Influence of the Control of Accounting and Financial Information on the Performance of SMEs in Chad

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Abstract

In a context characterized by economic volatility and institutional fragility, small and medium-sized enterprises (SMEs) play a crucial role in fostering growth, innovation, and employment in Chad. However, their performance is often constrained by weak financial governance and limited reliability of accounting information. This study examines the influence of accounting and financial information control—both separately and in an integrated manner—on the performance of Chadian SMEs.

A mixed-methods design was employed, combining a quantitative survey of 253 SMEs located in N'Djamena and Moundou with qualitative interviews conducted with 25 managers. The data were analyzed through descriptive statistics, regression models, and structural equation modeling, complemented by thematic analysis of qualitative insights.

Findings indicate a significant positive relationship between accounting information control and performance ($r = 0.56$; $p < 0.001$), as well as between financial information control and performance ($r = 0.49$; $p < 0.001$). More importantly, the integrated approach to accounting and financial information control exhibits the strongest effect ($r = 0.62$; $p < 0.001$), enhancing data consistency, decision-making speed, and organizational efficiency. Qualitative evidence confirms that SMEs with integrated systems demonstrate improved risk anticipation and more effective resource allocation.

These results highlight that moving from fragmented to integrated control mechanisms is a strategic lever for strengthening the competitiveness and resilience of SMEs in Chad. From a managerial standpoint, the study recommends professionalizing control practices and adopting integrated digital systems. From a scientific perspective, it opens research avenues on the mediating role of digital maturity and financial literacy in the relationship between information control and organizational performance.

Keywords: accounting control, financial control, integration, SME performance, Chad

Introduction

In a global economic environment characterized by increasing volatility and heterogeneous institutional dynamics, small and medium-sized enterprises (SMEs) are widely recognized as critical drivers of growth, innovation, and employment generation, particularly in developing countries (Beck & Demirguc-Kunt, 2006; Qureshi, 2023; World Bank, 2024). In Chad, this role is even more decisive, as much of the productive fabric is composed of small firms operating under severe structural constraints, notably in terms of governance, access to reliable financial information, and resource capitalization (IMF, 2023).

Within this setting, the control of accounting and financial information—understood to include financial information systems, internal control mechanisms, and financial training—emerges as a strategic lever for strengthening SME performance (Abor & Quartey, 2010; Fodio & Oba, 2023). Recent work suggests that formalized governance within Chadian SMEs, including elements such as delegation mechanisms, professionalization, and structured oversight, exerts a significant positive effect on organizational outcomes.

The question of SME performance occupies a central position in the management and accounting literature, particularly in emerging economies where SMEs form the backbone of productive activity. In Chad, SMEs play a crucial role in employment creation, local economic dynamism, and incremental innovation. Yet they continue to face structural and institutional constraints that limit their competitiveness and long-term viability. Among these constraints, the management and control of accounting and financial information appear as critical determinants of performance, especially in an environment in which organizational practices are being reshaped by progressive digitalization.

The digital transformation of accounting and financial systems is redefining the very foundations of performance. The introduction of digital technologies—such as enterprise resource planning systems (ERP), cloud-based infrastructures, and business intelligence tools—has the potential to improve data traceability, reduce information asymmetries, and accelerate decision-making cycles. As shown by Ngatchou and Tchangue (2025), SMEs that achieve a sufficient level of digital maturity experience a significant improvement in decision efficiency and overall performance. However, this value creation depends on the firm's ability to establish rigorous control over the information generated and circulated by these systems.

Parallel to this, the recent literature on SMEs in developing economies highlights the central role of financial literacy. Mastery of basic accounting and financial competencies is associated with greater organizational stability, improved access to credit, and better tax compliance (Nkundabanyanga et al., 2023; Salifou, 2024). In many Chadian SMEs, however, internal financial capabilities remain weak, which undermines both the reliability and the credibility of the information produced. In such a context, the establishment of accounting and financial

information control mechanisms—whether manual or digital—becomes essential to ensuring transparency, maintaining stakeholder trust, and improving operational performance.

This leads to a central question: What is the influence of accounting and financial information control on SME performance in Chad? This question is relevant because, although previous studies have examined accounting digitalization, financial literacy, or governance practices, few have analyzed the combined and interactive role of accounting control and financial control within African SMEs. Put differently, the issue is not merely whether SMEs produce reliable financial information, but how integrated control mechanisms shape decision quality and condition performance trajectories.

To address this issue, our study mobilizes a theoretical framework combining the Resource-Based View (RBV) and the dynamic capabilities approach. The RBV allows us to conceptualize accounting and financial information control as a strategic resource capable of generating sustained competitive advantage if it is rare, difficult to imitate, and effectively leveraged. The dynamic capabilities perspective complements this by emphasizing the ability of SMEs to adapt, integrate, and reconfigure their informational resources in response to unstable economic and technological environments.

The article is structured as follows. Section 2 reviews the literature and clarifies the current state of knowledge on accounting and financial information control, digitalization, and SME performance. Section 3 develops the conceptual framework and formulates the research hypotheses. Section 4 outlines the methodological approach. Section 5 presents the empirical results of the study. Finally, Section 6 discusses the findings, highlights their theoretical and managerial implications, and identifies the main limitations and avenues for future research.

1. Literature Review

1.1. Accounting and financial information control: definitions and dimensions

Accounting and financial information control is generally described as a cornerstone of organizational governance, as it aims to ensure the reliability, relevance, and transparency of data produced by the firm. It encompasses the set of mechanisms, processes, and tools designed to guarantee that the information used to represent the firm's economic and financial situation is accurate, traceable, and compliant with applicable accounting, fiscal, and regulatory standards (Fodio & Oba, 2023).

The literature typically distinguishes between two related but analytically distinct domains. Control of accounting information focuses on the integrity and accuracy of data derived from general and cost/management accounting, and primarily serves compliance, regularity, and auditability. Control of financial information extends the scope to include cash flows, liquidity and solvency indicators, profitability metrics, and other financial performance measures that inform managerial and strategic decision-making. This distinction is critical: the first function safeguards documentary credibility; the second orients strategic and financial choices.

Several recurring dimensions are emphasized. First, internal control systems are expected to prevent and detect errors, fraud, and anomalies through segregation of duties, hierarchical supervision, regular audit procedures, and systematic documentation (Otley, 2016). Second, the performance of financial information systems is considered crucial for the secure, timely, and structured processing of accounting and financial data, and for making relevant information available to decision-makers (Nkundabanyanga et al., 2023). Third, regulatory and fiscal compliance supports the comparability of information across time and firms and enhances stakeholder confidence, thereby facilitating access to external finance (Barth et al., 2022).

