability, to assess the effect of debt management behaviour on SME growth sustainability, to determine the moderating effect of debt literacy on the relationship between debt financing and growth sustainability, and to establish the moderating effect of debt literacy on the relationship between debt management behaviour and growth sustainability.

The study adopted a sequential explanatory mixed-methods design, integrating quantitative and qualitative approaches to provide a comprehensive understanding of the research problem. Quantitative data were analyzed using correlation analysis, robust regression analysis, and Structural Equation Modelling (SEM), while qualitative interviews with SME owners provided contextual explanations of the statistical relationships identified. The combination of these approaches enabled the study to examine not only whether relationships existed among the study constructs but also how and why these relationships occurred within the SME context of Lira City.

This chapter is organized into several sections. It begins with a summary of the study, followed by a summary of findings according to each research objective. The chapter then presents the conclusions drawn from the findings, the contribution of the study to knowledge, theoretical and practical implications, recommendations for relevant stakeholders, limitations of the study, and suggestions for further research. The chapter concludes by highlighting the

overall significance of the study in understanding how financial resources, behavioural capabilities, and debt literacy interact to influence sustainable SME growth.

6.2 Summary of Findings

This study examined the influence of debt financing, debt management behaviour, and debt literacy on the growth sustainability of small and medium-sized enterprises (SMEs) in Lira City. The summary of findings is presented according to the study objectives.

6.2.1 Summary of Findings on Debt Financing and Growth Sustainability of SMEs

The first objective of the study was to examine the effect of debt financing on the growth sustainability of SMEs in Lira City. The findings revealed that debt financing has a positive and statistically significant effect on SME growth sustainability. The correlation analysis demonstrated significant positive relationships between growth sustainability and the three dimensions of debt financing, namely loan size, interest rate, and Loan maturity. The robust regression results further confirmed that all three debt financing dimensions significantly predicted SME growth sustainability, with Loan maturity demonstrating the strongest effect among the financing variables.

The findings indicate that access to adequate loan amounts enables SMEs to undertake productive investments, expand operations, improve inventory levels, acquire business assets, and increase their capacity to generate sales and profits. However, the findings also demonstrate that the effectiveness of debt financing depends on appropriate loan structures and the ability of SMEs to meet repayment obligations. The qualitative findings supported these results by showing that entrepreneurs considered loan adequacy, borrowing costs, and repayment conditions as important factors determining whether debt contributed to business growth.

The SEM analysis further confirmed the significant positive relationship between debt financing and growth sustainability. The results demonstrated that debt financing remains an important resource for SME development when borrowed funds are effectively utilized. Therefore, the study concludes that debt financing contributes positively to SME growth sustainability in Lira City, provided that financing conditions are aligned with enterprise capacity and business requirements.

6.2.2 Summary of Findings on Debt Management Behaviour and Growth Sustainability of SMEs

The second objective was to assess the effect of debt management behaviour on the growth sustainability of SMEs in Lira City. The findings revealed that debt management behaviour significantly influences SME sustainability, although the relationship was complex. The correlation analysis showed that the individual dimensions of debt management behaviour, including lifestyle pattern, financial self-efficacy, and religiosity, were positively associated with growth sustainability. Among these dimensions, financial self-efficacy demonstrated the strongest relationship with sustainable growth outcomes.

The robust regression findings confirmed that lifestyle pattern, religiosity, and financial self-efficacy positively and significantly influence SME growth sustainability. Financial self-efficacy emerged as the strongest behavioural predictor, indicating that entrepreneurs' confidence in managing financial decisions, assessing loan affordability, and planning repayment obligations plays a critical role in sustaining enterprise growth.

However, the SEM results revealed a negative significant relationship between the overall debt management behaviour construct and growth sustainability. This finding suggests that behavioural characteristics alone may not always generate positive outcomes unless they are supported by adequate financial capability. Excessive caution, restrictive financial practices, or avoidance of productive borrowing may limit business expansion opportunities even when such behaviours reflect financial discipline.

The qualitative findings explained this relationship by demonstrating that SME owners rely on financial discipline, expenditure control, repayment planning, and informed decision-making when managing debt. Therefore, the study concludes that debt management behaviour contributes to SME sustainability when combined with appropriate financial knowledge and effective application of financial practices.

6.2.3 Summary of Findings on Moderating Effect of Debt Literacy on the Relationship between Debt Financing and Growth Sustainability

The third objective examined whether debt literacy moderates the relationship between debt financing and SME growth sustainability. The findings revealed that debt literacy significantly moderates this relationship; however, the moderating effect was negative. The SEM results showed that the interaction between debt financing and debt literacy was statistically significant, indicating that debt literacy changes how debt financing influences SME growth outcomes.

The findings suggest that financially knowledgeable entrepreneurs may adopt more cautious borrowing strategies after evaluating loan costs, repayment obligations, and financial risks. Although debt literacy improves entrepreneurs' ability to understand financial decisions, it may reduce excessive reliance on debt by encouraging careful assessment of whether borrowing arrangements are suitable for business circumstances.

The qualitative findings supported this interpretation by showing that SME owners with greater awareness of loan conditions carefully considered repayment capacity, interest charges, and expected business returns before accepting loans. Therefore, the study concludes that debt literacy does not simply increase the growth benefits of debt financing but influences how entrepreneurs evaluate and utilize borrowing opportunities.

6.2.4 Summary of Findings on Moderating Effect of Debt Literacy on the Relationship between Debt Management Behaviour and Growth Sustainability

The fourth objective was to establish whether debt literacy moderates the relationship between debt management behaviour and SME growth sustainability. The findings revealed that debt literacy significantly and positively moderates this relationship. The SEM results demonstrated that debt literacy strengthens the contribution of debt management behaviour to sustainable SME growth.

The findings indicate that behavioural characteristics such as financial discipline, responsible spending, repayment commitment, and financial self-efficacy become more effective when entrepreneurs possess adequate knowledge of debt management principles. Debt literacy enables SME owners to understand loan conditions, evaluate risks, plan repayments, and make informed decisions regarding the utilization of borrowed resources.

The qualitative findings reinforced these results by demonstrating that SME owners who combined financial knowledge with disciplined debt management practices were better able to manage repayment obligations and sustain business operations. Therefore, the study concludes that debt literacy serves as an important enabling capability that transforms responsible debt management behaviour into improved SME growth sustainability.

6.3 Conclusions of the Study

This study examined the influence of debt financing, debt management behaviour, and debt literacy on the growth sustainability of small and medium-sized enterprises (SMEs) in Lira City. Based on the findings, the study concludes that SME growth sustainability is a multidimensional outcome influenced by the availability of financial resources, entrepreneurs' ability to manage debt effectively, and their capacity to apply appropriate financial knowledge. Sustainable growth among SMEs is therefore not determined by

access to finance alone but emerges from the interaction between financing conditions, financial behaviour, and debt-related capabilities.

6.3.1 Conclusion on Debt Financing and SME Growth Sustainability

The study concludes that debt financing is an important contributor to SME growth sustainability in Lira City. Access to external finance enables SMEs to overcome limitations associated with inadequate internal resources, expand business operations, improve productive capacity, and pursue growth opportunities. The findings demonstrate that debt can serve as a strategic resource for SME development when borrowed funds are directed toward productive business activities.

However, the study concludes that the contribution of debt financing depends on the conditions under which borrowing occurs. Loan adequacy, borrowing costs, and repayment arrangements determine whether debt supports or constrains enterprise sustainability. Therefore, debt financing contributes positively to SME growth sustainability when financing arrangements are appropriate, aligned with business needs, and supported by entrepreneurs' ability to meet repayment obligations.

6.3.2 Conclusion on Debt Management Behaviour and SME Growth Sustainability

The study concludes that debt management behaviour is a significant factor influencing SME growth sustainability. Entrepreneurs' financial behaviours, including lifestyle patterns, financial self-efficacy, and personal values, shape how borrowed resources are utilized, monitored, and repaid.

The study further concludes that financial self-efficacy is particularly important because entrepreneurs who possess confidence in managing financial responsibilities are better able to evaluate borrowing decisions, plan repayment strategies, and allocate financial resources effectively. However, the study establishes that behavioural characteristics alone are insufficient to guarantee sustainable growth. Effective debt management requires the support

of financial knowledge and skills to ensure that responsible behaviours are translated into productive financial decisions.

6.3.3 Conclusion on the Moderating Effect of Debt Literacy on the Relationship Between Debt Financing and SME Growth Sustainability

The study concludes that debt literacy plays a significant conditional role in shaping the relationship between debt financing and SME growth sustainability. Debt literacy influences how entrepreneurs evaluate borrowing opportunities, understand loan conditions, and assess the risks associated with debt obligations.

The study concludes that higher levels of debt literacy may encourage more cautious borrowing decisions because financially knowledgeable entrepreneurs are more likely to evaluate financing costs, repayment requirements, and potential risks before accepting loans. Therefore, debt literacy does not necessarily increase the positive effects of debt financing; instead, it improves the quality and appropriateness of borrowing decisions.

This finding suggests that financially informed entrepreneurs may avoid unsuitable financing arrangements while selecting debt options that better match their business capacity and sustainability objectives.

6.3.4 Conclusion on the Moderating Effect of Debt Literacy on the Relationship Between Debt Management Behaviour and SME Growth Sustainability

The study concludes that debt literacy strengthens the relationship between debt management behaviour and SME growth sustainability. Entrepreneurs who possess adequate knowledge of debt obligations are better able to translate responsible financial behaviours into effective debt management practices.

Debt literacy enables SME owners to understand repayment requirements, evaluate financial risks, monitor loan utilization, and make informed decisions regarding borrowed resources. Therefore, responsible financial behaviour becomes more effective when supported by adequate debt-related knowledge and skills.

The study concludes that sustainable SME growth requires not only appropriate financial behaviour but also the capability to apply that behaviour effectively within specific debt management contexts.

6.3.5 Overall Conclusion of the Study

Overall, the study concludes that SME growth sustainability is achieved through the interaction of financial access, responsible debt management behaviour, and debt literacy. Debt financing provides SMEs with opportunities for growth, but the realization of these opportunities depends on appropriate financing conditions and effective resource management.

The study further concludes that entrepreneurs' behavioural characteristics and financial capabilities play a critical role in determining whether borrowed resources generate sustainable outcomes. Therefore, improving SME sustainability requires a comprehensive approach that combines access to suitable finance, development of effective debt management practices, and enhancement of entrepreneurs' debt literacy.

6.4 Recommendations of the Study

Based on the findings and conclusions of this study, specific recommendations are proposed for policymakers, SME owners, financial institutions, and SME development organizations. The recommendations are guided by the study findings on the relationship between debt financing, debt management practices, debt literacy, and SME growth sustainability in Lira City. The proposed actions identify the responsible stakeholders, required interventions, implementation areas, timing, rationale, and approaches for effective implementation.

6.4.1 Policy Recommendations

The study recommends that government policymakers, SME development agencies, and local authorities responsible for enterprise development in Lira City should develop policies that promote appropriate and sustainable debt financing structures for SMEs rather than focusing only on increasing access

to credit.

Specifically, financial regulatory authorities, local government economic development departments, and SME support agencies should collaborate with commercial banks, microfinance institutions, and other lending organizations to design SME financing frameworks that consider loan affordability, interest rates, repayment periods, and business cash-flow patterns. This intervention should be implemented within SME financing programmes and government-supported entrepreneurship initiatives in Lira City and similar urban business environments**.**

The recommendation should be implemented during the development and revision of SME financing policies and programmes because the findings indicate that access to debt alone does not automatically improve SME sustainability; rather, the effectiveness of debt depends on whether financing conditions are suitable for the operational realities of small businesses. This can be achieved through stakeholder consultations, development of SME-specific lending guidelines, promotion of flexible repayment structures, and monitoring of financing outcomes among beneficiary enterprises.

The study further recommends that SME development agencies, local government authorities, and entrepreneurship support institutions should integrate structured debt literacy programmes into existing SME development initiatives**.** These programmes should focus on practical debt-related skills, including interpretation of loan agreements, calculation of borrowing costs, assessment of repayment capacity, financial risk evaluation, and productive utilization of borrowed funds.

Such programmes should be implemented through business training centres, SME associations, and local entrepreneurship development programmes in Lira City and should be conducted regularly, preferably before entrepreneurs' access external financing and throughout the loan management period. The reason for this intervention is that the study findings demonstrate that debt literacy influences entrepreneurs' ability to make informed borrowing decisions

and effectively manage financial obligations.

Implementation should involve financial institutions, business trainers, and SME associations developing practical training modules, conducting workshops, and providing continuous financial advisory support rather than one-time financial awareness sessions.

The study also recommends that government entrepreneurship programmes and SME support organizations should incorporate behavioural financial management training into SME capacity-building initiatives**.** Training should address financial discipline, budgeting practices, separation of personal and business finances, repayment planning, saving behaviour, and confidence in financial decision-making.

This recommendation should be implemented as part of entrepreneurship training programmes before and after business financing support is provided because the findings show that debt management behaviour contributes to sustainable SME growth. The intervention can be achieved through practical financial management exercises, mentoring programmes, business coaching, and follow-up assessments to evaluate changes in financial behaviour among SME owners.

