

Leadership Style and Sustainability of Small and Medium Enterprises (SMEs) in Uganda: The Mediating Role of Cash Flow Management Behaviour

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Abstract

Purpose: The purpose of this study was to establish the mediating role of cash flow management behaviour in the relationship between leadership style and sustainability of Small and Medium Enterprises (SMEs) in Uganda. **Methodology:** This study is cross-sectional and correlational. Data were collected through a questionnaire survey of 233 SMEs operating in Gulu and Lira cities in Northern Uganda. Data were analyzed for preliminary analyses of data cleaning, descriptive statistics through using Statistical Package for the Social Sciences and SmartPLS to establish the direct and indirect effect between the study variables, Structural Equation Modeling (SEM) and mediation analysis. **Findings:** Findings indicate that cash flow management behaviour partially mediates the relationship between leadership style and SME sustainability. Results further reveal that cash flow management behaviour and leadership style significantly predict SME sustainability in Uganda. **Originality:** This study contributes to the already existing literature on SME sustainability as it provides initial empirical evidence on the mediating role of cash flow management behaviour in the association between leadership style and SME sustainability using evidence from the global south with a focus on Uganda where empirical evidence on the study phenomenon is still limited.

Keywords

Leadership Style, Cash Flow Management Behaviour, SME Sustainability, Uganda

1. Introduction

The sustainability of Small and Medium Enterprises (SMEs) has remained a focal point for both practitioners and scholars. Over the years, there have been a lot of studies on the sustainability of small and medium-sized businesses, but more research is needed (Chopra et al., 2021; Sendawula et al., 2024; Azmat et al., 2023). The calls made by previous studies emphasise the necessity for SMEs to formulate strategies aimed at ensuring sustainability, as their operations can negatively affect the natural environment and societal values, while yielding only modest economic benefits (Sendawula et al., 2025). Specifically, majority of SMEs in Uganda do not manage their wastes properly, and as a result, they dispose of wastes, and toxic byproducts in residential areas, drainage channels, and water sources (Maswanku & Yolcu, 2024). This contributes to severe environmental degradation, including increased particulate matter emissions from activities like burning waste materials, furnaces, and incinerators. For instance, in Kampala, a significant portion of the daily waste generated, including that from SMEs, is not properly managed, resulting in environmental hazards such as extreme floods. The widespread nature of these environmental issues suggests a deficiency in leadership commitment and the implementation of effective internal control systems geared towards environmental sustainability. Moreover, a significant number of SMEs are loss making (Kabbera et al., 2024), effective leadership, and efficient cash flow management are essential for balancing economic, social, and environmental aspects, the observed poor waste management indicates that existing leadership may not be adequately prioritizing or enforcing environmentally responsible practices. Effective leadership is crucial for integrating environmental considerations into business operations and ensuring compliance with sustainability standards constraining their potential to create more jobs, while contributing to the national gross domestic product that is vital for socio-economic transformation.

In promoting SME sustainability, the triple bottom line theory of Elkington (1997) indicates that managers and owners of SMEs can achieve sustainability by including economic, social, and environmental practices into their operations (Jayashree et al., 2021; Khan et al., 2021). In addition to improving society and the environment, this is meant to strengthen stakeholder relationships, promote long-term sustainability, and improve overall corporate performance (Hammer & Pivo, 2017). It is however known that although this theory emphasises that SMEs must balance the needs of profit, planet, and people, it fails to capture the strategies that managers and owners of businesses should take to guarantee the incorporation of sustainability into their daily operations.

In addressing the aforementioned weakness, this study also employs the systems theory. In particular, Von Bertalanffy's (1972) systems theory argues that by combining risk assessment, control activities, environmental controls, information & communication, and monitoring mechanisms, effective internal control systems should not only concentrate on preventing fraud but also on im-

proving overall business sustainability. As [Nkundabanyanga et al. \(2024\)](#) show, any management practice that is pertinent to cash flow management in a company's financing, investing, and operations is considered cash flow management; the systems theory would predict this to be a crucial element of an organization's financial system. In essence, to preserve the environment and societal values while achieving business profitability, leads to appropriate cash flow monitoring, liquidity optimisation, and efficient allocation of cash resources across different operational units ([Wadesango et al., 2019](#); [Von Bertalanffy, 1972](#)).

The systems theory further posits that establishing and executing excellent cash flow management practices that support corporate sustainability requires strong leadership ([Piwowar-Sulej & Iqbal, 2023](#)). This potentially contributes to previous work on cashflow management behavior and its value (e.g., [Nkundabanyanga et al., 2024](#)) since cashflow behaviour's contribution to SME sustainability has remained an empirical question. In addition, it is important to note that there are limited studies that have interrogated the mediating effect of cash flow management behaviour in the relationship between leadership style and SME sustainability. As such, the focus has been on the association between capital structure and liquidity in small and medium enterprises ([Danjuma et al., 2015](#)), portfolio management and financial performance of insurance firms ([Wandabusi, 2024](#)), and stock mispricing and corporate cash holding ([Majid et al., 2024](#)). In light of the above gaps, this study was carried out to determine how cash flow management behavior mediates the relationship between leadership style, and sustainability of SMEs in Uganda.

2. Theoretical Foundation

The current study is underpinned by the triple bottom line theory and the systems theory in order to establish the mediating role of cash flow management behaviour in the relationship between leadership style and SME sustainability.

2.1. The Triple Bottom Line Theory

The Triple Bottom Line (TBL) theory was developed by John Elkington in 1994, a British management consultant and sustainability expert ([Edeigba & Arasanni, 2022](#)). It introduced the idea that businesses should measure their success not only by profit but also by their impact on people (social equity) and the planet (environmental sustainability) ([Jum'a et al., 2022](#)). Historically, the concept of integrating social and environmental concerns into business practices has roots in earlier ideas like Corporate Social Responsibility (CSR) and sustainable development, as defined by the Brundtland Commission in 1987 ([Mokbel Al Koliby et al., 2024](#)). While working as a consultant in Sustainability, [Elkington \(1997\)](#) coined the term "triple bottom line" to challenge the dominant focus on financial performance. He argued that companies could be financially profitable while harming society or the environment, and thus a broader perspective was needed ([Mokbel Al Koliby et al., 2024](#)). The TBLT is based on the Win-Win

Scenarios: TBL assumes that economic growth can be achieved without compromising environmental and social well-being (Isil & Hernke, 2017). This “win-win” perspective envisions that businesses can simultaneously create value across all three dimensions—profit, people, and planet. However, the TBL theory does not suggest strategies that the business community can undertake to achieve sustainability, which is addressed by the systems theory.