In this sense, accounting and financial information control is not merely an administrative exercise: it becomes an organizational performance instrument. Reliable accounting information enables a realistic assessment of the firm's economic position, while financial information control supports cash flow optimization, solvency management, and forward-looking decision-making under uncertainty.

Nevertheless, recent studies highlight structural limitations in the case of SMEs, particularly in Sub-Saharan Africa. SMEs frequently face shortages of internal competencies, weak procedural formalization, dependence on a small number of key individuals, and limited use of digital tools that could otherwise automate, secure, and standardize information flows (Salifou, 2024). As a result, information is often incomplete, delayed, or presented in a form that is not easily actionable for strategic decision-making. Moreover, most prior work treats accounting control and financial control as separate objects of analysis. Little attention has been paid to their operational integration into a unified internal governance system. This omission is problematic, especially for SMEs managing permanent cash constraints: in such contexts, the ability to connect operating performance and immediate financial viability is vital(Mignenan, 2021, 2022, 2023).

The present study addresses precisely this blind spot. It analyzes accounting information control and financial information control jointly, not as parallel dimensions but as an integrated governance mechanism. It then examines how this integration contributes to SME performance in a setting characterized by high uncertainty, narrow financial margins, and strong liquidity pressure, as is the case in Chad.

1.2. SME performance: measurement dimensions and African specificities

SME performance is a multidimensional construct that cannot be reduced to accounting profitability alone. Classical approaches rely on financial indicators such as sales growth, margin levels, productivity, self-financing capacity, and solvency (Barth et al., 2022). More recent approaches incorporate non-financial dimensions, such as customer satisfaction, perceived quality of products and services, innovation capacity, ability to attract and retain labor, reputation, social impact, and long-term viability (World Bank, 2024; Nkundabanyanga et al., 2023). The focus has thus shifted from short-term financial performance to the firm's ability to remain viable, credible, and competitive over time.

In African economies, and Sub-Saharan Africa in particular, these indicators must be interpreted in light of structural constraints. Studies have documented persistent barriers faced by SMEs: limited access to formal credit, administrative and regulatory burdens, unstable fiscal regimes, low banking penetration, weak digitalization of internal processes, insufficient managerial and accounting capabilities, and high exposure to cash flow shocks (Djankov et al., 2023; AfDB, 2023; Salifou, 2024). Under such conditions, performance depends not only on the intrinsic business model but also on the firm's ability to build internal mechanisms for the reliability, monitoring, and use of financial information.

This reality is particularly pronounced in Chad, where the entrepreneurial fabric is dominated by small, undercapitalized, semi-formal or informal firms operating in a fragile institutional environment. In such a context, survival and growth cannot rely solely on market strategy; they require a minimum level of internal governance: reliable bookkeeping, systematic cash monitoring, disciplined budgeting, and credible financial communication to external partners. In other words, SME performance in Chad cannot be meaningfully understood without considering the degree of internal formalization of accounting and financial practices. Our study makes this link explicit. It does not limit itself to measuring performance outputs (profitability, solvency, external credibility). It asks to what extent those outcomes are conditioned by the quality of internal informational control and by the ability of SME leaders to interpret and act upon financial signals.

1.3. Information control and SME performance: theoretical foundations

The relationship between information control and SME performance can be illuminated by three major theoretical perspectives.

The first is agency theory, which posits that managers and owners do not necessarily share the same interests or the same level of information (Jensen & Meckling, 1976). From this perspective, accounting information control functions as a mechanism for reducing information asymmetry and managerial opportunism. By increasing transparency and enabling systematic accountability, it also serves as a credibility signal to financial and institutional partners (Barth et al., 2022). This is particularly important for SMEs that rely heavily on external trust to access scarce resources.

The second is the Resource-Based View (RBV), which explains sustained performance through the mobilization and protection of internal resources that are valuable, rare, inimitable, and non-substitutable (Barney, 1991). In African SMEs, the quality of financial management practices, mastery of accounting systems, and the ability to interpret and mobilize financial indicators for operational steering can be conceptualized as precisely such strategic resources. When access to capital is limited, information itself becomes a critical asset, because it supports better allocation of scarce resources and margin protection in unstable environments (Fodio & Oba, 2023).

The third perspective is contingency theory. It argues that the effectiveness of control mechanisms depends on their alignment with the firm's specific context: size, sector, degree of

formalization, and environmental volatility or complexity (Otley, 2016). In other words, there is no universal model of information control that applies uniformly across all SMEs. Practices that are effective in a relatively formalized industrial SME in Ghana may not translate directly to a semi-formal trading SME in southern Chad(Mignenan, 2021, 2022, 2023). This approach cautions against treating Chadian SMEs as "small versions of large firms"; instead, they must be analyzed as organizations embedded in fragile institutional environments where informal rules are common, regulatory enforcement is intermittent, and decision-making is highly centralized in the hands of the owner-manager (Salifou, 2024).

The distinctive contribution of our study lies in articulating these three perspectives rather than mobilizing them in isolation. We consider governance (reduction of information asymmetry), internal resources (mastery of accounting and financial information systems), and environmental conditions (uncertainty, informality, liquidity pressure) simultaneously. Our results suggest that, in a context such as Chad, performance is not solely market-driven. It depends on the firm's capacity to generate and process reliable financial information under structurally adverse conditions.

1.4. Prior empirical work: main insights and limitations

Empirical work conducted in West Africa has shown that SMEs with structured financial management practices tend to exhibit better economic performance, notably in terms of profitability and growth, because such structuring reduces perceived risk for partners and facilitates access to financing (Abor & Quartey, 2010). More recent studies in Central Africa confirm this relationship while highlighting the role of digitalization. The adoption of digital accounting and financial reporting tools is associated with improved profitability, provided that the technological investment is supported by internal capacity building rather than limited to superficial tool acquisition (Ngatchou & Tchangue, 2025). Other studies in various African economies further argue that the quality of accounting information directly affects SMEs' access to formal financing by acting as a credibility signal, and that budgetary discipline and rigorous financial monitoring are associated with stronger strategic performance (Nkundabanyanga et al., 2023; Salifou, 2024).

Taken together, these studies converge on a central point: in uncertain environments, reliable financial information becomes a strategic asset. It enables both internal optimization and external legitimation. However, these studies have three limitations when applied to the Chadian context. First, they tend to focus on more structured economies with denser banking systems and more developed SME support ecosystems. Second, they often treat accounting and finance as separate functional domains and do not systematically examine their operational integration in day-to-day decision-making. Third, they devote limited attention to the actual interpretive capacity of SME owner-managers, even though this individual capability becomes decisive in environments marked by high informality and liquidity stress.