6.4.2 Recommendations for SME Owners and Managers

The study recommends that SME owners and managers operating in Lira City should adopt more strategic and financially disciplined approaches to borrowing and debt utilization. Entrepreneurs should ensure that borrowed funds are allocated primarily to productive business activities such as inventory expansion, equipment acquisition, technology improvement, and business growth initiatives rather than non-business personal expenditures.

This recommendation should be implemented at the point of making borrowing decisions and throughout the Loan maturity period because inappropriate use of borrowed funds may reduce business liquidity and increase repayment difficulties. SME owners can achieve this by developing business investment

plans before borrowing, estimating expected returns from financed activities, and monitoring whether borrowed resources generate sufficient income to support repayment obligations.

The study further recommends that SME owners should strengthen internal debt management practices by maintaining proper financial records, preparing repayment schedules, monitoring cash flows, and regularly reviewing business financial performance**.**

This action should be implemented as a continuous business management practice because the findings indicate that effective debt management and financial discipline contribute to SME sustainability. SME owners should achieve this through basic accounting systems, monthly financial reviews, separation of business and personal finances, and consultation with financial advisors where necessary**.**

Additionally, SME owners should actively improve their debt literacy by seeking continuous financial knowledge and training opportunities. Entrepreneurs should acquire knowledge about interest rates, loan conditions, repayment obligations, financial risks, and alternative financing options before accepting debt.

This recommendation should be implemented before accessing loans and during financial decision-making processes because improved debt literacy enables entrepreneurs to evaluate whether borrowing decisions are beneficial and sustainable. This can be achieved through participation in SME training programmes, engagement with financial institutions, and utilization of available entrepreneurship development resources.

6.4.3 Recommendations for Financial Institutions

The study recommends that commercial banks, microfinance institutions, and other SME lenders operating in Lira City should develop financing products that are better aligned with SME operational realities.

Financial institutions should review SME loan structures by considering appropriate loan sizes, repayment periods, interest rates, and repayment schedules that correspond with business income cycles**.** This recommendation should be implemented during product design, loan assessment, and review of existing SME lending schemes because the findings indicate that the contribution of debt financing to sustainability depends largely on the suitability of financing conditions.

Financial institutions can implement this recommendation through cash-flow-based lending approaches, flexible repayment arrangements, and periodic evaluation of SME loan performance rather than applying uniform lending conditions to all small businesses.

The study further recommends that financial institutions should provide financial guidance and debt management support alongside lending services. Loan officers should assist entrepreneurs in understanding loan obligations, repayment requirements, and responsible borrowing practices.

This intervention should be implemented before loan approval and during the repayment period because improved borrower understanding may reduce repayment challenges and improve the productive use of borrowed funds. Financial institutions can achieve this through pre-loan financial counselling sessions, borrower education materials, repayment monitoring support, and periodic engagement with SME clients.

Furthermore, lenders should assess not only borrowers' financial history but also their financial management capability and debt-handling capacity before approving loans. This should be implemented during the credit assessment process through evaluation of entrepreneurs' record-keeping practices, business planning ability, and understanding of repayment responsibilities. Such assessment may support better matching between SMEs and suitable financing options.

6.4.4 Recommendations for SME Support Organizations and Training Institutions

The study recommends that SME support organizations, business associations, entrepreneurship training institutions, and development partners operating in Lira City should develop integrated SME capacity-building programmes that combine financial knowledge, behavioural skills, and practical debt management strategies.

These organizations should implement training programmes that address financial planning, debt management, budgeting, business decision-making confidence, and responsible utilization of borrowed resources**.** The programmes should be delivered through entrepreneurship centres, SME associations, and community-based business networks on a continuous basis rather than through isolated training events**.**

This recommendation is necessary because the study findings demonstrate that sustainable SME growth depends not only on availability of financial resources but also on entrepreneurs' ability to manage those resources effectively. Implementation should involve practical workshops, mentorship programmes, business clinics, and follow-up evaluations to measure improvement in SME financial practices**.**

The study also recommends that SME support organizations should establish structured peer-learning platforms among entrepreneurs. These platforms should allow SME owners to share experiences related to borrowing decisions, repayment management, business challenges, and successful financial practices.

Such platforms should be implemented within existing SME networks and business associations in Lira City because qualitative findings indicate that entrepreneurs often acquire practical knowledge through interaction and shared experiences. This can be achieved through regular entrepreneur forums, mentorship networks, business discussion groups, and collaborative learning activities.

6.8 Limitations of the Study

Although this study provides important insights into the relationship between debt financing, debt management behaviour, debt literacy, and SME growth sustainability, several limitations should be acknowledged. These limitations provide context for interpreting the findings and identify areas where future studies can provide further evidence.

First, the study collected data from respondents at a single point in time. Although this approach was appropriate for examining relationships among the study constructs, it limits the ability to establish long-term causal relationships between debt financing, debt management behaviour, debt literacy, and SME growth sustainability. Changes in financing conditions, business performance, and entrepreneurs' financial behaviours may occur over time; therefore, longitudinal studies would provide deeper insights into how these relationships develop and change throughout different stages of enterprise growth.

Second, the study was conducted among SMEs operating in Lira City, which may limit the generalizability of the findings to SMEs in other geographical areas. Although Lira City provides an important context for understanding SME financing and sustainability challenges, business environments differ across regions due to variations in economic conditions, financial access, market opportunities, and institutional support systems. Therefore, caution should be exercised when applying the findings to SMEs operating in other parts of Uganda or other developing economies.

Third, the study relied partly on self-reported data collected from SME owners and managers. Although appropriate measures were taken to ensure reliability and confidentiality, responses may have been influenced by recall limitations, personal perceptions, or social desirability bias. For example, respondents may have presented their financial behaviours or debt management practices in a more favourable manner than their actual practices. Future studies could address this limitation by incorporating additional sources of data, such as financial records, loan documentation, or information from financial institutions.

Fourth, the study focused on selected dimensions of debt financing, debt management behaviour, and debt literacy. Debt financing was examined through loan size, interest rate, and repayment characteristics, while debt management behaviour was assessed through lifestyle pattern, religiosity, and financial self-efficacy. Although these dimensions captured important aspects of the study constructs, other factors such as entrepreneurial experience, business age, financial technology adoption, market conditions, and managerial skills may also influence SME growth sustainability but were beyond the scope of the present study.

Fifth, the study examined debt literacy as a moderating variable but did not investigate other possible mechanisms through which debt literacy may influence SME outcomes. The findings demonstrated that debt literacy operates differently depending on the relationship being examined; however, further research could explore whether debt literacy also mediates other financial decision-making processes, such as loan utilization choices, investment decisions, or repayment behaviour.

Finally, although the sequential explanatory mixed-methods design provided a comprehensive understanding of the research problem by combining statistical analysis with qualitative explanations, the qualitative component was based on selected SME owners' experiences. While these perspectives provided valuable contextual understanding, they may not fully represent the experiences of all SME operators in Lira City. Future research may consider larger qualitative samples involving different categories of stakeholders, including financial institutions, policymakers, and SME support organizations.

Despite these limitations, the study provides valuable empirical evidence on how financing resources, behavioural capabilities, and debt-related knowledge interact to influence SME growth sustainability. The limitations identified also provide opportunities for future research to further develop understanding of SME financial sustainability.

6.9 Areas for Further Research

Based on the findings and limitations of this study, several areas are suggested for future research to further enhance understanding of SME growth sustainability, debt utilization, and financial decision-making behaviour.

First, future studies may consider adopting a longitudinal research design to examine how the relationships between debt financing, debt management behaviour, debt literacy, and SME sustainability evolve over time. Since the present study used cross-sectional data, it provides evidence of associations among the study variables but cannot fully capture changes in entrepreneurs' financial behaviours, borrowing patterns, and business performance throughout different stages of enterprise development. Longitudinal studies would provide greater insight into how debt decisions influence SME survival, expansion, and sustainability over extended periods.

Second, future research may expand the geographical scope by examining SMEs across different regions of Uganda or comparing urban and rural business environments. Since this study focused on SMEs in Lira City, further studies could investigate whether the observed relationships remain consistent in areas with different levels of financial access, market opportunities, infrastructure development, and institutional support. Comparative studies across districts or countries could provide a broader understanding of the contextual factors influencing SME sustainability.

Third, future research may investigate additional factors that could influence the relationship between debt financing and SME growth sustainability. Although this study focused on debt financing, debt management behaviour, and debt literacy, other factors such as entrepreneurial experience, business age, managerial competence, digital financial literacy, innovation capability, market competition, and access to business networks may also influence enterprise outcomes. Including these variables may provide a more comprehensive model of SME sustainability.

Fourth, future studies may explore other dimensions of debt literacy beyond the measures considered in this research. While this study examined debt literacy as a moderating capability, future research could examine specific components such as understanding of interest rates, loan contracts, repayment structures, credit risk assessment, and debt negotiation skills. Such studies may provide deeper insight into which aspects of debt literacy are most important in improving SME financial decision-making.

Fifth, future research could examine the role of financial institutions and lending practices in shaping SME debt outcomes. The current study primarily focused on SME owners' experiences and behaviours; however, lenders also influence borrowing outcomes through loan conditions, screening procedures, repayment requirements, and financial advisory services. Including perspectives from financial institutions could provide a more balanced understanding of how supply-side and demand-side factors interact to influence SME sustainability.

Sixth, further studies may consider examining sector-specific differences in the relationship between debt financing and growth sustainability. SMEs operating in sectors such as manufacturing, trade, agriculture, and services may experience different financing requirements, cash-flow patterns, and risk levels. Sector-based analysis could therefore reveal whether debt financing and debt management practices influence growth outcomes differently across industries.

Finally, future research may further investigate the mechanisms through which debt literacy influences SME performance. The current study established that debt literacy strengthens the relationship between debt management behaviour and sustainability while reducing the effect of debt financing on growth outcomes. Future studies could examine whether these effects occur through intermediate factors such as improved financial planning, better investment decisions, reduced financial distress, or enhanced repayment performance.

Overall, these suggested areas provide opportunities for future researchers to extend the current study by examining additional contexts, variables, and

mechanisms that contribute to understanding sustainable SME development. Such research would further strengthen knowledge on how entrepreneurs can effectively combine financial resources, behavioural capabilities, and financial knowledge to achieve long-term enterprise sustainability.

6.10 Conclusion

This chapter presented the summary of the study, conclusions, contributions, recommendations, limitations, and areas for further research. The study examined the influence of debt financing and debt management behaviour on the growth sustainability of SMEs in Lira City, with debt literacy considered as a moderating factor. The findings demonstrated that SME sustainability is influenced by the interaction between access to financial resources, entrepreneurs' behavioural capabilities, and their ability to understand and manage debt effectively.

The study concluded that debt financing contributes positively to SME growth sustainability when financing conditions are appropriate and borrowed resources are utilized productively. However, access to finance alone is insufficient to guarantee sustainable growth because entrepreneurs must possess the capacity to manage repayment obligations and make informed financial decisions. The study further established that debt management behaviour influences SME sustainability, although its effectiveness depends on the presence of adequate financial capability.

The study highlighted the important role of debt literacy as a contextual factor influencing SME outcomes. While debt literacy encouraged more cautious borrowing decisions in the relationship between debt financing and growth

sustainability, it strengthened the ability of entrepreneurs to apply responsible debt management practices effectively. These findings demonstrate that financial knowledge plays a critical role in shaping how SMEs acquire, utilize, and manage debt.

The chapter further presented the contributions of the study to knowledge, theory, and practice. It showed that integrating financial access, behavioural capabilities, and debt literacy provides a more comprehensive explanation of SME growth sustainability. Recommendations were provided for policymakers, SME owners, financial institutions, and SME support organizations to enhance responsible borrowing, improve debt management practices, and strengthen financial capability among entrepreneurs.

Finally, the chapter acknowledged the limitations of the study and proposed areas for future research, including longitudinal studies, broader geographical investigations, sector-specific analyses, and further examination of debt literacy mechanisms. Through these contributions, the study provides valuable insights into how SMEs can achieve sustainable growth by effectively combining financial resources with behavioural and knowledge-based capabilities.

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APPENDICES

Appendix A: Questionnaire Survey tool

Dear esteemed respondent,

I am Okello Apollo, a student at Gulu University pursuing a Doctorate of Philosophy Degree. As part of my academic journey, I am conducting research that has led me to seek your valuable insights. My focus is on delving into the theoretical and practical aspects of your daily interactions, particularly relating to debt financing, debt management behaviour, and the growth sustainability of Small and Medium-sized Enterprises in Lira City.

I have reached out to you due to your recognized resourcefulness in the field, and your input will significantly contribute to the depth and quality of my research. I want to emphasize that every aspect being studied is strictly for academic purposes, and the information provided will not, under any circumstances, be disclosed for any purpose other than the one stated.

I understand the demands of your time, but please take a few minutes of your busy schedule to answer the straightforward questions outlined in the attached questionnaire. Your participation is crucial to informing this study, and your responses will be handled with the utmost confidentiality.

Thank you for your consideration and valuable contribution to advancing academic knowledge in this field.