2.2. Systems Theory

Systems theory is a multidisciplinary approach to understanding complex systems and has evolved significantly over time (Becvar et al., 2023). The foundations of systems theory can be traced back to the 1920s and 1930s, with the work of biologist Ludwig von Bertalanffy. He proposed the concept of “general system theory” as a way to understand the organization and interaction of different components within biological systems (Guy-Evans, 2020). This idea laid the groundwork for a more comprehensive understanding of systems across various disciplines (Sony & Naik, 2020) including entrepreneurship, business and general management.

When applied to SME sustainability, the systems theory operates on several key assumptions that help to explain how various components interact to ensure the longevity and success of SMEs (Teece, 2018). These assumptions align with the holistic nature of systems theory, which views organizations as interconnected and dynamic systems (Hatch, 2018). Accordingly, Becvar et al. (2023) indicate that the systems theory assumes interconnectedness, holistic perspective, adaptability and feedback loops, dynamic complexity, open systems, and goal orientation. Adaptability and feedback loops are crucial concepts within Systems Theory that illuminate the dynamic interplay between leadership style, cash flow management, and sustainability outcomes in Small and Medium-sized Enterprises (SMEs). Systems Theory emphasizes the importance of adaptability for maintaining equilibrium within a system. For SMEs, this means continuously adjusting to changes in their environment by using feedback from performance measurement systems or market trends to refine their strategies. This adaptability is crucial for navigating challenges such as resource constraints or market volatility. Adaptability allows SMEs to respond effectively to external pressures, including regulatory requirements, societal expectations, and industry best practices, which encourage the adoption of sustainable practices. It is also essential for integrating economic, social, and environmental goals into business strategies, ensuring a comprehensive approach to long-term viability. Feedback loops are mechanisms through which information about outcomes is fed back into the system, influencing subsequent actions and decisions. In the context of SMEs, this involves a continuous cycle where the results of actions related to leadership, cash flow, and internal controls inform future adjustments.

In particular, the systems theory presents cash management as a critical subsystem within SMEs that ensures liquidity and financial health. Systems theory

presents the need for efficient resource allocation (Gichaba & Oluoch, 2019). Thus, proper cash management enables SMEs to allocate resources effectively, supporting investments in growth and sustainability initiatives (Haavig, 2019). Lastly, leadership acts as a guiding subsystem that influences organizational culture, employee engagement, and strategic direction (Teece, 2018). Systems theory explains that leadership styles directly impact SME sustainability by promoting sustainability practices (Turner & Baker, 2019). As such, leaders who integrate sustainability into their vision guide SMEs towards long-term goals aligned with environmental, social, and governance (ESG) criteria.

3. Literature Review and Hypotheses Development

3.1. SME Sustainability

Small and Medium Enterprises (SMEs) Sustainability originates from sustainable development, which dates back to 1987 when the World Commission on Environment and Development (WCED) was established. To date, scholars have advanced different views regarding the concept of sustainability from different perspectives. In the context of SMEs, sustainability entails businesses adopting practices that are environmentally beneficial, socially equitable, and economically viable (Das et al., 2020). This enables SMEs to operate in a way that is profitable while adding a net positive impact on the natural environment and supporting societal development.

3.2. Leadership Style

The concept of leadership style is crucial in the examination of organisations, particularly in the context of Small and Medium-sized Enterprises (SMEs). Leadership style encompasses the behaviours and thought processes leaders employ while guiding, inspiring, and overseeing their teams (Fischer et al., 2024). Siregar et al. (2024) add that leadership style includes how a leader makes decisions, talks to employees, and interacts with them. Thus, this study views leadership style as the ideology, capabilities, and dispositions of a leader to shape the corporate milieu and are reflected in their approach to leadership. We measured and operationalized leadership style in terms of transformational, transactional, and situational styles that are more applicable to the SME community (Bass & Riggio, 2006).

3.3. Cash Flow Management Behaviour

Managing cash flow is a crucial aspect of financial management, particularly for Small and Medium-sized Enterprises (SMEs), because it has a direct impact on their ability to continue operating and expanding (Rompotis, 2025). Cash flow management involves monitoring, evaluating, and enhancing the disparity between cash inflows and cash outflows (Mensah et al., 2025). It is vital for a business to be capable of settling its short-term liabilities while investing in developmental opportunities (Dorrah & McCabe, 2024). Due to the limited access to

external funding that Small and Medium-sized Enterprises (SMEs) experience compared to larger corporations, effective cash flow management is crucial for their success (Smith et al., 2021). As such, this study examined the behavioural aspects of cash flow management, which has received increased attention recently. SME proprietors often exhibit overconfidence and optimism, resulting in aggressive expansion tactics that neglect cash flow constraints. Understanding these behavioural patterns is essential for enhancing cash flow management in Small and Medium-sized Enterprises (SMEs).

3.4. The Mediating Effect of Cash Flow Management Behaviour

This study was mainly intended to establish the mediating effect of cash flow management behaviour in the relationship between leadership style and SME sustainability. This is true do to the fact that leadership styles such as transformational leadership that promote coaching and teaching to every staff member in cash flow management, provide for the financial needs of the subordinates and encourage them to follow set standards, rules, and procedures concerning cash flow management that contributes to effective utilization of the available resources while prioritizing investing in activities that positively impact the environment and the values of the society yet at the same time remaining profitable.

From the above illustration, it is evident that cash flow management behaviour that details operating, saving, investment, and financing cash flow behaviours provides a channel through which leadership style promotes SME sustainability. From literature review, it is important to note that extant studies have paid less attention to the mediating effect of cash flow management in the above-captioned relationship. As such, the focus has been on the association between capital structure and liquidity in small and medium enterprises (Danjuma, Umar, & Hammawa, 2015), portfolio management and financial performance of insurance firms (Wandabusi, 2024), and stock mispricing and corporate cash holding (Majid Akaleh, Didar, & Mansourfar, 2024). This presents gaps in existing literature that present a need for the current study, leading to the following hypotheses:

***H1:** Cash flow management behaviour significantly mediates the relationship between leadership style and SME sustainability in Uganda.*

3.5. Leadership Style and SME Sustainability

Leadership style of the business owners and managers is noted to play a vital role in fostering uptake of sustainability actions, practices and decisions (Sendawula et al., 2024). In particular, the leadership style of an SME owner-manager can permeate and influence the culture of the entire organization, directly impacting the SME's performance and sustainability (Okeke, 2019). This is in agreement with Malik et al. (2020) who indicated that transformational leadership catalyses business productivity as compared to transactional leadership. In the same vein,

Kowo and Akinbola (2019) reported a significant influence of strategic leadership on sustaining small and medium enterprises' profit performance, in their quantitative study of 300 SMEs in Nigeria.