1.5. Gaps in the literature and positioning of the study

Despite growing consensus on the strategic importance of accounting and financial information control in African SMEs, the literature remains fragmented. Three gaps are especially salient. First, there is a lack of integrative models that link, within a single analytical framework, accounting information control, financial information control, their integration into a coherent internal steering mechanism, and the resulting performance of the firm. Most prior studies treat these elements separately, making it difficult to capture the systemic role of information control as a competitiveness lever. Second, while the literature acknowledges the importance of managerial and financial literacy, it rarely theorizes it as a necessary condition for translating information into performance. This omission is particularly problematic in Chadian SMEs, where decision-making authority is often highly centralized in the hands of the owner-manager. Third, there remains a significant empirical gap regarding Chadian SMEs, which tend to operate with low levels of formalization, limited access to finance, and only partial or uneven digitalization (Djankov et al., 2023; Djimaldé & Mignenan, 2025).

The present study positions itself precisely in this space. It proposes a model that links internal governance (through the control of accounting and financial information), the integration of these informational streams into a unified steering device, the adoption of digital technologies as an activation mechanism, and the financial literacy of the owner-manager as a condition for transforming information into actionable decisions. The model is then tested empirically using data from Chadian SMEs. In doing so, the study makes three contributions. First, it shows that SME performance depends not only on external factors (market access, regulatory environment) but also on how financial and accounting information is produced, consolidated, and mobilized internally. Second, it provides an operational analytical framework suitable for resource-constrained contexts, designed to inform managerial practice and governance within SMEs. Third, it documents, in a systematic manner, the largely understudied Chadian context and offers results that can inform SME leaders, support institutions, and public decision-makers in designing tailored capacity-building initiatives.

In summary, the study responds to both a scientific and a practical need. It addresses a clear empirical gap in the Chadian case, and it proposes an integrated framework capable of explaining how accounting and financial information can become a lever for competitiveness, external credibility, and organizational survival in environments characterized by liquidity pressure and limited formalization.

2. Conceptual Framework and Hypotheses

The proposed conceptual model articulates three internal mechanisms within SMEs: control of accounting information, control of financial information, and the integration of these two informational streams in support of managerial decision-making. Taken together, these mechanisms contribute to the emergence of a distinctive organizational capability that we refer to as frugal integration capacity (CIF). This capability is posited as a central determinant of SME performance, understood here as operational efficiency, financial sustainability, and strategic resilience. CIF is activated by digital technologies and conditioned by the level of financial

literacy of the firm's leadership. The framework thus adopts a systemic perspective that draws on agency theory (Jensen & Meckling, 1976), the Resource-Based View and strategic capability literature (Barney, 1991), and contingency theory as applied to management control systems (Otley, 2016). It also extends the lenses of dynamic capabilities (Teece, Pisano & Shuen, 1997) and organizational resilience (Lengnick-Hall & Beck, 2005), adapting these traditions to the specific constraints under which SMEs operate.

2.1. Frugal Integration Capacity (Cif): Construct Definition

We Define Frugal Integration Capacity (Cif) as the Ability of an Sme to Capture, Combine, and Reconfigure—economically and in a Disciplined Manner—the Accounting and Financial Information Generated by Its Day-to-day Operations, and to Transform That Information Into Actionable Decision Tools That Support the Rapid, Targeted, and Robust Allocation of Scarce Resources Under Uncertainty. Cif is Therefore Not Reducible to Traditional Financial Analysis. It is Better Understood as a Form of Lean Orchestration: Doing More With Less by Extracting High Decision Value From Control Infrastructures That Are Often Limited, Incomplete, or Heterogeneous. This Frugal Orientation is Critical in Smes, Where Financial Flexibility is Narrow, Formal Management Systems Are Underdeveloped, and the Personal Exposure of the Owner-manager to Financial and Reputational Risk Remains High (Fodio & Oba, 2023; Salifou, 2024).

In this respect, CIF can be understood as a specific form of dynamic capability. Dynamic capabilities refer to the firm's ability to sense environmental signals, seize opportunities, and reconfigure its internal resources and routines in order to maintain advantage in changing conditions (Teece, Pisano & Shuen, 1997). CIF translates this logic into SME terms, under resource constraints. It encompasses, first, the ability to perceive internal and external tensions, such as late payments from customers, rising unit costs, cash flow pressure, or margin erosion. Second, it reflects the ability to seize these signals and convert them into concrete operational decisions, such as price adjustments, renegotiation of supplier terms, or compression of the cash conversion cycle. Third, it reflects the ability to reconfigure, without delay, monitoring routines, budget allocation priorities, and internal follow-up practices. In this sense, CIF functions as a mechanism of organizational resilience, understood as the capacity to absorb shocks, maintain critical functions, and return to a viable trajectory without irreversible erosion of strategic assets (Lengnick-Hall & Beck, 2005). Whereas conventional resilience literature emphasizes shock absorption and adaptive capacity, CIF specifies the informational channel through which such resilience is achieved in small firms: the frugal integration of accounting and financial signals into immediate levers for action.

2.2. Constitutive dimensions of frugal integration capacity

CIF rests on several empirically observable dimensions. The first is selective centralization of information. This refers to the SME's capacity to gather, coherently and without redundant complexity, the accounting information (costs, charges, margins by activity) and the financial information (cash flows, working capital requirements, short-term liabilities) that are critical to

survival and growth. The aim is to reduce the fragmentation of information that characterizes many SMEs, without imposing heavy, costly, or oversized systems.

The second dimension is decision translation. This involves transforming technical accounting and financial data into indicators that are intelligible to owner-managers and operational heads, such as break-even points per product line, the cost of customer payment delays, or the effective cost of immobilized inventory. The intent is not abstract sophistication, but immediate managerial actionability.

The third dimension is adaptive looping and rapid routine revision. This refers to the firm's ability to adjust, in short order, its internal practices—spending authorizations, purchasing procedures, collection priorities, supplier payment schedules—in response to discrepancies between forecasted figures and financial reality. This dimension directly reflects the "reconfiguration" element at the core of dynamic capability theory.

The fourth dimension is informational frugality discipline. This denotes the ability to operationalize the previous three dimensions under strict constraints of cost, simplicity, and internal comprehensibility. The objective is to avoid over-engineering, limit the proliferation of unnecessary digital tools, and maintain processes that can be executed and understood by a small team. This discipline of sobriety is what gives CIF its frugal character and makes it particularly suited to SMEs.

These dimensions make CIF measurable and falsifiable. An SME that cannot centralize critical information, translate it into intelligible indicators, adjust routines rapidly, and do so under cost and simplicity constraints does not, in practice, possess CIF—even if it has access to isolated accounting or financial tools.