Your sincerely,

Okello Apollo
Researcher
Tel: 0392995571/0754092598
Email: apollookello2010.ao@gmail.com

Section I

This section aims to gather non-confidential information about you, the respondent. Please select the option that best represents your profile, business category, and credit source for each respective question (FSD Africa et al., 2015; FSD Uganda, 2018). Kindly tick the appropriate boxes accordingly.

GCR1	Gender: 1. Male 2. Female	☐ ☐
GCR2	In what age bracket do you fall? 1.18-24 2.25-34 3.35-50 4.50+	☐ ☐ ☐ ☐
GCR3	Marital Status: 1. Single 2.Married 3. Widow 4. Divorced	☐ ☐ ☐ ☐
GCR4	Level of Education: 1. Non 2. Primary 3. Secondary 4. Tertiary (College) 5. University (Undergraduate) 6. Post Graduate (Master and Higher) 7. Other (Vocational, Church-Based, and Group Training)	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

GCR5	Business Category: 1. Radio Stations 2. Funeral Services 3. Wholesale Merchants 4. Motor Spares and Garage 5. Agro-Input Service Provider 6. Gas and Oil Stations 7. Catering and Hotel Services 8. Millers 9. Supermarkets 10. Books and Stationary Hub 11. Private Schools 12. Manufacturing firms	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
GCR6	What is the age of your business? 1.1 2.1-5 3.6-10 4.11-15 5.16-20 6.21+	☐ ☐ ☐ ☐ ☐ ☐
GCR7	How many people are employed in this business? 1.5 - 49 2.50-100	☐ ☐

GCR8	What is your primary source of debt finance? 1. Friend/Relatives 2. Money Lenders 3. Associations (VSLAS) 4. Savings and Credit Cooperative Organizations (SACCOs), 5. Microfinance Institutions 6. Banks	☐ ☐ ☐ ☐ ☐ ☐

Section II

In this section, we focus on gathering information that directly aligns with the key themes of our research agenda. It is important to note that the terminology used here revolves around crucial concepts such as debt financing, debt management behaviour, and the growth sustainability of Small and Medium-sized Enterprises all highly relevant to your daily professional endeavors and academic interests.

Part A: Debt financing

Within this segment, you will find statements on informal loan size, informal interest rate and Loan maturity that aim to assess your experience, opinions, and knowledge in the specific areas that directly impact your daily operations. Using the following scale, please tick (√) the extent you agree with the following statements. Where, 1= strongly disagree, 2 = disagree, 3 = Not sure, 4 = agree, and 5= strongly agree.

ILS	**Statement on Loan Size (Sangwan & Nayak, 2021)**	**1**	**2**	**3**	**4**	**5**
ILS1	Loan size allows small enterprises to attain their goals.	☐	☐	☐	☐	☐
ILS2	The size of loans has an impact on small and medium size enterprises profitability.	☐	☐	☐	☐	☐
ILS3	The larger the loan size, the more SBs can achieve their capitalization requirements.	☐	☐	☐	☐	☐

ILS4	Small enterprises frequently acquire the informal loan size they require	☐	☐	☐	☐	☐
ILS5	The number of loans received by small enterprises has increased in tandem with their profitability.	☐	☐	☐	☐	☐
ILS6	The size of loans has an impact on business growth.	☐	☐	☐	☐	☐
ILS7	The loan size influences the volume of small and medium size enterprises sales.	☐	☐	☐	☐	☐
INR	**Statement on Interest Rate (Nassoro & Jaraj, 2022)percentages, pie charts and tabulation to show differences in frequencies. Statistical Package for Social Sciences (SPSS**	**1**	**2**	**3**	**4**	**5**
INR1	Interest on loans is favorable for facilitating borrowing amongst Small and Medium-sized Enterprises in the main lira market.	☐	☐	☐	☐	☐
INR2	The interest rate charged is often dependent on the loan amount obtained by the Small and Medium-sized Enterprises	☐	☐	☐	☐	☐
INR3	The fear of high interest rates compels most Small and Medium-sized Enterprises to take up small loans	☐	☐	☐	☐	☐
INR4	Higher interest rates often discourage Small and Medium-sized Enterprises from applying for additional loan facilities	☐	☐	☐	☐	☐
INR5	Small and Medium-sized Enterprises can afford the interest rates charged by debt financer	☐	☐	☐	☐	☐

INR6	The Interest rates paid by Small and Medium-sized Enterprises remain fixed for the whole repayment period	☐	☐	☐	☐	☐
INR7	The Interest amount charged on loans is only for the amount and the period for which the loan is used	☐	☐	☐	☐	☐
LOR	**Statement on Loan maturity (Bob et al., 2018; Gomera & Ngollo, 2023).**	**1**	**2**	**3**	**4**	**5**
LOR1	I voluntarily repay my loans without any inducement.	☐	☐	☐	☐	☐
LOR2	I make on-time loan payments.	☐	☐	☐	☐	☐
LOR3	The process/mode of paying the debt is proper.	☐	☐	☐	☐	☐
LOR4	The terms of Loan maturity are agreed upon by debt financers and small and medium size enterprises borrower.	☐	☐	☐	☐	☐
LOR5	The debt financer accepts early Loan maturitys to shorten the repayment duration	☐	☐	☐	☐	☐
LOR6	The debt financer agrees to amend the Loan maturity schedule for current small and medium size enterprises loans to match with changes in the business's cash flows.	☐	☐	☐	☐	☐
LOR7	The Loan maturity time is appropriate for small firms' business cycles	☐	☐	☐	☐	☐
LOR8	The Loan maturity plan is determined by the loan amount obtained by the small and medium size enterprises	☐	☐	☐	☐	☐
LOR9	Debt financer provides loan payback schedules that are acceptable for small enterprises' cash flows	☐	☐	☐	☐	☐
LOR10	Most loans secured by small enterprises must be paid back within one year	☐	☐	☐	☐	☐

LOR11	The repayment duration for small enterprises varies according to loan size	☐	☐	☐	☐	☐

Part B: Debt Management Behaviour

Part B1: Lifestyle, and Religiosity

Within this segment, you'll find statements on lifestyle, and religiosity that aim to assess your experience, opinions, and knowledge in the specific areas that directly impact your daily operations. Using the following scale, please tick (√) the extent to which you agree with the following statements. Where, 1= strongly disagree, 2 = disagree, 3 = Not sure, 4 = agree, and 5 = strongly agree.

Part C: Debt Literacy

Debt Knowledge

This section contains statements designed to assess your knowledge of debt, focusing on areas that directly impact your daily operations. For each statement below, please indicate whether it is **True** or **False** by ticking (√) in the corresponding box. Use the following scale: Where, 1= True, 2 = False. Please carefully review each statement (KNO1–KNO10) and tick (√) the option that best reflects your understanding

KNO	**Statement on Debt Knowledge**	**True**	**False**
KNO1.	The interest rate on a loan is the percentage of the loan amount that you pay as interest each year	☐	☐
KNO2.	A credit score is a number that represents your creditworthiness, based on your credit history	☐	☐
KNO3.	When you miss a payment on a loan, it can negatively affect your credit score	☐	☐
KNO4.	Debt consolidation involves taking out a new loan to pay off multiple existing loans	☐	☐
KNO5.	The term of a loan refers to the length of time over which the loan will be repaid	☐	☐
KNO6.	Shorter loan terms usually result in lower overall interest payments	☐	☐

KNO7.	Defaulting on a loan means failing to repay it as agreed, which can have serious financial and legal consequences	☐	☐
KNO8.	Interest rates are the same for all types of loans, regardless of the lender	☐	☐
KNO9.	A secured loan requires collateral, while an unsecured loan does not	☐	☐
KNO10.	Refinancing a loan can reduce your monthly payments but may extend the repayment term	☐	☐

Debt Skills

This section evaluates your debt management proficiency through practical scenarios involving basic arithmetic and debt concepts. Each question presents four options. Using the following scale, please tick (√) the extent to which you agree with the following statements. Where :1 – Strongly Disagree, 2 – Disagree, 3 – Agree, and 4 – Strongly Agree

SKI	**Statement on Debt Skills**	**1**	**2**	**3**	**4**
SKI 1	Borrowing UGX 1,000,000 at an annual interest rate of 10% results in an interest payment of UGX 100,000 after one year	☐	☐	☐	☐
SKI 2	A loan of UGX 500,000 with an annual compound interest rate of 12% amounts to UGX 560,000 after one year	☐	☐	☐	☐
SKI 3	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	☐	☐	☐	☐
SKI 4	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%.	☐	☐	☐	☐

SKI 5	A loan with monthly payments of UGX 50,000 and a 10% annual interest rate compounded monthly will result in a balance of UGX 300,000 after 6 months	☐	☐	☐	☐

Part D: Growth Sustainability of Small and Medium-sized Enterprises

Within this segment, you'll find statements on sales growth, profitability and employee growth that aim to assess your experience, opinions, and knowledge in the specific areas that directly impact your daily operations. Using the following scale, please tick (√) the extent you agree with the following statements. Where, 1=Very low extent, 2 = Low extent, 3 =moderate extent, 4 = High extent, and 5= Very high extent. Please tick (√) once.

SSG	Statement on Sales Growth	1	2	3	4	5
SSG1	The demand for my products/services has increased significantly over the past year	☐	☐	☐	☐	☐
SSG2	The business has expanded into new markets or regions to boost sales	☐	☐	☐	☐	☐
SSG3	The number of customers purchasing from my business has increased consistently	☐	☐	☐	☐	☐
SSG4	Repeat customers contribute to a significant portion of my sales growth	☐	☐	☐	☐	☐
SSG5	Customer satisfaction levels have improved, leading to higher sales	☐	☐	☐	☐	☐
SSG6	I actively track customer feedback to improve products/services, leading to increased sales	☐	☐	☐	☐	☐
SSG7	The business has implemented successful marketing strategies that have driven sales growth	☐	☐	☐	☐	☐
SSG8	We have adopted new sales techniques, such as digital marketing, that have positively impacted sales	☐	☐	☐	☐	☐
SSG9	My business uses pricing strategies effectively to maximize sales growth	☐	☐	☐	☐	☐
SSG10	The introduction of new products or services has contributed to my business's sales growth	☐	☐	☐	☐	☐
SSG11	We continuously innovate to meet changing customer preferences, which helps increase sales	☐	☐	☐	☐	☐
SSG12	Sales growth is driven by diversifying the range of products/services offered	☐	☐	☐	☐	☐
SSG13	Sales growth has directly contributed to improved cash flow and business stability	☐	☐	☐	☐	☐

SSG14	The increase in sales volume has led to economies of scale and cost reductions	☐	☐	☐	☐	☐
SPG	**Statement on Profitability Growth**	**1**	**2**	**3**	**4**	**5**
SPG1	The business has increased profitability by effectively managing operational costs	☐	☐	☐	☐	☐
SPG2	The business has optimized its supply chain, leading to higher profit margins	☐	☐	☐	☐	☐
SPG3	Over the past year, the business has experienced improved profitability despite rising costs	☐	☐	☐	☐	☐
SPG4	The business has consistently maintained or improved profit margins over the years	☐	☐	☐	☐	☐
SPG5	We have successfully identified and eliminated inefficient processes to increase profits	☐	☐	☐	☐	☐
SPG6	The business's profit margins have remained stable despite market volatility	☐	☐	☐	☐	☐
SPG7	Investments in technology or infrastructure have led to increased profitability					
SPG8	The business has been able to reinvest profits into growth initiatives without jeopardizing profitability	☐	☐	☐	☐	☐
SPG9	Profitability has been strengthened by strategic investments in assets and human capital	☐	☐	☐	☐	☐
SPG10	I have implemented successful pricing strategies that have led to higher profit margins	☐	☐	☐	☐	☐

SPG11	The business has diversified revenue streams, reducing dependency on one source of income and increasing profitability	☐	☐	☐	☐	☐
SPG12	I am confident that the business will continue to experience profitability growth in the foreseeable future	☐	☐	☐	☐	☐
SPG13	The business has a clear financial strategy to ensure continued profitability, even in uncertain economic conditions	☐	☐	☐	☐	☐
SEG	**Statement on Employee Growth**	**1**	**2**	**3**	**4**	**5**
SEG1	The number of employees in the business has increased as the business has grown	☐	☐	☐	☐	☐
SEG2	The business hires based on specific growth needs, leading to strategic workforce expansion	☐	☐	☐	☐	☐
SEG3	Over the past year, the growth in staff numbers has been directly aligned with business growth	☐	☐	☐	☐	☐
SEG4	Employee retention rates have improved due to better engagement and work culture	☐	☐	☐	☐	☐
SEG5	The business has invested in training and development programs that have contributed to employee growth	☐	☐	☐	☐	☐
SEG6	We provide opportunities for career advancement, leading to higher employee satisfaction and growth	☐	☐	☐	☐	☐
SEG7	The business has been hiring employees with specialized skills to support business growth	☐	☐	☐	☐	☐

SEG8	The business has focused on building a workforce that is agile and adaptable to changes	☐	☐	☐	☐	☐
SEG9	Employee growth has been driven by increasing the skill sets of the workforce through training and development	☐	☐	☐	☐	☐
SEG10	Employee productivity has increased as a result of strategic recruitment and team building	☐	☐	☐	☐	☐
SEG11	The business's workforce is more efficient, leading to cost savings and higher growth	☐	☐	☐	☐	☐
SEG12	Increased employee engagement has led to higher productivity and overall business growth	☐	☐	☐	☐	☐

Appendix B: Interview Guide

GULU UNIVERSITY

FACULTY OF BUSINESS AND DEVELOPMENT STUDIES

Department of Accounting and Finance

Interviewee Identification Number: _____

Interview Schedule Date: _____

Interview Date: _____

Type of Business: _____

For how long have you been operating this business? _____

Semi-Structured Interview Guide on the Study: To Examine SME Owners' Perspectives on Debt Financing and Growth Sustainability

1. Can you share your experience in obtaining business loans?
2. How do you determine the appropriate loan size for your business needs?
3. What role does the interest rate play in your loan decision-making process?
4. How do you manage the repayment of loans and how does this affect your business operations?
5. What challenges have you encountered with Loan maturity terms or interest rates?
6. Can you describe a situation where a business loan directly contributed to growth in sales, profits, or staff?
7. What strategies do you use to balance loan obligations and business sustainability?
8. Have you ever turned down a loan due to its conditions? Why?
9. How do you evaluate the risks and benefits of taking on debt?
10. In your view, what makes a loan beneficial or harmful to SME growth?