Similar results are further evident in a study conducted by Okeke (2019) who indicated that SME owner-managers adopt various leadership styles in catalyzing the potential of their businesses to positively impact the environment and society using evidence from Nigeria. This shows that SME owners and managers may need to apply different leadership styles based on the prevailing conditions if they are to foster sustainable development. As such, they should exhibit traits of transformational, transactional, and situational leadership while operating their businesses. Despite the relevance of leadership style in fostering SME sustainability, it is evident that very few studies have been conducted on this association using evidence from a developing country's perspective. Thus, we hypothesize that:

H2: There is a significant relationship between leadership style and SME sustainability in Uganda.

3.6. Cash Flow Management Behaviour and SME Sustainability

A review of existing literature shows that cash flow management behaviour is significantly associated with SME sustainability. This is true because cash flow management behaviours such as financing, operating, and investment enable SME managers to invest in technology, tools, equipment, and machinery that are friendly to the environment and society while running profitably. In addition, these behaviours enable SME managers to finance and invest in activities that promote SME sustainability like empowering community members, job creation, engaging in environmental cleaning campaigns, as well as promoting education and health.

Nassuna et al. (2023) have already demonstrated that financial resilience is essential to the survival of financial institutions in Uganda; since survival can serve as a proxy for sustainability, the findings may also apply to the sustainability of SMEs. It can be argued that appropriate cash flow management behaviour can induce financial resilience and hence sustainability. In a study conducted by Uwonda and Okello (2015), it is reported that effective cash flow management, including cash flow projection, tax planning, budgetary control, and interpreting financial statements, is crucial for SME sustainability. This is supported by Guda (2013) who indicated that cash flow is positively and significantly associated with the profitability of small and medium enterprises in Nairobi.

In another study conducted by Uwonda and Okello (2015), it is evident that cash flow management behaviours in terms of cash flow controls and monitoring have a significant influence on SMEs' sustainability. Relatedly, Wadesango et al. (2019) reported that cash flow management practices such as cash flow planning, budgeting, and monitoring significantly affect the profitability and overall sustainability of the investigated business. This explains why failures in many

SMEs have been linked to inadequate cash flow management, which compromises their sustainability by denying them the revenue stream needed to grow (Uwonda, Okello, & Okello, 2013). It could be argued that appropriate cash flow management behaviour in SMEs would call for anticipation, preparation for response and adaptation to incremental change and sudden unforeseen disruptions in their operating, investing and financing environmental activities. Sustainable firms have financial robustness, anticipatory capacity, awareness, flexibility and recovery ability, attributes that determine their survival in the unpredictable marketplace and stimulate responses to financial shocks (Taylor, 2013). It is therefore reasonable to expect that appropriate behaviours within operating, financing and investing activities of an SME could explain positive significant variations in SME sustainability. Berman et al. (2012) findings speak to the view that sustainability is associated with SME established activities (such as those in operating, investing and financing) and Nkundabanyanga et al. (2023) show that for firms to survive (or be sustainable), they need to keep adjusting their operating (or financing or investing) activities in case of need. SME managerial behaviour choices in these cash flow activities, arguably, have positive consequences on SME sustainability. Accordingly, we hypothesize that:

H3: There is a significant relationship between cash flow management behaviour and SME sustainability in Uganda.

3.7. Leadership Style and Cash Flow Management Behaviour

A review of existing literature indicates that leadership style is associated with cash flow management behaviour. In particular, Wang et al. (2021) reported that transformational leadership is positively associated with strategic cash flow management, as these leaders encourage their teams to identify and exploit financial opportunities. This resonates well with Smith et al. (2021) who indicated that leaders who adopt a transformational style are more likely to integrate technology into financial management practices, leveraging data analytics to improve cash flow forecasting and decision-making. In another study by Heifetz et al. (2009), it is evident that adaptive leaders are well-suited to navigate the complexities of digital transformation in financial management, ensuring that cash flow management practices remain agile and responsive to technological changes.

However, further engagement with literature presents contradicting findings. Specifically, Avolio and Yammarino (2013) revealed a negative impact of laissez-faire leadership on cash flow management, citing instances of financial mismanagement and liquidity crises in SMEs lacking strong leadership direction. Avolio and Yammarino (2013) further suggest that while transactional leaders may ensure adherence to financial protocols, they might not encourage the flexibility needed for dynamic cash flow management. This can lead to a more rigid approach that might not adapt well to changing financial conditions. From the foregoing discussion, it is evident that scholars have reported conflicting find-

ings on the contribution of leadership style and cash flow management behaviour. Thus, there is a need for the current study to validate and contextualize the contradicting findings. Hence, it is hypothesized that:

H4: There is a significant relationship between leadership style and cash flow management behaviour of SMEs in Uganda.

4. Methodology

4.1. Study Context

This study focused on SMEs that are operating in the Northern region of Uganda, situated 360 KM North of the capital city of Uganda. In particular, the study concentrated on Gulu and Lira Cities, situated in the Northern region of Uganda. Conducting this study in the Northern region was justified by the fact that when compared with the Western, Eastern, and Central regions of Uganda, the Northern region has limited access to national economic activities and has been politically unstable for a long period. This is because its neighbours (Sudan and the Democratic Republic of Congo) have had several social and economic challenges that ultimately affect the region in attaining sustainability (Uganda Ministry of Finance, Planning and Economic Development, 2020). As such, conducting this study was intended to suggest strategic actions that can be undertaken to promote sustainability of SMEs operating in the region.

4.2. Research Design, Population and Sample

The study adopted a cross-sectional and a correlational research design. The design was used to identify patterns, trends, and associations between variables in their natural setting (Baskerville & Pries-Heje, 2010). The design was also adopted since it permits the usage of statistical methods such as correlation coefficients to quantify the strength and direction of the relationships between variables (Bentouhami et al., 2021). As such, the population consisted of 650 SMEs from Gulu City Council (2022), from which a sample of 242 SMEs was selected using Krejcie and Morgan's (1970) sampling table. After the data collection and cleaning, 233 useable questionnaires were retained, representing a response rate of 96 percent. The high response rate is largely attributed to the personal approach, involving the researcher and the research assistants physically delivering and picking up the questionnaires from the respondents. In addition, before picking the questionnaires, phone calls were made to confirm the readiness of the questionnaires.