2.3. Conditions of validity and scope of generalization

CIF is proposed here as a construct particularly relevant in environments characterized by high economic uncertainty, volatile demand, and intense competitive pressure. It becomes especially salient where firms face acute liquidity risk, meaning that cash flow is persistently exposed to timing mismatches between receipts and disbursements. It is also crucial in firms with limited specialized human resources—for instance, in the absence of an in-house controller—or where digital transformation remains partial or still in progress. Finally, CIF is decisive where the survival of the firm is tightly linked to the execution capacity of the owner-manager.

These conditions describe a large share of SMEs in emerging and weakly institutionalized economies, where access to finance remains costly and conditional upon the firm's informational credibility in the eyes of banks, investors, and strategic partners. In such settings, CIF is not a governance refinement aimed at marginal optimization. It is a survival mechanism in the short term and a credibility mechanism in the medium term.

2.4. Antecedents of frugal integration capacity: the role of informational control

We posit that three forms of internal control act as direct antecedents of CIF. Control of accounting information refers to routines that ensure the reliability, traceability, and explainability of data relating to costs, charges, margins, and activity-level results. Control of financial information refers to monitoring and alert mechanisms for cash, liquidity flows, and financing structure. The integration of accounting and financial information control refers to the firm's capacity to articulate these two domains to produce a joint reading of operations and liquidity; that is, to connect economic and operational performance to financial sustainability.

2.5. Theoretical contribution

In summary, as illustrated in Figure 1, the proposed model moves beyond a linear "control → performance" relation by introducing a central mechanism: frugal integration capacity. First, it formalizes a dynamic capability specific to SMEs, namely the rapid reconfiguration of informational control routines under stringent resource constraints. Second, it operationalizes organizational resilience by showing how internal informational integrity translates into survival capacity, adaptive reallocation, and strategic redeployment. Third, it clarifies the conditions under which the construct is valid: CIF is particularly pertinent, measurable, and explanatory in small and mid-sized firms exposed to recurrent shocks and lacking sophisticated management infrastructures.

In doing so, the model addresses a recurrent limitation in the literature. Agency, resource-based, and contingency perspectives explain why control systems matter. Dynamic capabilities and resilience perspectives explain how certain firms survive and adapt under uncertainty. CIF, as defined and operationalized here, specifies the informational mechanism—frugal, disciplined, and integrative—through which these properties can emerge, persist, and generate a defensible competitive advantage in SMEs.

Figure 1: Conceptual Model
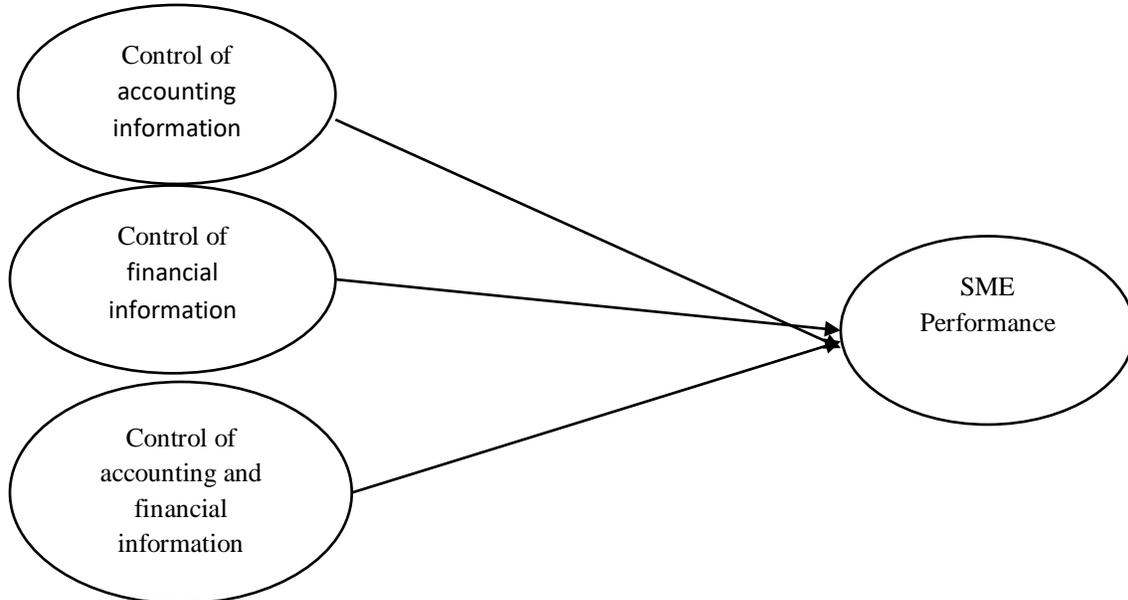
Source: author, production based on literature, August 2025

2.6. Operational Definition of Variables

Control of accounting information refers to the set of internal procedures designed to ensure the quality, reliability, and regularity of accounting entries. It encompasses journal monitoring, the verification of bank reconciliations, compliance with accounting standards, and the supervision of data entry and validation processes. Operationally, this variable is captured through the frequency and systematic nature of internal checks, the degree of traceability of accounting records, and the level of automation of accounting workflows (for example, periodic closings, access controls, and audit trails). SME performance associated with this dimension is assessed using both economic indicators (profitability, revenue growth) and organizational indicators (operational efficiency, customer satisfaction).

Control of financial information refers to the supervision of cash flows, the analysis of financial statements, and the monitoring of key indicators of profitability, liquidity, and solvency. Its operationalization relies on the regularity and timeliness of financial statement production, the rigor of budgetary and variance analysis, the implementation of targeted internal audits, and the existence of financial risk management mechanisms (commitment limits, liquidity stress testing). The associated measure of overall performance includes financial indicators (net income, financial autonomy) as well as strategic indicators (access to financing, perceived credibility and reputation among stakeholders).

Integrated control of accounting and financial information designates the coherent articulation between accounting control systems and financial steering mechanisms, in order to guarantee the interoperability and overall reliability of the data used for decision-making. It is measured by the

effective use of integrated information systems (ERP/BI), the quality and internal consistency of combined management reports, and the frequency of accounting–financial convergence analyses (for example, alignment between margins and cash positions; correspondence between the cash conversion cycle and reported results). Performance in this case is conceptualized as multidimensional, encompassing economic performance (profitability), strategic performance (adaptive capacity), and organizational performance (process agility).

SME performance (PPME) is captured through a composite index that combines financial indicators (profitability, solvency, revenue evolution) and non-financial indicators (customer satisfaction, employment growth, sustainability practices), using metrics calibrated to the structural and informational specificities of African SMEs (World Bank, 2024). This index supports cross-firm comparison while maintaining contextual relevance.