Semi-Structured Interview Guide on the Study: To Examine SME Owners' Perspectives on Debt Management Behaviour and Growth Sustainability

1. Can you describe your experience with managing debt in your business?
2. How do you decide the size of a loan that is appropriate for your business needs?
3. In what ways does the interest rate affect your decision to take or avoid loans?
4. What strategies do you use to ensure timely and consistent repayment of business loans?
5. How do your day-to-day lifestyle habits affect your business's financial decisions and debt management practices?
6. Can you share how your religious beliefs influence your borrowing decisions and repayment behaviour?
7. How confident do you feel in your ability to manage business finances, especially in times of financial pressure?
8. What specific challenges have you encountered when using debt to support your business growth?
9. Can you provide an example of how your debt management behaviour directly affected your sales, profit, or staff levels?
10. Based on your experiences, what advice would you give to fellow SME owners about managing debt responsibly?

Appendix C: Informed Consent Form

GULU UNIVERSITY

FACULTY OF BUSINESS AND DEVELOPMENT STUDIES

Department of Accounting and Finance

Informed consent document for questionnaire survey

Title of the study: Debt Financing, Debt Management Behaviour and Growth Sustainability of Small and Medium-sized Enterprises in Lira City.
Investigator: Okello Apollo
Institution: Gulu University

Introduction

I am Okello Apollo, a PhD student at Gulu University, conducting research on debt financing, debt management behaviour, and the growth sustainability of Small and Medium-sized Enterprises (SMEs). I am seeking your valuable insights, given your recognized expertise in the field, to contribute to the depth and quality of my study. The information collected will be used solely for academic purposes and kept confidential. I understand your time is valuable, and I greatly appreciate your participation in completing the attached questionnaire. Your input will significantly contribute to advancing academic knowledge in this area. Thank you for your consideration.
This informed consent explains the study to you. After the study has been explained, any questions you may have are answered. When you have decided to participate in the study, you will be asked to sign a consent, which you will be given a copy to keep.

A brief description of the sponsors of the research project

Purpose:

The study seeks to examine the effect of debt financing and debt management behaviour on the growth sustainability of Small and Medium-sized Enterprises in Lira City. The findings of this study will help to provide valuable insights for various

stakeholders, including SME owners, managers, employees, clients, other SMEs, government entities, and the Uganda Revenue Authority (URA). It will guide owners and managers in making informed financial decisions, improve business stability for employees, and help administrators enhance debt management frameworks. Clients will benefit from better service delivery, and other SMEs can adopt best practices for growth. Policymakers and the URA can develop supportive policies and improve tax compliance. The study will also contribute to academic literature and support the researcher's professional development.

Procedures:

Your participation in this study will involve completing a questionnaire designed to gather insights on debt financing, debt management behaviour, and the growth sustainability of Small and Medium-sized Enterprises (SMEs). The questionnaire will include straightforward questions regarding your experiences and practices related to managing debt and growing your business.

Who will participate in the study?

You have been chosen to participate in this study because you are a key stakeholder in the operations and growth of Small and Medium-sized Enterprises (SMEs) within Lira City. Your expertise, experiences, and insights into debt financing, debt management behaviour, and business sustainability make you an invaluable source of information for this research. The questionnaire survey session will last approximately 20 minutes and 311 participants will take part in this study.

Risks/discomforts:

There is no foreseeable risk of harm or discomfort that will arise from your participation in this study. The only risk or discomfort will be the inconvenience in terms of time spent during the interview.

Benefits:

As a participant in this study, you will benefit from receiving feedback on the findings and progress, giving you valuable insights into how your contributions shape the research outcomes. Additionally, if any new information or incidental findings arise during the study that could impact you, these will be promptly shared with you. This ensures that you remain informed and empowered to make better decisions

regarding debt financing and management practices, ultimately supporting the sustainable growth of your business.

Confidentiality:

Your identity will not be revealed to any one as we shall only use codes to identify participants. Information obtained will only be accessible by the research team. Soft copies of the data will be protected by password and hard copy files will be kept under lock and key. Confidential information will only be accessed by the principal investigator.

Alternatives:

You do not have to participate in this study if you are not interested. You will not lose any benefit in case of no participation.

Cost:

There will not be any additional cost incurred as a result of participating in this study. However, you will be provided with ugx. 10,000 as time compensation.

Questions:

If you have any questions related to the study as a research participant, you can contact the principal investigator, Mr. Okello Apollo on telephone number 0392995571/0754092598 or via email on apollookello2010.ao@gmail.com

Statement of voluntariness:

Participation in the research study is voluntary and you may join on your own free will. You have a right to withdraw from the study at any time without penalty.

If you have any issues pertaining to your rights and participation in the study, please contact the Chairperson, Gulu University Research Ethics Committee, Dr. Julaina A. Obika Tel: No., 0772964491; email: j.obika@gu.ac.ug ; or the Uganda National Council for Science and Technology, on plot 6 Kimera road, Ntinda, Kampala on Tel 0414705500.

Statement of consent

..... has described to me what is going to be done, the risks, the benefits involved and my rights as a participant in this study.

I understand that my decision to participate in this study will not affect me in any way. In the use of this information, my identity will be concealed. I am aware that I may withdraw at any time. I understand that by signing this form, I do not waive any of my legal rights but merely indicate that I have been informed about the research study in which I am voluntarily agreeing to participate. A copy of this form will be provided to me.

Name ……Signature/thumbprint of participant……Date ……

Name…….Signature of witness…… Date……

Name……Signature of Research Assistant…… Date……..

Appendix D: Uganda National Council for Science and Technology (UNCST) Clearance



Uganda National Council for Science and Technology

(Established by Act of Parliament of the Republic of Uganda)

Our Ref: SS3676ES **4 March 2025**

Apollo Okello
Gulu University
Gulu

Re: Research Approval: **DEBT FINANCING, DEBT MANAGEMENT BEHAVIOR AND GROWTH SUSTAINABILITY OF SMALL AND MEDIUM-SIZED ENTERPRISES IN LIRA CITY**

I am pleased to inform you that on 04/03/2025, the Uganda National Council for Science and Technology (UNCST) approved the above referenced research project. The Approval of the research project is for the period of 04/03/2025 to 04/03/2026.

Your research registration number with the UNCST is SS3676ES. Please, cite this number in all your future correspondences with UNCST in respect of the above research project. As the Principal Investigator of the research project, you are responsible for fulfilling the following requirements of approval:

1. Keeping all co-investigators informed of the status of the research.
2. Submitting all changes, amendments, and addenda to the research protocol or the consent form (where applicable) to the designated Research Ethics Committee (REC) or Lead Agency for re-review and approval prior to the activation of the changes. UNCST must be notified of the approved changes within five working days.
3. For clinical trials, all serious adverse events must be reported promptly to the designated local REC for review with copies to the National Drug Authority and a notification to the UNCST.
4. Unanticipated problems involving risks to research participants or other must be reported promptly to the UNCST. New information that becomes available which could change the risk/benefit ratio must be submitted promptly for UNCST notification after review by the REC.
5. Only approved study procedures are to be implemented. The UNCST may conduct impromptu audits of all study records.
6. An annual progress report and approval letter of continuation from the REC must be submitted electronically to UNCST. Failure to do so may result in termination of the research project.

Please note that this approval includes all study related tools submitted as part of the application as shown below:

No.	Document Title	Language	Version Number	Version Date
	Project Proposal	English	1	
1	Approval Letter	English		

Yours sincerely,



Hellen Opolot
For: Executive Secretary
UGANDA NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY

LOCATION/CORRESPONDENCE

Plot 6 Kimera Road, Ntinda
P.O. Box 6884
KAMPALA, UGANDA

COMMUNICATION

TEL: (256) 414 705500
FAX: (256) 414-234579
EMAIL: info@uncst.go.ug
WEBSITE: http://www.uncst.go.ug

Appendix E: Gulu University Research Ethic Committee (GUREC) Clearance

GULU UNIVERSITY

P.O. Box 166, Gulu (U)
Website: www.gu.ac.ug
Email: gurec@gu.ac.ug

Tel: +256 471 432 096
Fax: +256 471 432 913
Mob: +256 772 964 491
+256 776 812 147

RESEARCH ETHICS COMMITTEE

13/02/2025

To: Apollo Okello

0392995571

Type: Initial Review

Re: GUREC-2024-1057: DEBT FINANCING, DEBT MANAGEMENT BEHAVIOR AND GROWTH SUSTAINABILITY OF SMALL AND MEDIUM-SIZED ENTERPRISES IN LIRA CITY

I am pleased to inform you that at the **120th** convened meeting on **27/11/2024**, the Gulu University REC meeting voted to approve the above referenced application.
Approval of the research is for the period of **13/02/2025** to **13/02/2026.**

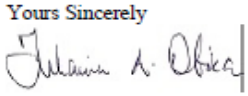
As Principal Investigator of the research, you are responsible for fulfilling the following requirements of approval:

1. All co-investigators must be kept informed of the status of the research.
2. Changes, amendments, and addenda to the protocol or the consent form must be submitted to the REC for re-review and approval **prior** to the activation of the changes.
3. Reports of unanticipated problems involving risks to participants or any new information which could change the risk benefit: ratio must be submitted to the REC.
4. Only approved consent forms are to be used in the enrollment of participants. All consent forms signed by participants and/or witnesses should be retained on file. The REC may conduct audits of all study records, and consent documentation may be part of such audits.
5. Continuing review application must be submitted to the REC **eight weeks** prior to the expiration date of **13/02/2026** in order to continue the study beyond the approved period. Failure to submit a continuing review application in a timely fashion may result in suspension or termination of the study.
6. The REC application number assigned to the research should be cited in any correspondence with the REC of record.
7. You are required to register the research protocol with the Uganda National Council for Science and Technology (UNCST) for final clearance to undertake the study in Uganda.

The following is the list of all documents approved in this application by Gulu University REC:

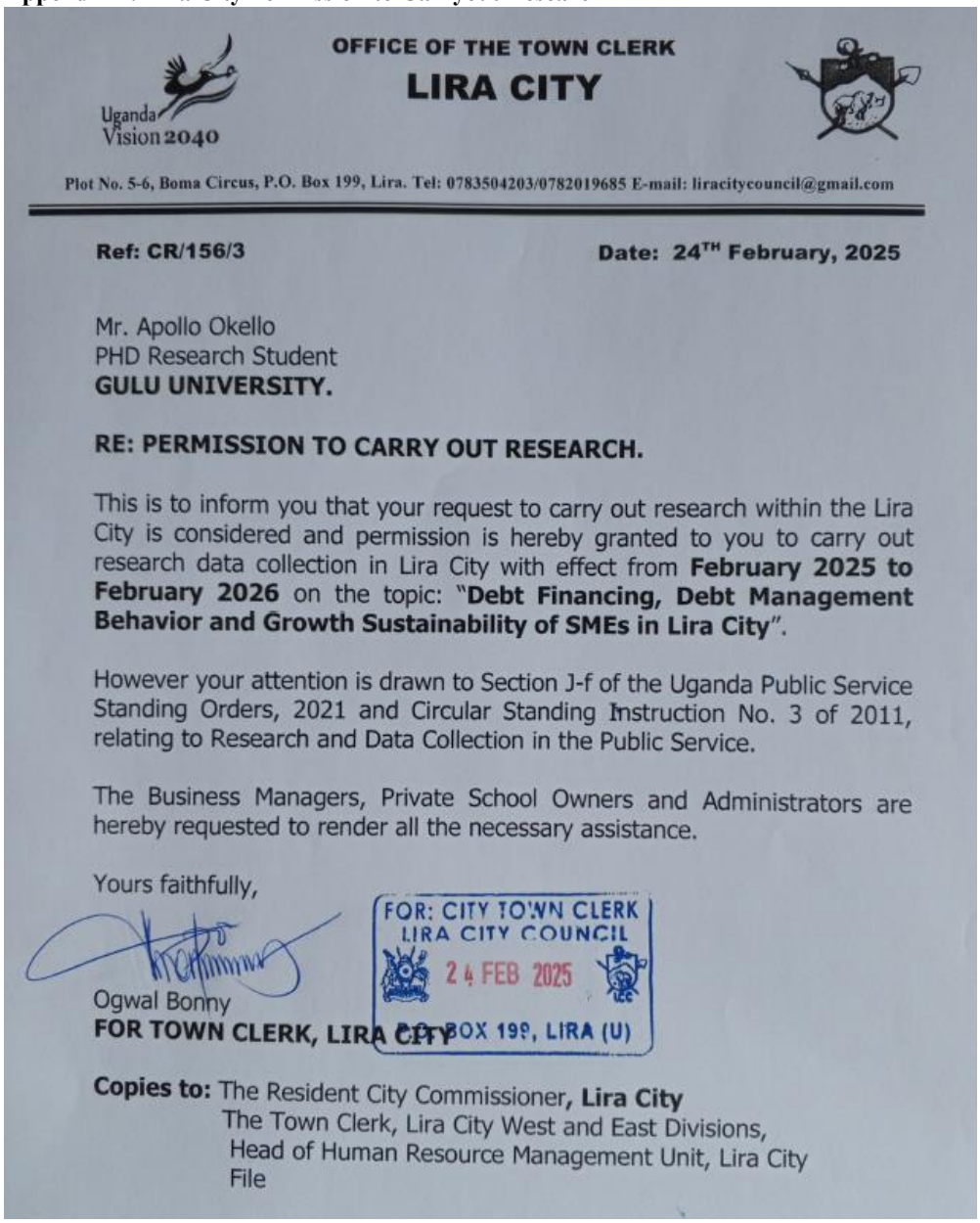
No.	Document Title	Language	Version Number	Version Date
1	Protocol	English	3	2025-02-06
2	Data collection tools	English	2	2025-01-21
3	Informed consent form for the recruitment of research participants	English	1	2025-01-21
4	Informed Consent forms	English	1	2025-01-21
5	COVID-19 & EBOLA risk management plan	English	1	2025-01-21
6	Community Engagement plan	English	1	2025-01-21

Yours Sincerely



Julaina A. Obika (PhD)
For: Gulu University REC

Appendix F: Lira City Permission to Carryout Research



OFFICE OF THE TOWN CLERK

LIRA CITY

Uganda Vision 2040

Plot No. 5-6, Boma Circus, P.O. Box 199, Lira. Tel: 0783504203/0782019685 E-mail: liracitycouncil@gmail.com

Ref: CR/156/3 **Date: 24TH February, 2025**

Mr. Apollo Okello
PHD Research Student
GULU UNIVERSITY.

RE: PERMISSION TO CARRY OUT RESEARCH.

This is to inform you that your request to carry out research within the Lira City is considered and permission is hereby granted to you to carry out research data collection in Lira City with effect from **February 2025 to February 2026** on the topic: "**Debt Financing, Debt Management Behavior and Growth Sustainability of SMEs in Lira City**".

However your attention is drawn to Section J-f of the Uganda Public Service Standing Orders, 2021 and Circular Standing Instruction No. 3 of 2011, relating to Research and Data Collection in the Public Service.

The Business Managers, Private School Owners and Administrators are hereby requested to render all the necessary assistance.

Yours faithfully,

FOR: CITY TOWN CLERK
LIRA CITY COUNCIL
24 FEB 2025
P.O. BOX 199, LIRA (U)

Ogwal Bonny
FOR TOWN CLERK, LIRA CITY

Copies to: The Resident City Commissioner, **Lira City**
The Town Clerk, Lira City West and East Divisions,
Head of Human Resource Management Unit, Lira City
File

Appendix G: Summary of Reviewed Empirical Literature

2.3.1: Debt Financing and Growth Sustainability of SMEs

Author(s) & Year	Study Focus	Key Findings	Knowledge Gap	Focus of the Current Study
Badi & Ishengoma (2021)	Flexible loan conditions and SME development in Tanzania	Flexible loan conditions and affordable financing were associated with improved income and employment outcomes.	Did not examine whether loan size, interest rate and maturity jointly explain growth sustainability or whether borrower capability influences the relationship.	Examine the relationship between loan size, interest rate, loan maturity and SME growth sustainability in Lira City.
Kassegn & Endris (2022)	Loan structure and SME performance in Ethiopia	Appropriately structured loans, manageable interest rates and longer maturities supported liquidity, reinvestment and business performance.	Limited attention to the combined contribution of loan size, interest rate and maturity and the Ugandan SME context.	Evaluate the combined relationship between debt-financing characteristics and growth sustainability among SMEs in Lira City.
Githaiga & Kabiru (2015)	High-interest and short-term loans and SME performance in Kenya	High-interest and short-term borrowing was associated with reduced profitability and cash-flow stability.	Did not incorporate borrower capability or examine the combined effects of debt-financing characteristics.	Examine how debt-financing characteristics are associated with SME growth sustainability in Lira City, subject to source verification.
Bob et al. (2018)	Loan maturity conditions and enterprise liquidity	The study provides evidence concerning Loan maturity performance and borrower-related factors in Uganda.	The supplied description of Kenyan SMEs and its specific claims about loan structure should be verified against the original source; the study does not establish the complete relationship between loan size, interest rate and maturity and growth sustainability.	Examine the integrated relationship between debt-financing characteristics and SME growth sustainability in Lira City, using verified evidence.

Mamaro & Legotlo (2020)	Loan maturity and strategic SME investment in South Africa	Longer-term financing was associated with capital investment and employment expansion, while short-term borrowing was associated with operational instability.	Did not adequately integrate borrower capability and the combined effects of loan characteristics within the Ugandan context.	Assess the relationship between loan maturity and other debt-financing characteristics and SME growth sustainability in Lira City.
Obuya (2017); Lukonga (2020)	Loan characteristics and SME performance in African and East African contexts	The studies provide evidence concerning financing conditions and SME financial outcomes.	Limited integrated analysis of loan size, interest rate and maturity in relation to sustainable SME growth in Lira City.	Examine the combined relationship between the three debt-financing dimensions and SME growth sustainability.
Ahmed et al. (2022); Bukenya et al. (2023)	Barriers to SME financing in Uganda	Financing constraints included issues relating to borrowing costs, creditworthiness and financial planning.	Focused primarily on financing barriers rather than directly examining how loan characteristics relate to growth sustainability.	Assess how debt-financing characteristics are associated with the growth sustainability of SMEs in Lira City.
Synthesis of reviewed studies	Debt financing and SME growth sustainability	The evidence indicates that the contribution of debt financing varies according to loan conditions, repayment requirements and the business context.	Limited integrated evidence on the combined relationship between loan size, interest rate and maturity and SME growth sustainability in Lira City.	Test the relationship between debt financing and SME growth sustainability using a quantitative model covering loan size, interest rate and loan maturity.

2.3.2: Debt Management Behaviour and Growth Sustainability of SMEs

Author(s) & Year	Study Focus	Key Findings	Knowledge Gap	Focus of the Current Study
Graña-Alvarez et al. (2022)	Post-loan behaviour and SME sustainability	Budgeting, repayment discipline and reinvestment practices were associated with improved post-loan outcomes.	Did not specifically examine lifestyle pattern, religiosity and financial self-efficacy as dimensions of debt management behaviour or their relationship with SME growth sustainability.	Examine the relationship between lifestyle pattern, religiosity, financial self-efficacy and SME growth sustainability in Lira City.
Serrasqueiro et al. (2023)	Debt structure, financial practices and SME growth in Europe	Financial planning and record-keeping were associated with SME growth-related outcomes.	Limited attention to behavioural characteristics and the contextual conditions of SMEs in Sub-Saharan Africa.	Assess the relationship between specified debt management behaviours and growth sustainability in Lira City.
Badi & Ishengoma (2021)	Loan monitoring and debt management practices in Tanzania	Effective loan monitoring and repayment planning enhanced the benefits associated with loan financing.	Did not examine lifestyle pattern, religiosity and financial self-efficacy as distinct behavioural dimensions.	Model debt management behaviour through lifestyle pattern, religiosity and financial self-efficacy among SMEs in Lira City.
Nuwagaba et al. (2021)	Internal debt mismanagement and SME sustainability in Uganda	Weak financial controls and ineffective repayment practices were associated with debt-management difficulties and business challenges.	The qualitative approach did not quantitatively test the relationship between specific behavioural dimensions and growth sustainability.	Quantitatively examine the relationship between debt management behaviour and SME growth sustainability in Lira City.

Razak et al. (2020)	Financial self-efficacy and repayment behaviour in Kenya	Higher financial self-efficacy was associated with more responsible debt repayment behaviour.	Did not establish the relationship between self-efficacy and wider SME growth sustainability outcomes.	Examine financial self-efficacy as one dimension of debt management behaviour and its relationship with SME growth sustainability.
Opoku et al. (2023)	Religiosity and ethical borrowing	The reported focus and findings require verification against the original source and reference entry.	The source cannot be used to support claims about religiosity and SME debt behaviour until the citation is verified.	Examine the role of religiosity in debt management behaviour and SME growth sustainability using verified theoretical and empirical sources.
Nyeko et al. (2024); Palupi et al. (2023)	Lifestyle orientation and financial behaviour	The supplied text associates frugal or investment-oriented lifestyles with more favourable financial outcomes and consumption-oriented behaviour with problematic financial practices.	The studies were not integrated into a complete model of lifestyle pattern, debt management behaviour and SME growth sustainability; source details require verification.	Examine lifestyle pattern as a dimension of debt management behaviour in relation to SME growth sustainability in Lira City.
Ranyard (2018); related behavioural finance literature	Behavioural factors and financial decision-making	Behavioural characteristics can influence financial decisions, borrowing and repayment practices.	Limited direct empirical integration of lifestyle pattern, religiosity and financial self-efficacy within an SME growth model.	Develop and test an integrated debt management behaviour construct comprising lifestyle pattern, religiosity and financial self-efficacy.
Turyakira et al. (2019); Nuwagaba et al. (2021)	Firm capability, finance and SME performance	Firm capabilities, access to finance and internal financial practices are relevant to SME performance.	Limited integration of behavioural debt-management dimensions into an explanatory model of SME growth sustainability.	Examine the contribution of debt management behaviour to SME growth sustainability while maintaining a clear focus on the selected behavioural dimensions.

Synthesis of reviewed studies	Debt management behaviour and SME growth sustainability	The literature indicates that monitoring, repayment discipline, financial control and individual behavioural characteristics are relevant to debt use and business outcomes.	Limited quantitative and context-specific evidence on the combined relationship between lifestyle pattern, religiosity, financial self-efficacy and SME growth sustainability in Lira City.	Test the relationship between debt management behaviour and SME growth sustainability using a multidimensional quantitative model.

2.3.3: Debt Literacy as a Moderator Between Debt Financing and SME Growth Sustainability

Author(s) & Year	Study Focus	Key Findings	Knowledge Gap	Focus of the Current Study
Badi & Ishengoma (2021)	Flexible loan conditions and SME performance in Tanzania	Flexible and affordable loan conditions were associated with improved SME outcomes.	Did not examine whether debt literacy changes the relationship between financing conditions and SME growth sustainability.	Test the moderating effect of debt literacy on the relationship between debt financing and SME growth sustainability in Lira City.
Kassegn & Endris (2022)	Loan structure and SME financial outcomes in Ethiopia	Appropriately structured loans supported liquidity, reinvestment and business performance.	Did not examine whether borrowers' debt-related knowledge influences the effectiveness of loan size, interest rate and maturity.	Examine whether debt literacy moderates the relationship between loan size, interest rate, loan maturity and SME growth sustainability.
Githaiga & Kabiru (2015)	Short-term, high-interest loans and SME performance in Kenya	Costly and short-term borrowing was associated with weaker profitability and cash-flow stability.	Did not incorporate debt literacy or borrower capability into the explanation of debt-financing outcomes.	Assess whether debt literacy conditions the relationship between debt-financing characteristics and SME growth sustainability, subject to source verification.

Bob et al. (2018)	Repayment conditions and enterprise liquidity in Uganda	The source provides evidence concerning Loan maturity performance and borrower-related factors.	The supplied description and its relevance to the specific debt-financing dimensions require verification; debt literacy was not explicitly modelled.	Examine the moderating role of debt literacy in the relationship between debt financing and SME growth sustainability using verified evidence.
Mamaro & Legotlo (2020)	Loan duration and SME development in South Africa	Longer-term financing was associated with investment and employment expansion, while short-term borrowing was associated with instability.	Did not account for debt-related knowledge as a factor that may influence the effects of loan structure.	Test whether debt literacy moderates the relationship between debt-financing characteristics and SME growth sustainability.
Orobia et al. (2020)	Financial literacy and loan utilisation in Uganda	General financial literacy was positively associated with loan utilisation and enterprise performance.	Did not distinguish debt literacy from general financial literacy or test its moderating effect.	Distinguish debt literacy conceptually and examine its moderating effect on the debt financing–growth sustainability relationship.
Namagembe & Mbago (2023)	Financial comprehension and debt management in Northern Uganda	Inadequate financial comprehension was associated with ineffective debt allocation and increased default.	Did not test whether debt literacy moderates the relationship between specific loan characteristics and SME growth sustainability.	Test the interaction between debt financing and debt literacy in explaining SME growth sustainability in Lira City.
Zaniarti et al. (2022); Ferli (2023)	Debt education and borrowing decisions in Indonesia	Debt-related education and training were associated with more strategic borrowing and reduced exposure to high-risk loans.	Did not test the moderating role of debt literacy in the relationship between debt financing and SME growth.	Examine whether debt literacy changes the relationship between debt financing and SME growth sustainability in the Ugandan context.