4.3. Sample Selection

In this study, we used stratified sampling to select SMEs that participated in this study. This sampling procedure entails dividing the population into smaller groups known as strata based on shared features and then applying simple random sampling to every subpopulation (Lohr, 2021). This technique was adopted

since it accurately indicates the population studied and ensures that all strata (districts and business types) in the population are represented (Patten & Newhart, 2018). Specifically, the selection of the final SMEs was done using the RAND function for stratified sampling in Excel. The RAND () function is particularly useful because it generates values between 0 and 1, allowing for easy sorting and selection within each stratum (Maduekwe & de Vries, 2019). This method ensures that you maintain the proportional representation of each stratum while still introducing randomness into your sample selection (Wagner & Stehman, 2015). For the business managers as the respondents, they were purposively selected due to the fact that they had a better understanding of how the internal control mechanisms, leadership style and cash management are vital in fostering sustainability of their businesses.

4.4. The Questionnaire and Operationalization of the Variables

Data was gathered through self-administered questionnaires featuring closed-ended questions. The questionnaire covered items measuring SME sustainability, leadership style and cash flow management behaviour. We operationalized SME sustainability in terms of environmental, social and economic sustainability (Janaswamy et al., 2024; Alinda et al., 2024). Leadership style on the other hand was measured using transformational, situational, and transactional leadership styles (Piwowar-Sulej & Iqbal, 2023), while cash flow management behaviour was unpacked in terms of operating, saving, investment, and financing cash flow management behaviours (Nkundabanyanga et al., 2024).

4.5. Data Analysis

Analysis of the quantitative data gathered from 233 small and medium enterprises in Gulu and Lira districts, Uganda was done using Statistical Package for the Social Sciences (SPSS.25) and SmartPLS to clean the data, confirm normality of the data, as well as establish the direct and indirect relationship between the study variables.

5. Results

5.1. Constructing Measurement Model

The measurement models for the study variables of leadership style, cash flow management behaviour and sustainability of Small and Medium Enterprises (SMEs) in Uganda used in this study were constructed in SmartPLS. Study results demonstrated that several items had strong loading, each with significant correlation levels. The Average Variance Extracted (AVE), Composite Reliability (CR), and Cronbach's alpha coefficient (α) all met and were above the suggested thresholds established by Fornell and Larcker (1981), and Hair et al. (2020). The outcomes for Average Variance Extracted (AVE), Composite Reliability (CR), and Cronbach's alpha coefficient (α) are presented in **Tables 1-2** and **Figures 1-2**.

Table 1. Convergent validity.

Study variables	Cronbach's alpha	Composite reliability	Average Variance Extracted (AVE)
CFMB	0.842	0.888	0.614
LS	0.828	0.885	0.658
SME SUS	0.781	0.748	0.500

Note: Source: author's own creation.

Table 2. Discriminant validity based on Fornell-Larcker criterion.

Study variables	CFMB	LS	SME SUS
CFMB	0.783***		
LS	0.765***	0.811***	
SME SUS	0.882***	0.712***	0.707***

Note(s): *** $p < 0.0001$, Source: author's own creation.

5.2. Constructing Structural Equation Model

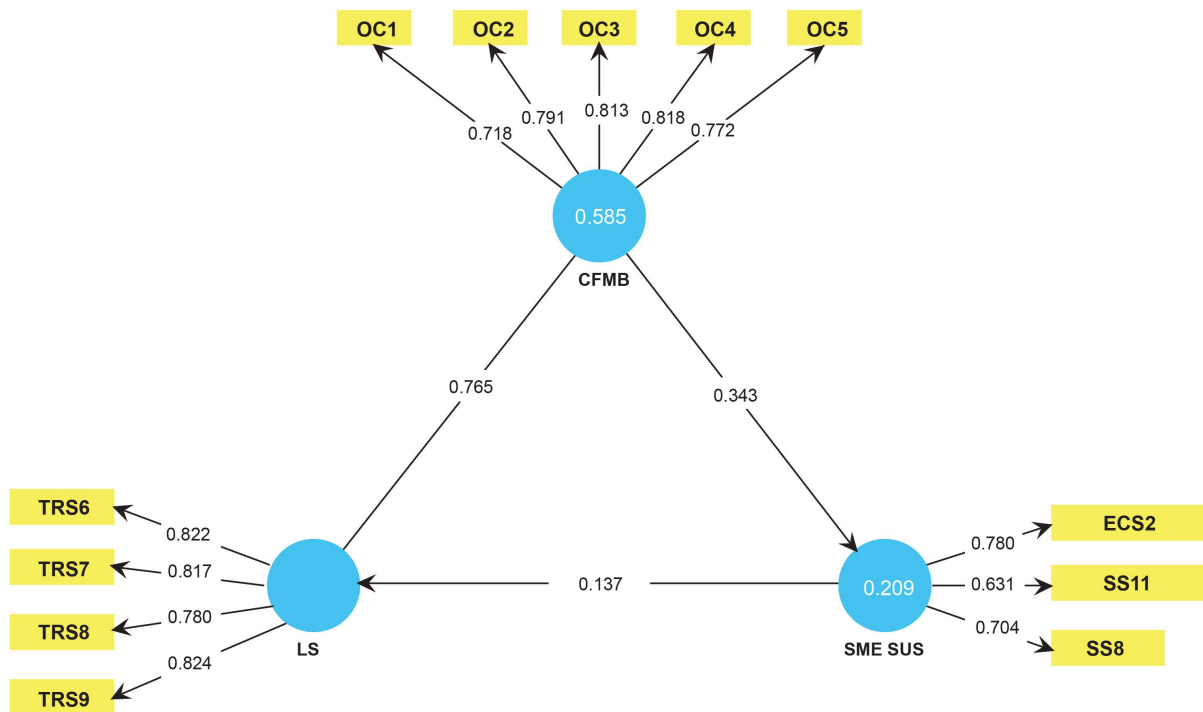
The study results demonstrated that all hypotheses were supported, as shown in **Table 3**. The results of the structural equation model are elucidated by the bell-shaped histograms in **Figures 3-5**, which illustrate the normal distribution of both direct and indirect effects of the exogenous variable and the mediator variable on the endogenous variable. The results from the SmartPLS analysis reveal a significant mediating effect of Cash Flow Management Behaviour (CFMB) in the association between Leadership Style (LS) and sustainability of Small and Medium Enterprises (SME SUS) among the 233 respondents in Uganda ($\beta = 0.263$, $t = 11.616$, $p < 0.05$), confirming H1 of the study.