2.7. Research Hypotheses

Drawing on the conceptual model presented in Figure 1 and on prior empirical work, three hypotheses are formulated and illustrated in Figure 2.

Hypothesis 1: Control of accounting information has a significant positive influence on SME performance.

Control of accounting information—understood as the set of mechanisms that ensure the reliability, traceability, and compliance of accounting records—improves the readability of the firm's economic activity. By providing managers with timely, verifiable data, such control supports strategic decision-making, facilitates budget planning, and strengthens internal transparency. A rigorous accounting control system therefore acts as a lever for both economic and operational performance.

Hypothesis 2: Control of financial information is positively associated with overall SME performance.

Control of financial information includes the supervision of cash flows, the analysis of financial statements, and the monitoring of profitability and solvency ratios. Robust financial information control helps prevent financial imbalances, optimize resource allocation, and anticipate liquidity risks. By securing asset management and reinforcing credibility with external stakeholders (banks, investors, commercial partners), it contributes to financial stability and sustainable growth.

Hypothesis 3: Integrated control of accounting and financial information exerts a positive and significant effect on SME performance.

An integrated approach to the control of accounting and financial information links operational data to financial indicators, thereby providing a holistic view of the firm's health. Such coupling strengthens the coherence of internal reporting, improves strategic responsiveness to market

fluctuations, and enhances decision-support systems. A unified accounting–financial control architecture thus promotes organizational efficiency, multidimensional performance, and the resilience of SMEs.

Figure 2 : illustration des hypothèses
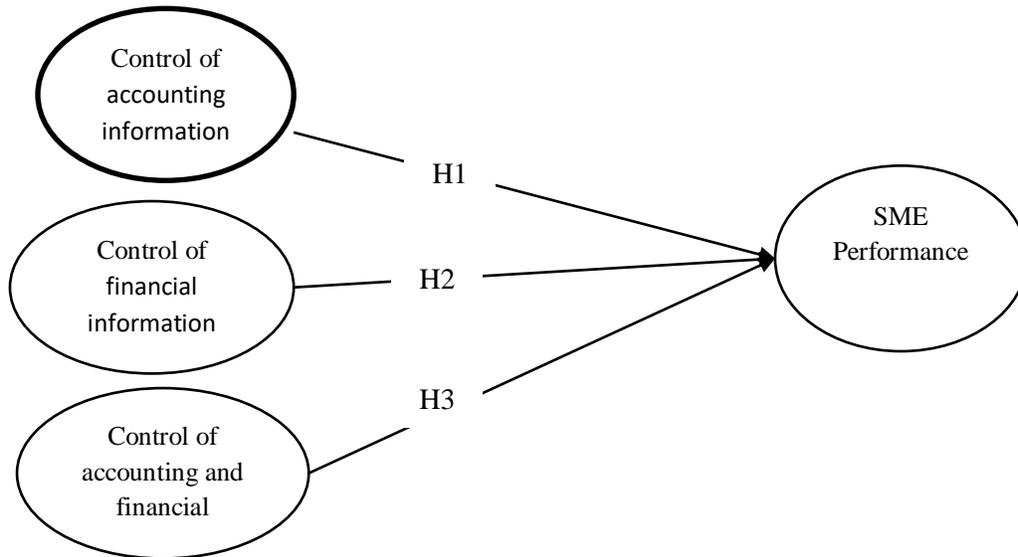
Source: author, compilation of the three hypotheses, August 2025

In light of Figure 2, we develop Table 1 presenting the items that translate the three hypotheses into observable variables, specifying the dimensions and examples of measurable statements.

Table 1: Operationalization of Assumptions

Hypothesis	Independent / dependent variable	Dimensions	Proposed items (Likert scale 1 = Strongly disagree to 5 = Strongly agree)	References
H1: The control of accounting information has a significant positive influence on the performance of SMEs	Control of accounting information → Performance of SMEs	- Reliability of accounting entries - Traceability of transactions - Compliance with accounting standards	1. My company's accounting entries are regularly checked and corrected if necessary. 2. Financial transactions are documented and archived in a systematic manner. 3. The accounting statements comply with the standards and regulations in force. 4. Bookkeeping provides clear information for budget planning.	Al-Matari et al. (2014); Kinyua (2020); Mignenan (2023)
H2: Control of financial reporting is positively associated with the overall performance of SMEs	Control of financial information → SME performance	- Supervision of cash flows - Analysis of financial statements - Monitoring of profitability and solvency ratios	1. Cash flows are monitored and analyzed regularly. 2. Financial statements are reviewed to identify performance trends.3. Financial indicators (profitability ratios, solvency) are calculated periodically. 4. Controlled financial information is used to anticipate risks and opportunities.	Abor & Quartey (2010) ; Fodio & Oba (2023) ; Salifou (2024)
H3: Integrated control of accounting and financial information has a positive	Integrated accounting and financial control → SME performance	- Consistency of operational and financial data - Integration into decision-making - Strategic	1. Accounting and financial data are integrated to produce comprehensive reports. 2. Combined information facilitates quick strategic	

and significant effect on the performance of SMEs		responsiveness	decisions. 3. The accounting and financial integration allows for better anticipation of market developments. 4. The integrated control system contributes to organisational efficiency.	

Source: Author, Literature Compilation, August 2025

3. Methodology

3.1. Type of research and methodological approach

This study is part of an explanatory approach aimed at identifying, analyzing and modeling the determinants of SME performance based on accounting information control practices, the level of financial literacy and the adoption of digital technologies. In order to understand the complexity of the relationships between these different variables, the study uses a **mixed methodological approach**, articulating **quantitative** (standardised questionnaires) and **qualitative (**semi-structured interviews) data. This choice is based on the need to combine the rigour of statistical measurements with the depth of analysis of the perceptions of the actors.

3.2. Population, sampling and study site

The field of investigation of this research focuses on **small and medium-sized enterprises (SMEs) located in Chad**, operating mainly in the trade, handicraft production, services and agri-food sectors. The **target population** is made up of executives, accounting managers and financial managers, i.e. actors directly involved in the collection, processing and control of accounting and financial information.

Principled sampling **was preferred, in accordance with the number of items (25), in order to guarantee both** sectoral **and** geographical representativeness. This methodological choice makes it possible to include SMEs with varied profiles in terms of size, sector of activity and level of structuring of control systems, while optimizing access to the field and the availability of respondents.

The **sample size** of **253 SMEs** is justified by the need to have a sufficient volume of data to carry out robust statistical analyses (correlations, regressions, structural models), while respecting the logistical and temporal constraints of the study. The selected companies are mainly divided between **N'Djamena**, the capital and main economic hub of the country, and **Moundou**, the second largest city in economic importance, thus offering relevant and diversified territorial coverage. Table 2 illustrates the characteristics of the respondents.