Porzak et al. (2021)	Debt literacy, loan management and financial stress among SMEs in Poland	Debt-literate entrepreneurs managed loans more effectively and experienced lower financial stress.	Did not examine the interaction between debt literacy, loan structure and broader SME growth outcomes.	Model the moderating effect of debt literacy on the relationship between debt financing and growth sustainability.
Synthesis of reviewed studies	Debt literacy, debt financing and SME growth sustainability	The literature suggests that loan conditions and borrowers' financial knowledge may jointly influence the outcomes of debt financing.	Limited empirical evidence tests debt literacy as a moderator between loan size, interest rate, loan maturity and SME growth sustainability, particularly in Lira City.	Test H_3 by estimating the moderating effect of debt literacy on the relationship between debt financing and SME growth sustainability.

2.3.4: Debt Literacy as a Moderator Between Debt Management Behaviour and SME Growth Sustainability

Author(s) & Year	Study Focus	Key Findings	Knowledge Gap	Focus of the Current Study
Badi & Ishengoma (2021)	Loan monitoring, repayment planning and SME performance in Tanzania	Effective loan oversight and repayment planning were associated with improved performance.	Did not examine whether debt literacy conditions the relationship between debt management behaviour and SME growth sustainability.	Test the moderating effect of debt literacy on the relationship between debt management behaviour and SME growth sustainability in Lira City.
Mamaro & Legotlo (2020)	Debt supervision and SME failure in South Africa	Inadequate debt monitoring and inconsistent repayment practices were associated with increased business failure.	Did not examine whether debt-related knowledge could strengthen the effectiveness of debt-management practices.	Examine the interaction between debt literacy and debt management behaviour in relation to SME growth sustainability.

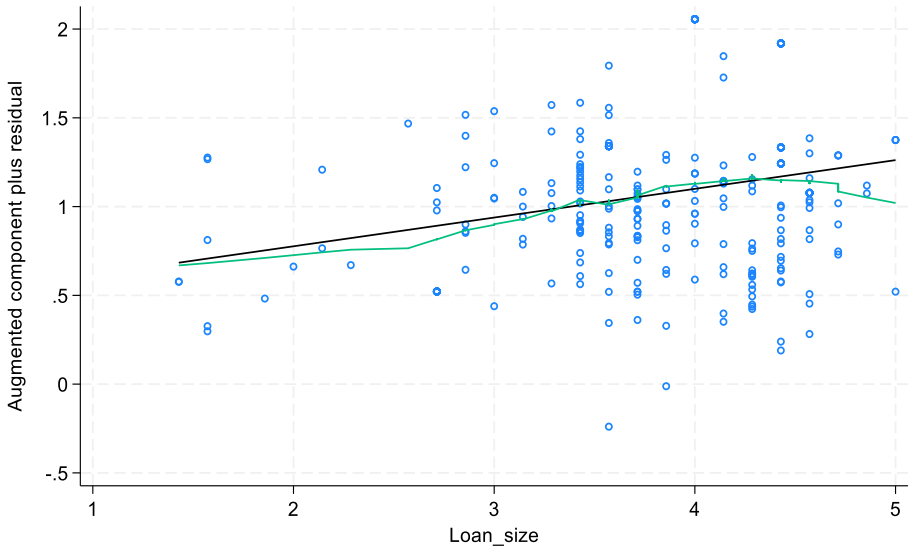
Nuwagaba et al. (2021)	Internal debt mismanagement among Ugandan SMEs	Weak financial controls and ineffective repayment strategies were associated with debt-management difficulties and business failure.	Did not quantitatively test the moderating role of debt literacy.	Quantitatively examine whether debt literacy changes the relationship between debt management behaviour and SME growth sustainability.
Razak et al. (2020)	Financial self-efficacy and responsible repayment in Kenya	Financial self-efficacy was associated with more responsible repayment behaviour.	Did not examine whether debt literacy moderates the relationship between self-efficacy and SME growth outcomes.	Assess financial self-efficacy as a behavioural dimension and test its interaction with debt literacy.
Sabri & Wijekoon (2019)	Financial knowledge and financial behaviour among Malaysian youth	Financial knowledge was associated with improved financial behavioural intentions.	Did not examine debt literacy as a distinct construct or its moderating role in SME debt management.	Examine whether debt literacy strengthens the relationship between debt management behaviour and SME growth sustainability.
Agyei (2018); Orobia et al. (2020)	Financial knowledge, debt management and SME outcomes	Financial knowledge was associated with improved repayment behaviour and loan utilisation.	Did not test the interaction between financial knowledge and behavioural characteristics in explaining SME growth sustainability.	Analyse the moderating role of debt literacy in the relationship between debt management behaviour and SME growth sustainability.
Kintu et al. (2019); Ilugbusi & Adisa (2024)	Financial capability, self-efficacy and business resilience	Financial capability, self-efficacy and behavioural discipline were associated with improved loan management or resilience.	The studies did not adequately test debt literacy as a moderating construct.	Assess the interaction between debt literacy and debt management behaviour using Structural Equation Modelling.

Buyinza et al. (2018)	Financial behaviour, financial literacy and SME success in Uganda	The study incorporated financial literacy and financial behaviour in an SEM-based model of SME success.	Did not explicitly isolate debt literacy or estimate interaction terms between literacy and debt management behaviour.	Include debt literacy as a moderator of the relationship between debt management behaviour and SME growth sustainability.
Lusardi & Tufano (2015); Zaniarti et al. (2022)	Debt literacy and credit-risk management	Debt knowledge was associated with improved understanding of borrowing costs, credit risks and repayment decisions.	Did not examine how debt literacy conditions the relationship between SME debt management behaviour and firm-level growth outcomes.	Examine whether debt literacy moderates the relationship between debt management behaviour and SME growth sustainability in Lira City.
Synthesis of reviewed studies	Debt management behaviour, debt literacy and SME growth sustainability	The literature suggests that behavioural practices and debt-related knowledge may jointly influence debt use, repayment and financial outcomes.	Limited empirical evidence tests whether debt literacy changes the strength of the relationship between lifestyle pattern, religiosity, financial self-efficacy and SME growth sustainability.	Test H_4 by estimating the moderating effect of debt literacy on the relationship between debt management behaviour and SME growth sustainability.

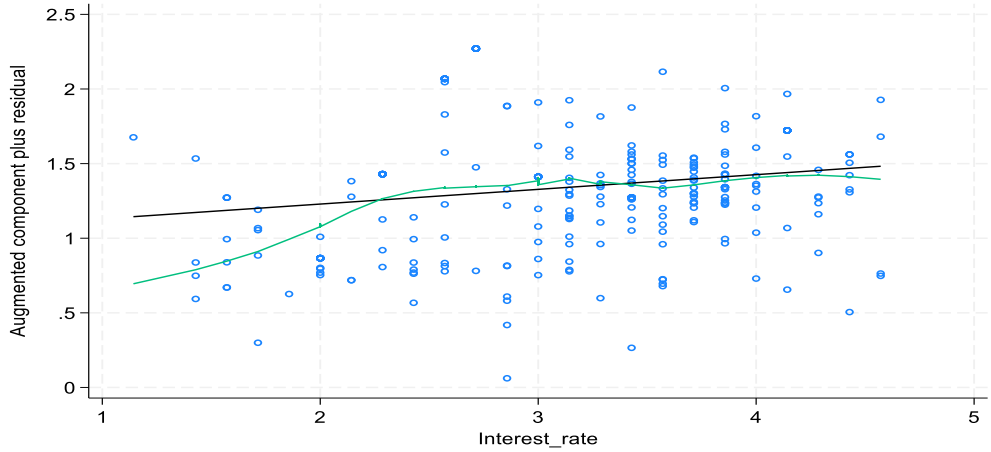
Appendix H: Regression Diagnostic Tests

H1. Linearity Assessment

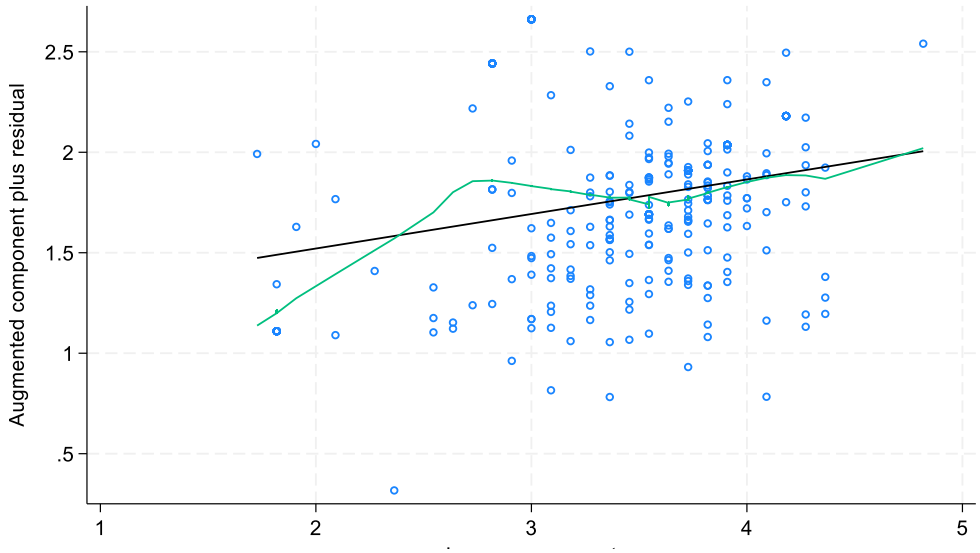
Component-plus-residual plot for Loan Size



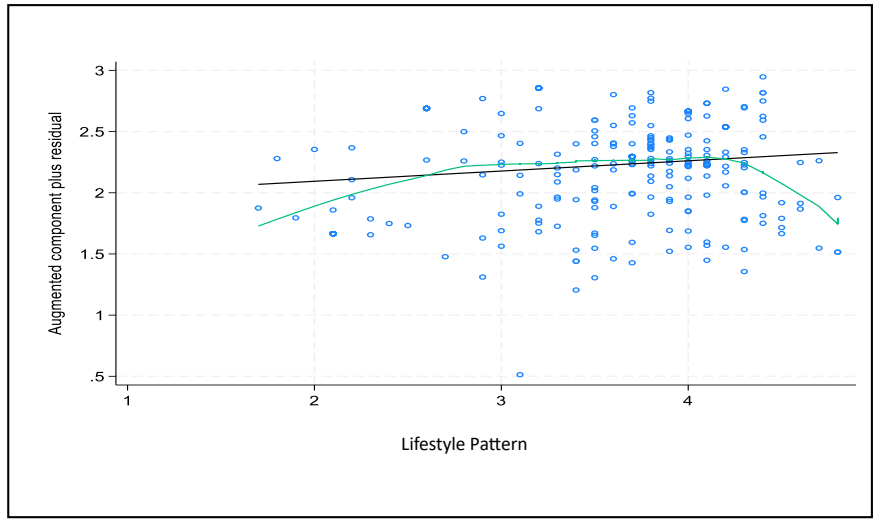
Component-plus-residual plot for Interest Rate



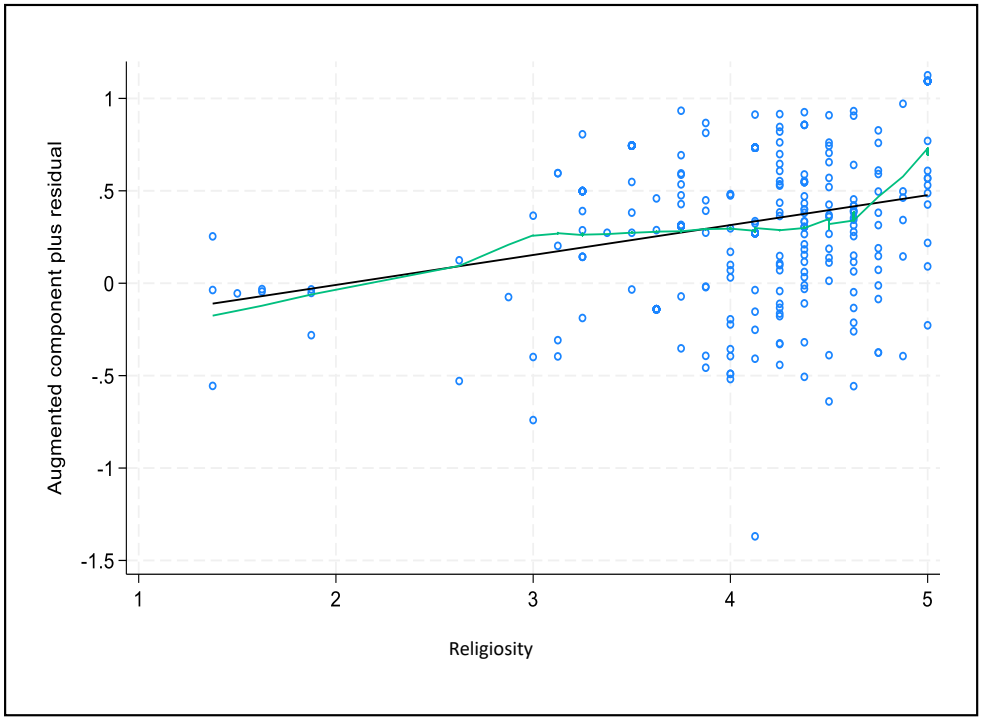
Component-plus-residual plot for Loan maturity