In particular, when controlling for cash flow management behaviour, the direct effect of leadership style on SME sustainability remained significant, thus confirming a partial mediation effect. This implies that leadership style partly influences SME sustainability through cash flow management behaviour. The findings show that whereas the effect of leadership style on SME sustainability can be directly transmitted, part of this contribution can be channelled through cash flow management behaviour. This implies that when SME managers adopt transformational, situational and transactional leadership styles, they can promote operating, saving, investment, and financing cash flow management behaviours that are vital in promoting SME sustainability in Uganda.

Regarding hypothesis 2 which states that there is a significant relationship between leadership style and SME sustainability in Uganda, our results indicate, a positive and significant association between the study variables ($\beta = 0.137$, $t = 21.473$, $p < 0.05$), validating H2 of the study. Study results suggest that changes in leadership styles translate into positive variations in the uptake of activities that foster environmental protection, societal well-being, and

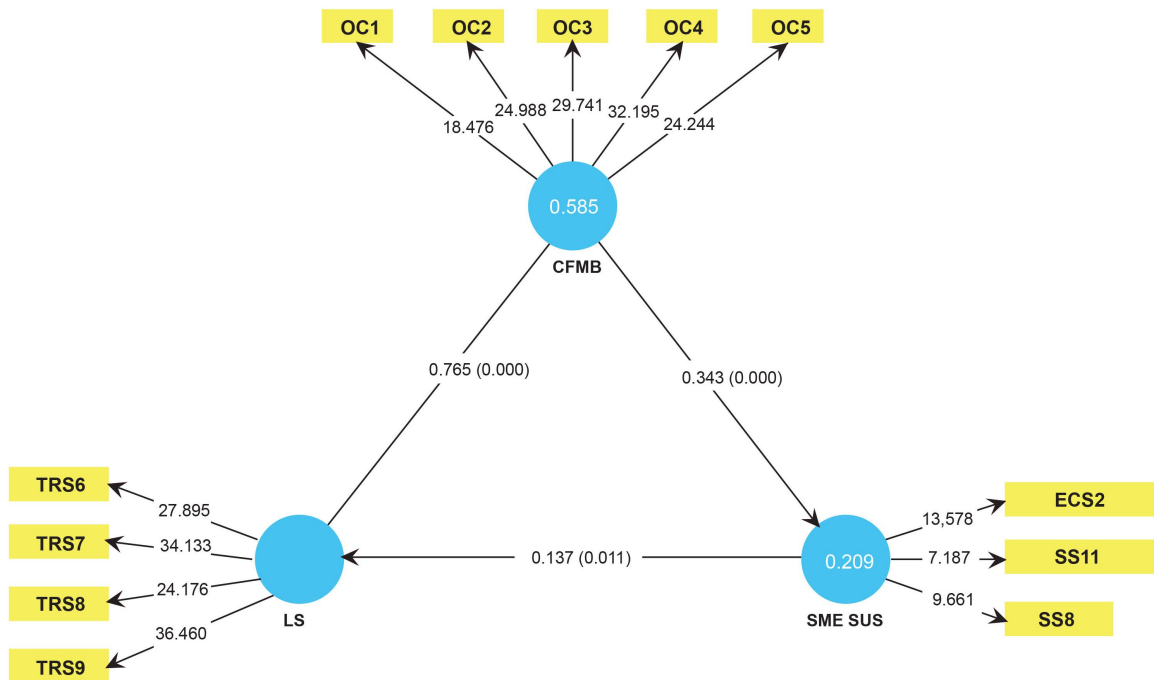
economic viability. As such, the attainment of SME sustainability is achieved when SME managers adopt transformational, situational, and transactional leadership styles. For hypothesis 3, study results present a significant positive relationship between cash flow management behaviour and SME sustainability in Uganda ($\beta = 0.765$, $t = 26.414$, $p < 0.05$) and as a result, H3 was supported. This suggests that positive changes in cash flow management behaviour are related to positive changes in the environmental, social, and economic sustainability of the small and medium enterprises.

Concerning hypothesis 4, our findings indicate a significant positive relationship between leadership style and cash flow management behaviour of SMEs in Uganda ($\beta = 0.343$, $t = 10.769$, $p < 0.05$). This denotes that changes in leadership styles such as transformational leadership, situational leadership, and transactional leadership account for a positive variation in the cash flow management behaviour of SMEs in Uganda. This is true because cash flow management behaviour is dependent on the leadership style adopted by SMEs. In particular, transformational leadership permits SME owners and managers to set high cash flow management standards for their subordinates, express satisfaction regarding better cash flow management behaviour, and reward employees who demonstrate such excellent attributes. This results in better operating, saving, investment, and financing behaviours within the SMEs in Uganda.



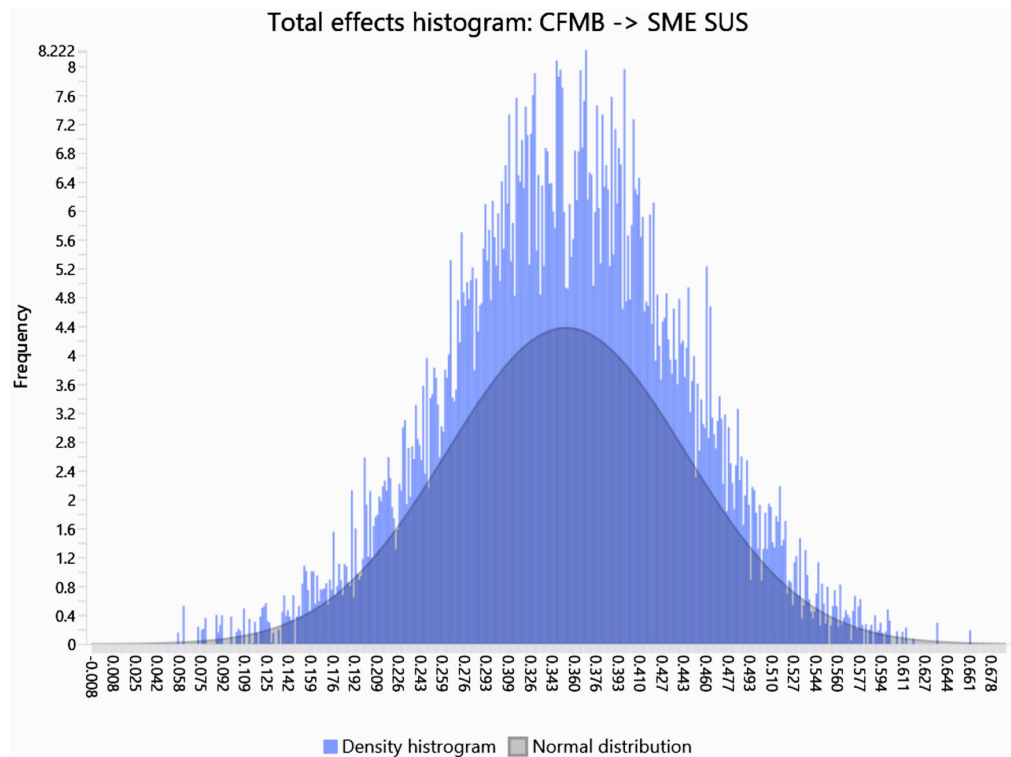
Notes: LS—Leadership Style; CFMB—Cash Flow Management Behaviour; SME SUS—Small and Medium Enterprise Sustainability; **Source:** author own creation.