Table 2: Characteristics of Respondents

City / Location	Main sectors	Number of SMEs surveyed	Proportion (%)
N'Djamena	General Trade, Services, Food & Beverage	150	59,29
Moundou	General trade, Craft production, Food and beverage	103	40,71
Total		253	100

Source: Author, Interview Recap, August 2025

3.3. Data Collection Instruments

Two main instruments were used for data collection. First, a structured questionnaire was administered in person and designed on the basis of scales validated in the literature. It was used to measure managers' perceptions of accounting control, financial literacy, technological use, and perceived performance. Second, semi-structured interviews were conducted with 25 SME leaders to complement and nuance the quantitative data by providing contextual insights into actual practices and operational constraints observed in the field.

3.4. Data Analysis Techniques

The data collected were analyzed using rigorous statistical techniques. Questionnaire results were first subjected to descriptive analysis (means, standard deviations, frequencies) in order to construct a profile of the SMEs and their practices. Simple and multiple linear regressions were then conducted to test hypothesized relationships between the variables. In addition, structural equation modeling (SEM) was employed to assess the mediating and moderating effects proposed in the conceptual model, explicitly accounting for latent variables and measurement error.

3.5. Validity and Reliability of the Instruments

To ensure content validity, questionnaire items were developed on the basis of recent academic literature and validated by an expert panel. Construct validity was examined through exploratory factor analysis, which confirmed the internal coherence of the measured dimensions. With regard to reliability, internal consistency coefficients (Cronbach's alpha) were calculated for each subscale, all of which exceeded the 0.70 threshold, indicating satisfactory measurement stability. Tests for multicollinearity, normality, and variance homogeneity were also performed to verify the assumptions underlying the statistical models.

4. Presentation of Results

4.1. Qualitative Results

Control of accounting information and SME performance.

Most respondents (levels 4 or 5 on the evaluation scale) reported that their accounting control practices are regular, structured, and compliant with applicable standards, although some SMEs still display weaknesses in systematic archiving and periodic verification. A smaller number of respondents (levels 1 or 2) emphasized constraints linked to the lack of qualified human resources and to the cost of compliance. At level 5, several respondents described highly rigorous accounting practices. One manager stated: "Each quarter, we have our records reviewed by an external firm, which allows us to detect anomalies quickly" (R8). Another noted: "Thanks to budget planning based on our accounting data, we reduced our operating costs by 12%" (R19). At level 4, some respondents indicated that they systematically archive all supporting documents, while acknowledging that classification is not always optimal due to staffing limitations (R15). By contrast, a respondent classified at level 2 admitted: "We do keep the accounts, but there is no real structured internal control" (R3), illustrating the persistence of partially informal practices in certain SMEs.

Control of financial information and SME performance.

Practices related to the monitoring and analysis of financial flows were more heterogeneous. Export-oriented firms and high-growth SMEs reported using advanced financial indicators and conducting quarterly analyses. Smaller structures, on the other hand, tended to limit themselves to basic cash monitoring, often without regularly calculating performance ratios. Respondents also noted that proactive risk anticipation remains a weak point. At level 5, some managers described particularly rigorous financial monitoring. One of them explained: "We track our cash flows every week and produce a three-month projection to anticipate our needs" (R4). Another observed: "Rigorous financial monitoring helped us avoid a deficit when input costs suddenly increased" (R23). At level 4, respondents reported using financial statements to adjust margins and identify seasonal patterns (R12). By contrast, at level 3, one participant stated: "We know our revenues and expenses, but we don't really calculate financial ratios" (R1), revealing a more limited approach to financial information control.

Integrated accounting–financial control and SME performance.

Respondents whose firms had an integrated system (levels 4 or 5) reported greater decision-making responsiveness, improved consolidated visibility, and more effective anticipation of market trends. However, some respondents (levels 1 or 2) indicated that their systems remain fragmented, limiting the fluidity and reliability of cross-analyses. At level 5, several respondents emphasized the effectiveness of their integrated tools. One manager explained: "Our ERP combines accounting and finance, which gives us reliable real-time dashboards" (R11). Another added: "Thanks to our integrated control, we anticipated a drop in demand and adjusted our

inventories in time" (R21). At level 4, some managers noted that integrated data allow them to prepare comprehensive strategic reports for investors (R17). In contrast, at level 2, one participant stated: "We have two separate systems, and that makes analysis slow and sometimes inconsistent" (R5), illustrating the limits of non-integrated accounting and financial control.

Table 3 summarizes the qualitative results in relation to the three hypotheses (H1, H2, H3), by presenting levels of agreement, dominant themes, and illustrative excerpts from respondents.

Table 3: Summary of qualitative results from the 25 interviews

Hypothesis	Trends and findings	Representative verbatim
H1: Control of accounting information → Performance of SMEs	The majority of managers (levels 4 and 5) apply regular control of entries, systematic archiving and compliance with accounting standards. A few SMEs (levels 1 and 2) have insufficient internal control, often due to a lack of resources.	"Every quarter, we have our entries checked by an external firm, which allows us to quickly detect anomalies" (R8). We archive all the supporting documents, but sometimes the classification is not optimal due to a lack of dedicated staff" (R15). We keep the accounts, but there is no real structured internal control" (R3). Thanks to budget planning based on our accounting data, we have reduced our operating costs by 12%" (R19).
H2: Control of financial information → Performance of SMEs	The best-structured SMEs regularly monitor and analyse their financial flows, calculate ratios and anticipate risks. Others are limited to basic income/expense tracking, without in-depth analysis.	"We monitor our cash flow every week and make a three-month projection to anticipate needs" (R4). Financial statements are used to adjust our margins and identify seasonal trends" (R12). We know our income and expenses, but we don't really calculate the financial ratios" (R1). Rigorous financial monitoring allowed us to avoid a deficit due to an unexpected increase in procurement costs" (R23).
H3: Integrated	Companies with integrated systems	"Our ERP combines accounting

| **accounting and financial control → SME performance** | (levels 4 and 5) benefit from consolidated information, strategic reporting and better anticipation of market developments. Siloed systems (levels 1 and 2) hinder the responsiveness and consistency of analyses. | and finance, which gives us reliable dashboards in real time" (R11). Integration allows us to prepare comprehensive strategic reports for our investors" (R17). We have two separate systems and this makes the analysis slow and sometimes inconsistent" (R5). Thanks to our integrated control, we anticipated a drop in demand and adjusted our inventories in time" (R21). |

Source: Author, Interview Recap, August 2025

Figure 3 highlights the major trends from the qualitative analysis, grouping together the most frequently mentioned themes by respondents. It illustrates the priorities perceived by SME managers as well as the main obstacles and levers related to the control of accounting and financial information.