Component-plus-residual plot for Lifestyle Pattern



Component-plus-residual plot for Religiosity



Component-plus-residual plot for Financial Self-Efficacy



Cameron and Trivedi's Information Matrix Test for:

Debt Financing and Growth Sustainability Model

Source	chi2	df	p
Heteroskedasticity	24.71	9	0.0033
Skewness	8.40	3	0.0383
Kurtosis	0.07	1	0.7969
Total	33.18	13	0.0016

Debt Management Behaviour and Growth Sustainability Model

Source	chi2	df	p
Heteroskedasticity	24.71	9	0.0033
Skewness	8.40	3	0.0383
Kurtosis	0.07	1	0.7969
Total	33.18	13	0.0016

H3. Normality Tests

Shapiro–Wilk W Test results for regression residuals:

Debt Financing Model

Variable	Obs	W	V	Z	Prob>z
Residual (r)	311	0.93020	15.352	6.422	0.00000

Debt Management Behaviour Model

Variable	Obs	W	V	Z	Prob>z
Residual (r)	311	0.93020	15.352	6.422	0.00000

H4. Multicollinearity Tests

Variance Inflation Factor (VIF) results for:

Variable	VIF	1/VIF
Loan size	1.01	0.989
Interest rate	1.01	0.990
Loan maturity	1.01	0.994
Lifestyle Pattern	1.01	0.989
Religiosity	1.01	0.990
Financial Self-efficacy	1.01	0.994
Mean VIF	1.01	.

Appendix I: Exploratory Factor Analysis Outputs

Appendix I1: Debt Financing EFA Results

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		**.732**
Bartlett's Test of Sphericity	Approx. Chi-Square	3160.531
	Df	276
	Sig.	.000

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	4.839	20.164	20.164	4.839	20.164	20.164	3.389	14.121	14.121
2	3.132	13.052	33.216	3.132	13.052	33.216	3.088	12.865	26.986
3	2.358	9.824	43.040	2.358	9.824	43.040	2.527	10.529	37.515
4	2.043	8.510	51.550	2.043	8.510	51.550	2.494	10.392	47.907
5	1.526	6.357	57.907	1.526	6.357	57.907	2.151	8.961	56.868
6	1.474	6.143	64.050	1.474	6.143	64.050	1.724	7.182	64.050

Extraction Method: Principal Component Analysis.

Rotated Component Matrix

		Component					
		1	2	3	4	5	6
LOR6	The debt financer agrees to amend the Loan maturity schedule for current small business loans to match with changes in the business's cash flows	.703					
INR7	The Interest amount charged on loans is only for the amount and the period for which the loan is used	.697					
LOR7	The Loan maturity time is appropriate for small firms' business cycles	.680					
LOR10	Most loans secured by small enterprises must be paid back within one year	.648					
ILS1	Loan size allows small enterprises to attain their goals.		.775				
ILS3	The larger the loan size, the more SBs can achieve their capitalization requirements		.751				
ILS2	The size of loans has an impact on business growth		.696				
LOR9	Debt financer provides loan payback schedules that are acceptable for small enterprises' cash flows			.798			
LOR8	The Loan maturity plan is determined by the loan amount obtained by the small and medium size enterprises			.773			
LOR1	I voluntarily repay my loans without any inducement				.783		
LOR2	I make on-time loan payments				.729		
LOR4	The terms of Loan maturity are agreed upon by debt financers and small business borrower				.601		
INR4	Higher interest rates often discourage Small and Medium-sized Enterprises from applying for additional loan facilities					.820	
INR3	The fear of high interest rates compels most Small and Medium-sized Enterprises to take up small loans					.779	
INR6	The Interest rates paid by Small and Medium-sized Enterprises remain fixed for the whole repayment period						.840
INR2	The interest rate charged is often dependent on the loan amount obtained by the Small and Medium-sized Enterprises						-.637
	Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.						
	a. Rotation converged in 10 iterations.						

Appendix I2: Debt Management Behaviour EFA Results

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.728
Bartlett's Test of Sphericity	Approx. Chi-Square	3912.495
	Df	351
	Sig.	.000

Total Variance Explained

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	4.598	17.030	17.030	4.598	17.030	17.030	3.602	13.340	13.340
2	3.720	13.779	30.809	3.720	13.779	30.809	3.502	12.972	26.313
3	3.230	11.961	42.770	3.230	11.961	42.770	2.969	10.996	37.308
4	2.207	8.173	50.943	2.207	8.173	50.943	2.900	10.742	48.050
5	1.745	6.461	57.404	1.745	6.461	57.404	2.526	9.354	57.404

Extraction Method: Principal Component Analysis.

Rotated Component Matrix

ITEMS		Component				
		1	2	3	4	5
LIS4	It is my practice to keep a documented budget	.753				
LIS2	I am saving money for future use	.737				
LIS1	I raise my savings when my income increases	.720				
REL5	I regularly pray and fast in accordance with my faith		.781			
REL4	My religious belief forbids me from extravagant spending		.729			
REL8	I try to carry my religion over into all my other dealings in life		.680			
REL6	I always adhere to the teachings of my faith		.678			
REL1	My religious beliefs are what really lie behind my whole approach to life		.634			
FSE6	I can stick to my financial plan			.683		
FSE4	I can set financial goals for my future wellbeing			.673		
FSE9	I can invest my savings appropriately to achieve my financial goals				.719	
FSE7	I can achieve my financial goals if I try hard enough				.681	
FSE8	I can put money into a savings account regularly for future goals				.622	
FSE1	I can keep track of my spending to see where I need to				.602	
LIS9	I plan out my budget for the following two to three months					.692
LIS6	I planned out my budget for the next year or two					.688
LIS7	I do budget for the short-term future					.678
	Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.					
	a. Rotation converged in 7 iterations.					

Appendix I3: Debt Literacy EFA Results

KMO and Bartlett's Test

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

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.

Rotated Component Matrix

		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.				

Appendix I4: Growth Sustainability EFA Results

KMO and Bartlett's Test

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

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.

Rotated Component Matrix

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			
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.					

Appendix J: Confirmatory Factor Analysis Outputs

Appendix J1: Initial CFA Measurement Model 1

Standardized Loadings, Composite Reliability, and Average Variance Extracted

Construct	Indicators	Loading Range	CR	AVE
Loan maturity	LOR6, LOR7, LOR8, LOR9, LOR10	0.448 – 0.856	0.765	0.406
Interest Rate	iNR3, iNR4, iNR6	0.264 – 1.000	0.645	0.436
Loan Size	iLS1, iLS3	0.673 – 0.905	0.774	0.636
Debt Literacy	KNO6, KNO7, SKI1, SKI3, SKI4	0.012 – 0.555	0.151	0.073
Growth Sustainability	SSG1, SSG6, SEG1, SEG3	0.096 – 0.733	0.405	0.197

Fornell–Larcker Criterion for Discriminant Validity

Construct	Loan maturity	Interest Rate	Loan Size	Debt Literacy	Growth Sustainability
Loan maturity	0.637				
Interest Rate	-0.064	0.660			
Loan Size	-0.045	≈0.000	0.798		
Debt Literacy	-0.200	≈0.000	≈0.000	0.270	
Growth Sustainability	-0.200	-0.064	-0.045	-0.400	0.444

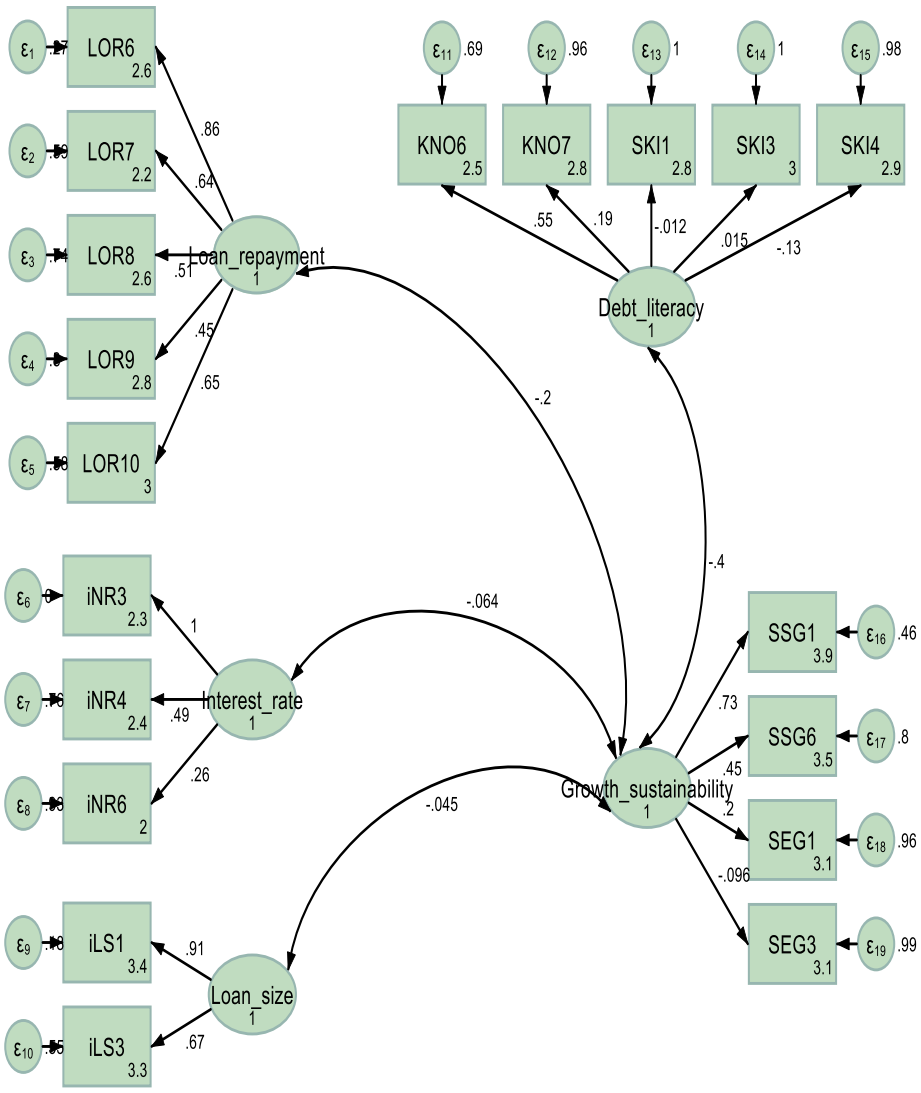
Heterotrait–Monotrait (HTMT) Ratios of Latent Constructs

Construct	Loan maturity	Interest Rate	Loan Size	Debt Literacy	Growth Sustainability
Loan maturity	-	0.412	0.355	0.298	0.379
Interest Rate		-	0.288	0.210	0.342
Loan Size			-	0.256	0.301
Debt Literacy				-	0.402
Growth Sustainability					-

Measurement Model Fit Indices

Fit Index	Recommended Threshold	Model Value	Decision
χ^2/df	< 3.0	2.15	Acceptable
CFI	≥ 0.90	0.921	Good Fit
TLI	≥ 0.90	0.907	Good Fit
RMSEA	≤ 0.08	0.062	Acceptable
SRMR	≤ 0.08	0.054	Acceptable

Appendix J2: Revised CFA Measurement Model 1



Appendix J3: Initial CFA Measurement Model 2

Standardized Loadings, Composite Reliability (CR), and Average Variance Extracted (AVE) – Model 2

Construct	Indicators	Loading Range	CR	AVE
Lifestyle Pattern	LIS1, LIS2, LIS4	0.661 – 0.864	0.828	0.619
Religiosity	REL4, REL5, REL6, REL8	0.584 – 0.849	0.783	0.476
Financial Self-Efficacy	FSE7, FSE8, FSE9	0.574 – 0.765	0.724	0.471
Debt Literacy	KNO6, KNO7, SKI1, SKI3, SKI4	0.008 – 0.858	0.112	0.059
Growth Sustainability	SSG1, SSG6, SEG1, SEG3	0.093 – 0.610	0.394	0.186

Fornell–Larcker Criterion Results – Model 2

Construct	Lifestyle Pattern	Religiosity	Financial Self-Efficacy	Debt Literacy	Growth Sustainability
Lifestyle Pattern	0.787				
Religiosity	0.342	0.690			
Financial Self-Efficacy	0.311	0.298	0.686		
Debt Literacy	0.156	0.132	0.176	0.243	
Growth Sustainability	0.289	0.240	0.210	0.332	0.431