Figure 1. PLS-SEM algorithms with significant direct and indirect effects.



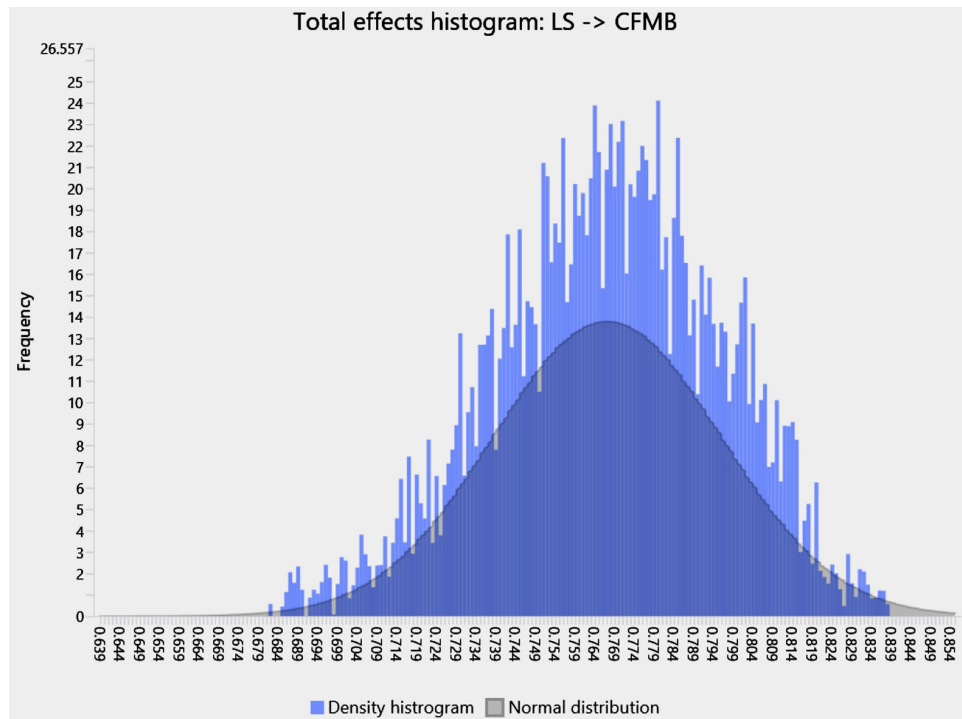
Notes: LS—Leadership Style; CFMB—Cash Flow Management Behaviour; SME SUS—Small and Medium Enterprise Sustainability; **Source:** author’s own creation.

Figure 2. PLS-SEM algorithms with significant t-values and p-values.



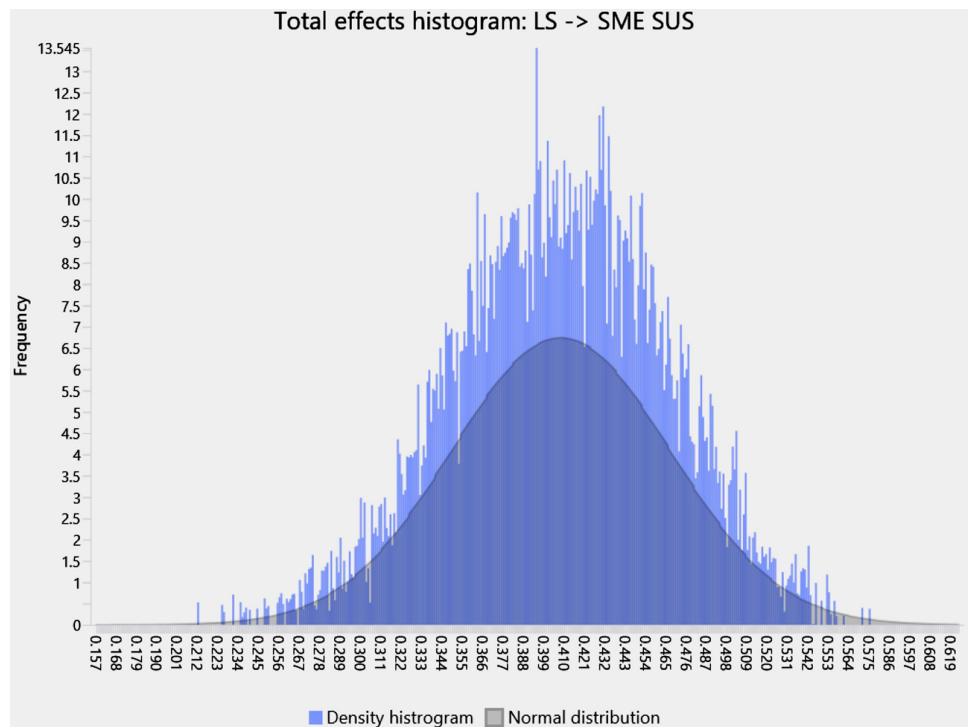
Notes: CFMB—Cash Flow Management Behaviour; SME SUS—Small and Medium Enterprise Sustainability; **Source:** author’s own creation.

Figure 3. Histogram for direct effect of cash flow management behaviour on SME sustainability.



Notes: LS—Leadership Style; CFMB—Cash Flow Management Behaviour; **Source:** author’s own creation.