Figure 3: Key trends in qualitative results
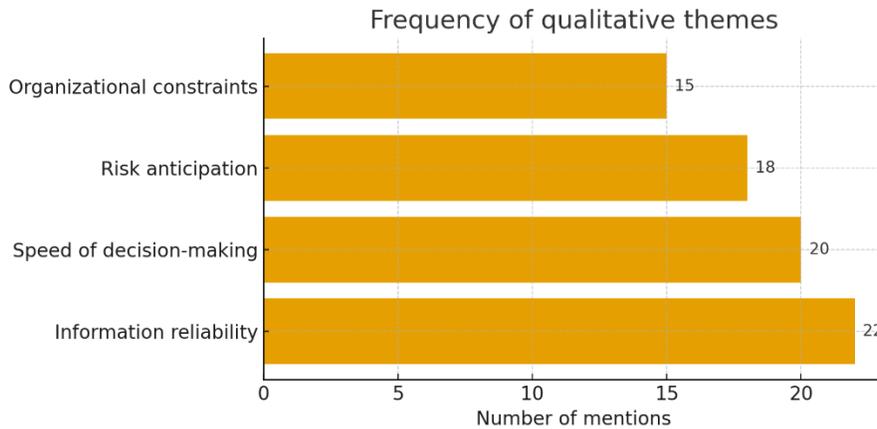
Source: Author, Interview Recap, August 2025

According to Figure 3, the thematic analysis reveals that the **reliability of information** is the central concern of SME managers (22 mentions), confirming its structuring role in the effectiveness of control systems. **Decision-making speed** (20 mentions) and **risk anticipation** (18 mentions) appear to be direct benefits of strengthening integrated control systems. On the other hand, **organizational constraints** (15 mentions) reflect the persistent obstacles to the optimal implementation of these systems, highlighting the need for targeted support to overcome these structural limitations.

4.2 Quantitative Results

Descriptive results on the control of accounting information and the performance of SMEs
Table 3 shows the distribution of responses and the averages obtained for each item. It provides a summary overview of accounting information control practices and their perceived contribution to the performance of SMEs.

Table 4: Description of Accounting Information Control Practices

No.	Item	1: Strongly disagree	2: Disagree	3: Neutral	4 or 5: Agree / Strongly Agree	Average
1	Accounting entries are regularly checked and corrected	12 (4,7%)	21 (8,3%)	45 (17,8%)	175 (69,2%)	4,02
2	Financial transactions are systematically documented and archived	9 (3,6%)	18 (7,1%)	40 (15,8%)	186 (73,5%)	4,10
3	The accounting statements comply with the standards and regulations in force	6 (2,4%)	14 (5,5%)	39 (15,4%)	194 (76,7%)	4,17
4	Bookkeeping provides clear information for budget planning	15 (5,9%)	22 (8,7%)	42 (16,6%)	174 (68,8%)	3,98

Source: Author, interview results, August 2025

The analysis of the data reveals a high level of respondents' adherence to accounting information control practices, with agreement rates (levels 4 or 5) exceeding 68% for all items. Systematic archiving of information from financial transactions (M = 4.10) and compliance with accounting standards (M = 4.17) obtain the highest average scores, reflecting regulatory compliance that is largely integrated into organizational practices. Regular verification of accounting entries also has a high score (M = 4.02), indicating frequent and structured internal control. The provision of clear information for budget planning has a slightly lower average (M = 3.98), suggesting that, although this function is mostly performed, it can still be improved, in particular because of resource constraints or limitations in monitoring tools. Overall, these results confirm that the SMEs surveyed have solid accounting systems, but that there is still potential for optimisation in the use of data for forecasting and strategic purposes.

Control of financial information and performance of SMEs

The measurement of financial reporting control is essential to assess the ability of SMEs to analyse, anticipate and guide their strategic decisions on the basis of reliable data. Table 4 summarizes the distribution of responses and the averages obtained, illustrating the level of application of financial control practices within the companies surveyed.

Table 5: Description of Financial Reporting Control Practices

No.	Item	1 – Strongly disagree	2 – Disagree	3 – Neutral	4 or 5 – Agree / Strongly Agree	Average
1	Cash flows are monitored and analyzed regularly	18 (7,1%)	28 (11,1%)	56 (22,1%)	151 (59,7%)	3,85
2	Financial statements are reviewed to identify trends	14 (5,5%)	24 (9,5%)	48 (19,0%)	167 (66,0%)	3,96
3	Financial indicators are calculated periodically	20 (7,9%)	32 (12,6%)	63 (24,9%)	138 (54,6%)	3,75
4	Financial information is used to anticipate risks and opportunities	12 (4,7%)	21 (8,3%)	46 (18,2%)	174 (68,8%)	4,00

Source: Author, interview results, August 2025

A review of the results shows an overall satisfactory adoption of financial reporting control practices, although there is still room for improvement. The items relating to anticipating risks and opportunities (M = 4.00) and reviewing financial statements to identify trends (M = 3.96) show the highest levels of agreement, reflecting a strategic use of financial data. Regular monitoring and analysis of cash flows (M = 3.85) is also widely practiced, but with a higher proportion of neutral or negative responses, suggesting that practices are still heterogeneous. The periodic calculation of financial indicators (M = 3.75) obtained the lowest average score, revealing a lack of tools or skills in some SMEs to fully exploit these indicators for decision-making purposes. These results indicate that, while the culture of financial monitoring is well established, its degree of sophistication can still be improved to maximize strategic effectiveness and organizational resilience.

Integrated accounting and financial control and performance of SMEs
The measurement of integrated accounting and financial control is decisive in assessing the ability of SMEs to have a consolidated vision that promotes consistency and speed of decision-making. Table 5 presents the distribution of responses and the averages obtained, highlighting the degree of integration of control systems and its relationship to organizational performance.