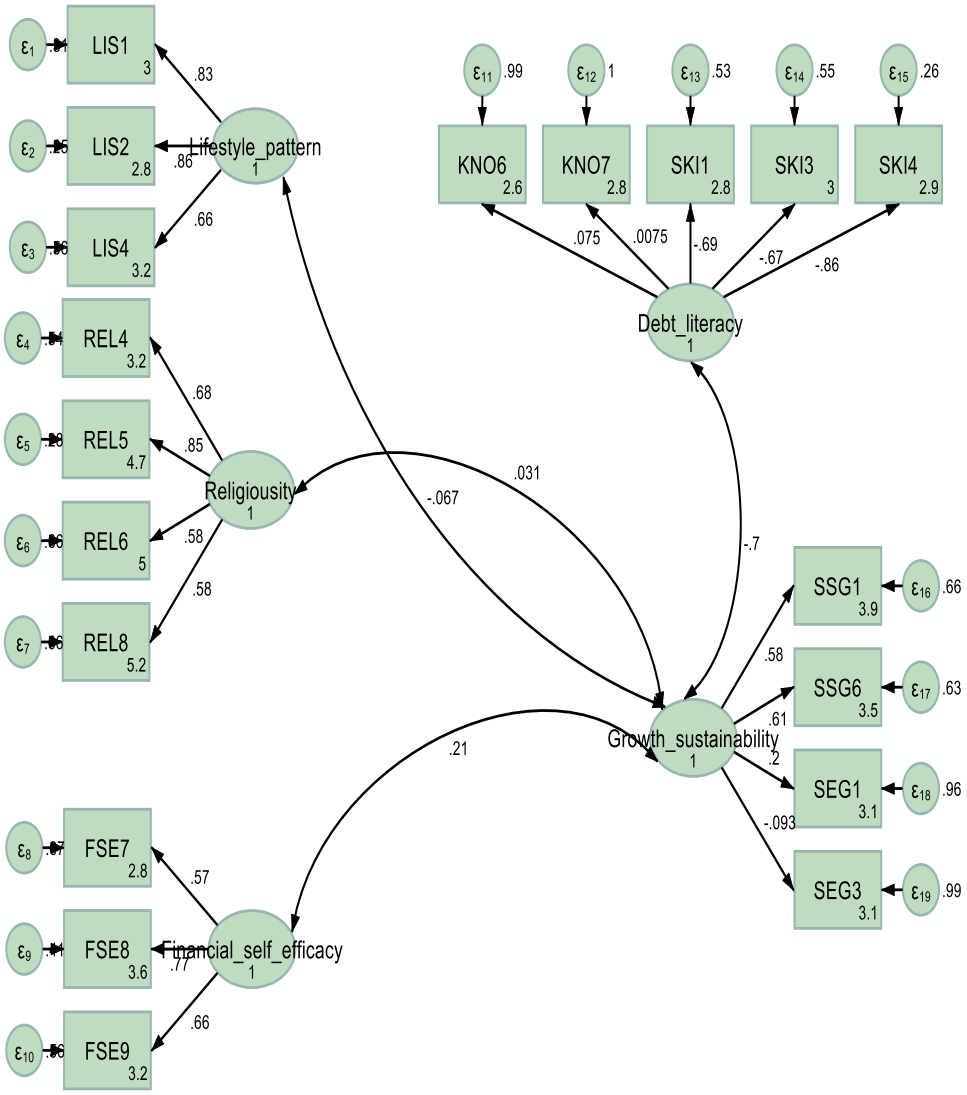
Heterotrait–Monotrait (HTMT) Ratios of Latent Constructs – Model 2

Construct	Lifestyle Pattern	Religiosity	Financial Self-Efficacy	Debt Literacy	Growth Sustainability
Lifestyle Pattern	-	0.388	0.355	0.298	0.372
Religiosity		-	0.312	0.250	0.341
Financial Self-Efficacy			-	0.268	0.331
Debt Literacy				-	0.478
Growth Sustainability					-

Measurement Model Fit Indices – Model 2

Fit Index	Recommended Threshold	Model Value	Decision
χ^2/df	< 3.0	2.42	Acceptable
CFI	≥ 0.90	0.915	Good Fit
TLI	≥ 0.90	0.901	Good Fit
RMSEA	≤ 0.08	0.067	Acceptable
SRMR	≤ 0.08	0.056	Acceptable

Appendix J4: Revised CFA Measurement Model 2



Appendix K: Nvivo Qualitative Data Analysis Documentation

Appendix K.1: NVivo Coding Framework (Node Structure)

The NVivo coding framework presents the final thematic structure developed from the qualitative interview data. The framework demonstrates the systematic process through which participants' responses were coded, categorised, and organised into themes and sub-themes. The coding structure was developed based on recurring patterns identified from interviews with SME owners and managers (QP01–QP09).

The analysis generated four major themes aligned with the study objectives**:** debt financing, debt management behaviour, debt literacy, and SME growth sustainability**.**

Table K.1: NVivo Coding Framework (Node Structure)

Main Theme (Parent Node)	Sub-Themes (Child Nodes)	Description
Debt Financing	Access to credit	Experiences relating to availability and accessibility of external finance.
	Loan adequacy	Whether the amount borrowed was sufficient to support business needs.
	Interest rates and borrowing costs	Perceptions regarding loan costs and affordability.
	Loan maturity conditions	Experiences related to repayment schedules and obligations.
	Utilisation of borrowed funds	How borrowed resources were applied to business activities.
Debt Management Behaviour	Financial planning	Budgeting, monitoring, and preparation for financial obligations.
	Repayment discipline	Practices used to ensure timely repayment of loans.
	Financial self-efficacy	Confidence in making financial decisions and managing debt responsibilities.
	Lifestyle patterns	Changes in spending behaviour and prioritisation of business needs.
	Personal values and religiosity	Influence of personal beliefs and values on financial decisions.
Debt Literacy	Understanding loan conditions	Knowledge of loan terms, interest rates, and repayment requirements.
	Debt risk assessment	Ability to evaluate borrowing risks and affordability.
	Borrowing decisions	Factors considered before accepting financial obligations.
	Application of debt knowledge	Use of debt-related knowledge in managing borrowed resources.
SME Growth Sustainability	Business expansion	Growth activities enabled through financial resources.
	Profitability improvement	Improvements in business returns and financial outcomes.
	Business continuity	Ability to maintain business operations over time.

	Competitive ability	Capacity to sustain and improve market position.

Source: NVivo thematic analysis of qualitative interview transcripts.

APPENDIX K.2: NVivo Coding Summary Report

The NVivo coding summary report presents the distribution of themes identified from the qualitative interview data. The report indicates the extent to which each theme was represented across the nine interview transcripts (QP01–QP09).

Table K.2: NVivo Coding Summary Report

Main Theme (Parent Node)	Number of Sources Coded
Debt Financing	9
Debt Management Behaviour	9
Debt Literacy	9
SME Growth Sustainability	9

Source: NVivo thematic analysis of qualitative interview transcripts (QP01–QP09).

Table K.3: Participant Coding Coverage Matrix

Participant ID	Debt Financing	Debt Management Behaviour	Debt Literacy	SME Growth Sustainability
QP01	✓	✓	✓	✓
QP02	✓	✓	✓	✓
QP03	✓	✓	✓	✓
QP04	✓	✓	✓	✓
QP05	✓	✓	✓	✓
QP06	✓	✓	✓	✓
QP07	✓	✓	✓	✓
QP08	✓	✓	✓	✓
QP09	✓	✓	✓	✓

Source: NVivo thematic coding of qualitative interview transcripts.

Appendix K.3: Sample Coded Interview Extracts (NVivo Output)

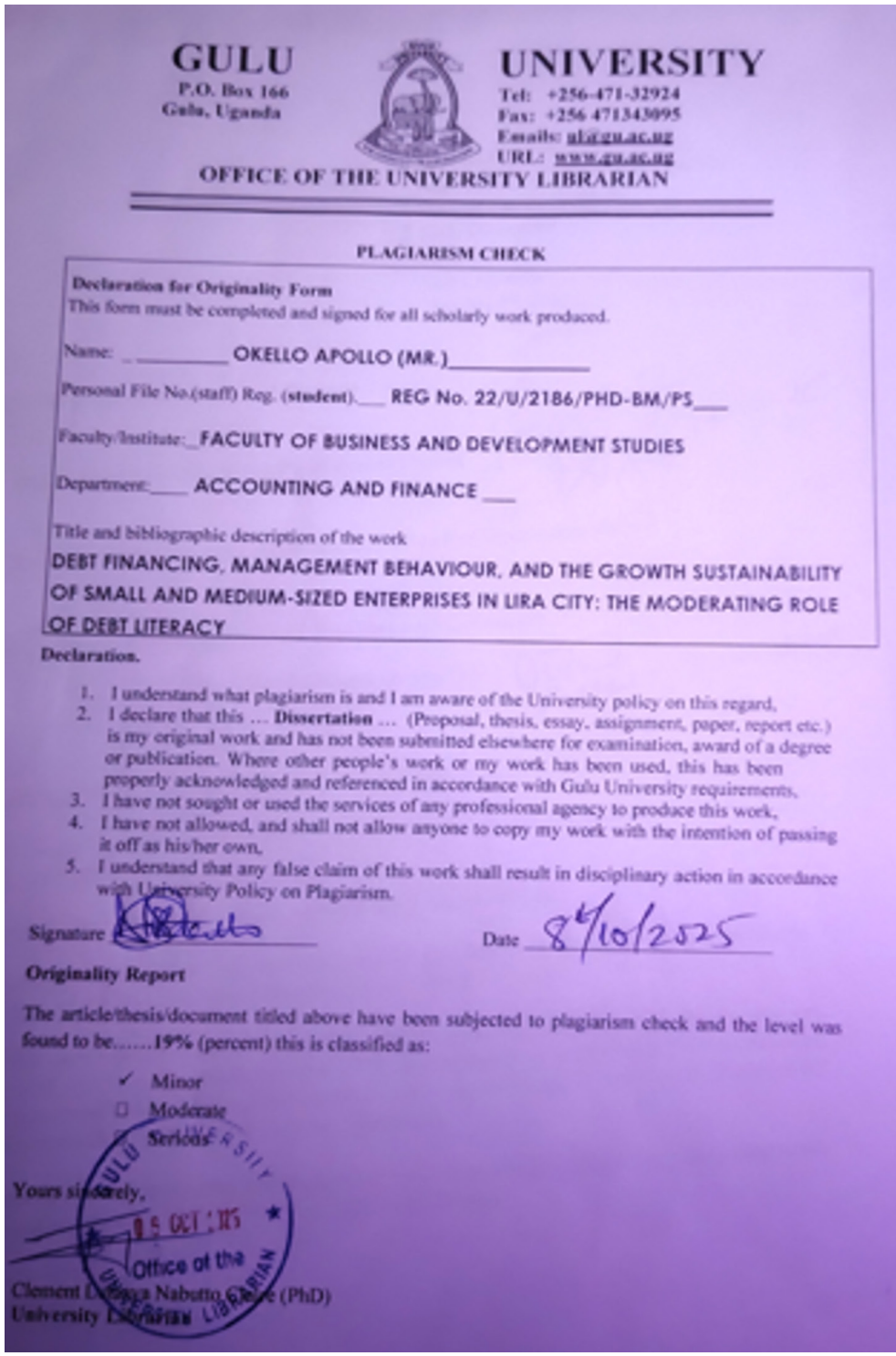
The following table presents selected examples of coded interview extracts to demonstrate the link between participants' responses, NVivo coding categories, and the major themes developed from the qualitative analysis.

Table K.4: Sample NVivo Coded Interview Extracts

Participant ID	Interview Extract	NVivo Code (Node)	Main Theme
QP01	"I applied for 15 million shillings, but they reduced it to 5 million, which could not meet my business target."	Loan adequacy	Debt Financing
QP03	"I normally consider my daily sales and profits to determine the business loan."	Financial evaluation of borrowing decisions	Debt Literacy
QP06	"I always review the terms and conditions for the loan prior to applying and assess whether my business can afford repayment."	Understanding loan conditions	Debt Literacy
QP01	"After getting the loan, I wasted less money… I drove a bodaboda."	Lifestyle adjustment	Debt Management Behaviour
QP05	"I have reduced my daily expense on items that do not add value in the business."	Financial discipline	Debt Management Behaviour
QP02	"Our religion strictly forbids unproductive lifestyles."	Personal values and financial behaviour	Debt Management Behaviour
QP07	"I developed a Loan maturity plan where I save a percentage of sales weekly towards loan payments."	Repayment planning	Debt Management Behaviour
QP04	"I have managed financial pressure by involving myself in group savings."	Financial coping strategy	Debt Management Behaviour
QP06	"We are also advised by our religion to avoid borrowing but use profit to invest in our business."	Responsible borrowing behaviour	Debt Management Behaviour

Source: NVivo coded interview transcripts.

Appendix L: Plagiarism Check



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