Figure 4. Histogram for direct effect of leadership style on cash flow management behaviour.



Notes: LS—Leadership Style; SME SUS—Small and Medium Enterprise Sustainability; **Source:** author’s own creation.

Figure 5. Histogram for direct effect of leadership style on SME sustainability.

Table 3. Hypothesis testing.

Hypothesized path	Path coeff.	M	SD	T Values	P Values
LS -> CFMB -> SME SUS	0.263	0.271	0.073	11.616	0.000
LS -> SME SUS	0.137	0.137	0.093	21.473	0.011
LS -> CFMB	0.765	0.767	0.029	26.414	0.000
CFMB -> SME SUS	0.343	0.353	0.091	10.769	0.000

Note(s): ***p < 0.0001, LS—Leadership Style; CFMB—Cash Flow Management Behaviour; SME SUS—Small and Medium Enterprises Sustainability; Path coeff—path coefficient; M—sample mean; SD—Standard Deviation; Source: author’s own creation.

6. Discussion

The discussion is anchored on our hypotheses and the study findings. As such, **H1** shows that cash flow management behaviour partially mediates the relationship between leadership style and SME sustainability in Uganda. In particular, the results indicate that leadership style and SME sustainability are directly associated. It is also evident that this relationship can be achieved through cash flow management behaviour. The findings mean that the specific pathway by which the association between leadership style and SME sustainability happens is direct, while cash flow management behaviour reduces the contribution. This indicates that when cash flow management behaviour is high, it takes away some of the direct contributions in the causal pathway of leadership style and SME sustainability.

In this case, cash flow management behaviour acts as a channel, and since it takes priority over SME sustainability, one cannot split cash flow management behaviour from SME sustainability. Thus, leadership style and cash flow management behaviour are both true predictors of SME sustainability in Uganda. This suggests that when SME managers adopt transformational, situational, and transactional leadership styles, they can promote operating, saving, investment, and financing cash flow management behaviours that are vital in promoting SME sustainability in Uganda.

Engagement with extant literature shows that scholars have paid less attention to the mediating effect of cash flow management in the relationship between the study variables. As such, our finding enhances extant studies that tested the mediating effect of cash flow management while predicting the liquidity of SMEs (Danjuma et al., 2015), firm efficiency (Guo et al., 2021), and firm performance (Mazouei, 2024), which are significantly different from the sustainability of SMEs.

Study results on testing **H2** established a meaningful and statistically significant relationship between leadership style and SME sustainability. Study results suggest that changes in leadership styles translate into positive variations in the uptake of activities that foster environmental protection, societal well-being, and economic viability. As such, the attainment of SME sustainability is achieved when SME managers adopt transformational, situational, and transactional lead-

ership styles. In particular, the transformational leadership style enables business owners and managers to have faith in their subordinates regarding implementing sustainability activities, translate a sense of sustainability to the subordinates as well as express satisfaction regarding sustainability behaviour and initiatives of the workers. For situational leadership style, business managers are in position to encourage employees to participate in sustainability activities as well as help them solve business problems regarding sustainability. Moreover, transactional leadership permits business managers and owners to punish employees who exhibit unsustainability behaviours as well as reward those who contribute to the protection of the environment and society for the benefit of the current and future generations.

The findings of the study resonate very well with the systems theory that positions leadership style as a key component that interacts with and influences other elements of the SME system (Luhmann, Baecker, & Gilgen, 2013). In particular, the leadership style of an SME's owner-manager can permeate and influence the culture of the entire organization, directly impacting the SME's performance and sustainability (Okeke, 2019). This is in agreement with Malik et al. (2020) who indicated that transformational leadership catalyses business productivity as compared to transactional leadership.

Similar results are further evident in a study conducted by Okeke (2019) who indicated that SME owner-managers do not follow any specific leadership style in catalyzing the potential of their businesses to positively impact the environment and society using evidence from Nigeria. This shows that SME owners and managers may need to apply different leadership styles based on the prevailing conditions if they are to foster sustainable development. As such, they should exhibit traits of transformational, transactional, and situational leadership while operating their businesses.

The results of **H3** test indicate that there is a significant positive relationship between cash flow management behaviour and SME sustainability in Uganda. Thus, H3 was supported. This suggests that positive changes in cash flow management behaviour are related to positive changes in the environmental, social and economic sustainability of the small and medium enterprises. In specific terms, cash flow management behaviours that revolve around operating cash flow, investment cash flow, saving cash flow and financing cash flow behaviours are vital in unlocking the sustainability potential of SMEs in Uganda. For example, investment cash flow management behaviour that focuses on investing in pro-environmental activities such as tree planting, community hygiene, buying eco-friendly items like energy-saving tools and equipment, using solar energy as well as training employees in sustainability can result in the uptake of environmental, social and economic sustainability practices.

Study findings are supported by Uwonda and Okello (2015) who indicated that effective cash flow management, including cash flow projection, tax planning, budgetary control, and interpreting financial statements, is also crucial for SME sustainability. In the same vein, Guda (2013) adds that cash flow is posi-

tively and significantly associated with the profitability of small and medium enterprises in Nairobi. Relatedly, [Wadesango et al. \(2019\)](#) reported that cash flow management practices such as cash flow planning, budgeting and monitoring significantly affect the profitability and overall sustainability of the investigated business. As a result, failures in many SMEs have been linked to inadequate cash flow management, which compromises their sustainability by denying them the revenue stream needed to grow ([Uwonda et al., 2013](#)).

The results of hypothesis **H4** indicate that a significant positive relationship exists between leadership style and cash flow management behaviour of SMEs in Uganda. As a result, H4 was supported, suggesting that changes in leadership styles such as transformational leadership, situational leadership and transactional leadership account for a positive variation in the cash flow management behaviour of SMEs in Uganda. This is true because cash flow management behaviour is dependent on the leadership style adopted by SMEs. In particular, transformational leadership permits SME owners and managers to set high cash flow management standards for their subordinates, express satisfaction regarding better cash flow management behaviour and be able to reward employees who demonstrate such excellent attributes. This results in better operating, saving, investment, and financing behaviours within the SMEs in Uganda.

Our findings are in agreement with [Wang et al. \(2021\)](#) who found that transformational leadership is positively associated with strategic cash flow management, as these leaders encourage their teams to identify and exploit financial opportunities. This resonates well with [Smith et al. \(2021\)](#), who indicated that leaders who adopt a transformational style are more likely to integrate technology into financial management practices, leveraging data analytics to improve cash flow forecasting and decision-making. In another study by [Chukwunweike and Aro \(2014\)](#), it is evident that adaptive leaders are well-suited to navigate the complexities of digital transformation in financial management, ensuring that cash flow management practices remain agile and responsive to technological changes.

Conversely, a study by [Avolio and Yammarino \(2013\)](#) highlights the negative impact of laissez-faire leadership on cash flow management, citing instances of financial mismanagement and liquidity crises in SMEs lacking strong leadership direction. [Avolio and Yammarino \(2013\)](#) further suggest that while transactional leaders may ensure adherence to financial protocols, they might not encourage the flexibility needed for dynamic cash flow management. This can lead to a more rigid approach that might not adapt well to changing financial conditions.

The study found a significant positive relationship between leadership style, as a global construct, and SME sustainability in Uganda. This relationship suggests that adopting transformational, situational, and transactional leadership styles leads to positive variations in activities promoting environmental protection, societal well-being, and economic viability. Similarly, leadership style, as a global construct, was found to be vital in catalysing cash flow management behaviours in SMEs. This indicates that leadership styles encouraging innovation and adapta-

bility, inspiring creative financial thinking, and fostering continuous improvement can lead to streamlined cash flow management behaviour. The findings suggest that while all three leadership styles contribute to the overall leadership style construct, transactional leadership appears to be the most influential in explaining leadership style itself. However, it's important to note that the study also found transactional leadership to be insignificant in directly fostering SME sustainability. This is attributed to its authoritative nature, which may demotivate employees from engaging in sustainability initiatives. Conversely, transformational and situational leadership were found to be important in fostering SME sustainability, encouraging environmentally friendly behaviours, and supporting community-based initiatives. These styles are crucial for unlocking the potential of SMEs to balance environmental, social, and economic aspects.

7. Summary, Conclusion and Implications

The purpose of this study was to establish the mediating role of cash flow management behaviour in the relationship between leadership style and sustainability of Small and Medium Enterprises (SMEs) in Uganda. This was achieved through a questionnaire survey of 233 SMEs operating in Gulu and Lira cities in Northern Uganda. Findings indicate that cash flow management behaviour partially mediates the relationship between leadership style and SME sustainability. Results further reveal that cash flow management behaviour and leadership style significantly predict SME sustainability in Uganda.

Based on the findings and discussions, this study makes several contributions to academics, policy and the SME operators in and outside Uganda. Thus, this study makes a unique contribution to extant literature by establishing the mediating effect of cash flow management behaviour in the relationship between internal control systems, leadership style, and SME sustainability. This enhances extant studies that tested for the mediating effect of cash flow management while predicting the liquidity of SMEs (Danjuma et al., 2015), firm efficiency (Guo et al., 2021), and firm performance (Mazouei, 2024), which are significantly different from the sustainability of SMEs.

For policymakers, the government should develop and operationalize leadership standards for SMEs. This can be achieved through developing and promoting leadership development programs tailored for business owners and managers for SME sustainability. In addition, the government should provide tax incentives for SMEs that exhibit proper cash flow management behaviours. In particular, the SME section under the Ministry of Trade, Industries, and Cooperatives (MTIC) in partnership with different private organizations such as the Uganda Manufacturers' Association and Uganda Small Scale Industries Association should identify SMEs that exhibit excellent cash flow management behaviour in form of proper records, and payment of taxes.

The SME owners, managers and operators on the other hand should continuously develop leadership skills to effectively manage the dynamics of SME sus-

tainability. In addition, they should finance and invest in affordable sustainability activities such as putting in place dustbins, tree planting and employee training. These activities will add a net positive impact on the natural environment while improving the wellbeing of the employees and community members as a conduit for socio-economic transformation in Uganda. Moreover, there is a need to improve their cash flow management behaviours. This will enable SME managers to undertake cash flow planning, monitoring and controlling cash flows and maintaining adequate cash reserves to meet unexpected challenges as a strategic pathway for running a business that is profitable and supports environmental conservation as well as societal welfare activities.

8. Limitations and Area for Future Research

This study presents limitations that warrant exploration in future research, whether on similar or divergent themes. The study employed a cross-sectional design, which confined the measurement to a specific point in time. A longitudinal study is required as perceptions related to the study phenomenon are likely to evolve over time. The study was exclusively quantitative, indicating the necessity to adopt a mixed methods or qualitative approach to gain a more comprehensive understanding of SME sustainability. The research accounted for 20.9% of the variance in SME sustainability, suggesting that subsequent investigations may examine additional potential antecedents of SME sustainability. Our findings are derived from a sample of 233 Small and Medium-sized Enterprises (SMEs) located in the Northern region of the country, specifically in Gulu and Lira cities. This indicates a necessity for additional research in contexts beyond Uganda to validate the current findings for generalisability. To account for the remaining unexplained variance, future research could investigate a range of theory-driven variables. These variables could offer a more comprehensive understanding of SME sustainability:

Depiction from the Resource-Based View (RBV) and Dynamic Capabilities Theories, entrepreneurial orientation, for example, innovativeness, proactiveness, and risk-taking could significantly influence SME sustainability. SMEs with a stronger entrepreneurial orientation might be more adept at identifying and capitalizing on new opportunities, adapting to market changes, and developing sustainable competitive advantages. Informed by Systems Theory, organizational culture, particularly one that values sustainability, learning, and adaptability, could play a crucial role. A culture that fosters employee engagement in sustainability initiatives and supports ethical practices may lead to better long-term outcomes. Expanding on the Systems Theory's emphasis on open systems, external factors such as market dynamism, technological advancements, and regulatory support could be explored. For instance, the availability of green technologies, access to sustainable supply chains, and government incentives for sustainable practices might significantly impact SME sustainability. Building on the Triple Bottom Line (TBL) and Stakeholder Theories, the extent and quality of engagement with vari-

ous stakeholders (e.g., customers, suppliers, local communities, and government agencies) could influence sustainability outcomes. Strong stakeholder relationships can provide resources, legitimacy, and support for sustainable initiatives.

Ethical Consideration

While conducting this study, human ethics that are intended to avoid invading participants' privacy, deception, and other acts that endanger participants' safety were followed. In particular, the study was cleared by The Uganda National Council for Science and Technology (UNCST) to be conducted in Uganda. Furthermore, we maintained the confidentiality of the respondents by refraining from collecting any personal details, including their names, contact information, and the names and addresses of their organisations. Moreover, respondents engaged in the study following their consent.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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