Table 6: Description of Accounting and Financial Reporting Control Integration Practices

No.	Item	1 – Strongly disagree	2 – Disagree	3 – Neutral	4 or 5 – Agree / Strongly Agree	Average
1	Accounting and financial data are integrated to produce comprehensive reports	10 (3,9%)	17 (6,7%)	39 (15,4%)	187 (74,0%)	4,11
2	Combined information facilitates quick strategic decisions	8 (3,2%)	14 (5,5%)	37 (14,6%)	194 (76,7%)	4,19
3	Accounting-financial integration makes it possible to anticipate market developments	11 (4,3%)	18 (7,1%)	41 (16,2%)	183 (72,3%)	4,07
4	Integrated control system contributes to organizational efficiency	7 (2,8%)	15 (5,9%)	38 (15,0%)	193 (76,3%)	4,20

Source : auteur, résultats des entrevues, août 2025

The analysis of the data shows a strong support of respondents for accounting and financial integration as a lever for organizational performance. High agreement rates (above 72% for all items) and averages between 4.07 and 4.20 indicate that the majority of SMEs have systems in place that allow for comprehensive reporting (M = 4.11), rapid strategic decision-making (M = 4.19) and effective anticipation of market developments (M = 4.07). The item with the highest average (M = 4.20) concerns the impact of integrated control on organizational efficiency, which confirms its added value in process optimization. These results suggest that the integration of accounting and financial information is not only well established, but that it is a determining factor in responsiveness, decision-making consistency and competitiveness for the SMEs studied.

Testing the hypotheses

Hypothesis testing is used to statistically verify the robustness of the relationships established between information control practices and the performance of SMEs. They thus provide an empirical basis for confirming or refuting the links proposed in the conceptual model, while assessing the strength and significance of these relationships.

Hypothesis 1 – Control of accounting information and performance of SMEs Statistical analysis reveals a positive and significant correlation between the control of accounting information and the performance of SMEs ($r = 0.56$; $p < 0.001$). This moderately strong relationship indicates that improved accounting control—as measured by the regularity of audits, the rigour of archiving, and compliance with standards—is associated with a substantial increase in organizational performance indicators. This result suggests that the reliability and traceability of accounting data is a major lever for optimizing internal management, strengthening financial credibility with partners and improving strategic decision-making.

Hypothesis 2 – Control of financial information and performance of SMEs
The results show a positive and significant correlation between the control of financial information and the performance of SMEs ($r = 0.49$; $p < 0.001$). Although slightly lower than that observed for accounting control, this relationship remains substantial and confirms that the quality of financial monitoring — including cash flow analysis, periodic calculation of profitability indicators and risk anticipation — contributes to the improvement of overall performance. The lower intensity of this correlation can be explained by a heterogeneity in the sophistication of the financial tools used, as well as by a lack of financial skills in some SMEs.
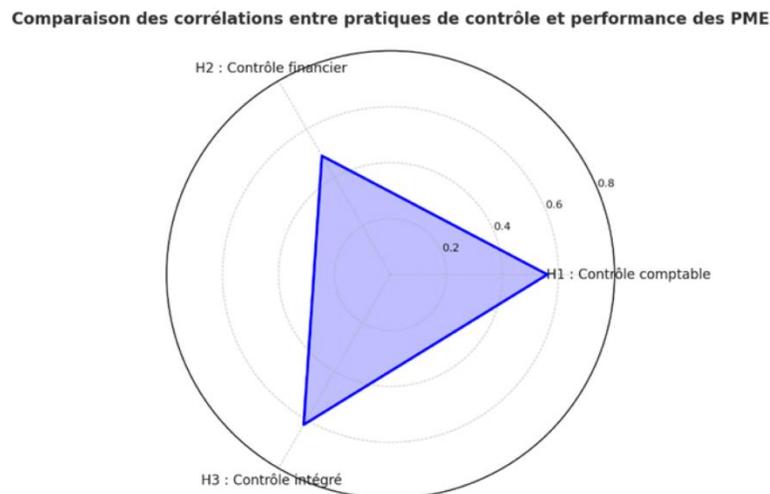
Hypothesis 3 – Integrated accounting-financial control and SME performance
The hypothesis of a stronger correlation between integrated control and SME performance is confirmed ($r = 0.62$; $p < 0.001$), reflecting a significant and high-intensity relationship. This result shows that the combination and integration of accounting and financial information in a single control system generates a synergy that goes beyond the additional effects of the two dimensions taken separately. This integration facilitates data consolidation, reduces time to information, improves the consistency of analyses, and enables faster, better-informed decision-making. It is therefore a key factor in organizational efficiency and competitiveness, particularly in environments characterized by uncertainty and complexity.

Table 7: Comparative Summary of Hypothesis Testing Results

Hypothesis	Correlation coefficient (r)	Significance (p)	Intensity and statistical interpretation	Managerial implications
H1: Control of accounting information → Performance of SMEs	0,56	< 0.001	Moderately strong positive correlation; Improved accounting control combined with a significant increase in performance	Strengthen audit rigor, systematic archiving, and compliance to improve credibility and decision-making
H2: Control of financial information → Performance of SMEs	0,49	< 0.001	Moderate positive correlation; Quality of financial monitoring contributing to performance but with heterogeneity in practices	Structure cash flow analysis, develop financial indicators and strengthen financial management skills
H3 : Integrated accounting-financial control → SME performance	0,62	< 0.001	Strong positive correlation; Integration that generates greater synergy than the addition of isolated effects	Implement integrated systems that consolidate data to reduce time to information, improve analysis consistency, and increase strategic responsiveness

Figure 3: Comparison of correlations between control practices and SME performance

Source: Author, survey results, August 2025

The radar plot clearly highlights the primacy of integrated accounting–financial control (H3), whose correlation with SME performance exceeds that of accounting control (H1) and financial control (H2) when considered separately. This statistical superiority illustrates the added value of a systemic approach, in which the consolidation and interconnection of data enhance analytical coherence, accelerate decision-making, and improve organizational efficiency.

5. Discussion

5.1. Summary and interpretation of the results

The results confirm, with both statistical and qualitative consistency, the decisive role of accounting and financial information control in shaping SME performance. They are aligned with the findings of Al-Matari, Al-Swidi and Fadzil (2014) and Kinyua (2020) regarding the impact of internal control systems, and they show that regular verification, systematic archiving, and compliance with standards are widely practiced (mean scores above 4/5). Most importantly, the integration of accounting and financial flows—rather than their treatment in silos—is more strongly associated with performance ($r = 0.62$; $p < 0.001$). This is because it accelerates trade-offs between invoicing, cash collection, disbursements, and resource prioritization. The interview data corroborate this pattern: even under resource constraints, the existence of integrated and recurrent control routines improves both financial and operational stability.

It should nonetheless be emphasized that the sample largely reflects the dynamics of urban SMEs. Rural firms—with intermittent connectivity, seasonal cash flows, longer and more fragile supply chains, and higher levels of informality—are under-represented. To extend the scope of the findings, future research should systematically incorporate rural SMEs, in order to test the

robustness of the observed effects, identify potentially specific mechanisms, and refine operational recommendations for those environments.

With respect to digital integration, the evidence challenges the assumption that full-scale ERP deployment is a necessary precondition for effective control. In resource-constrained environments such as Chad, integration often takes the form of gradual and frugal digitalization: hosted or cloud-based accounting, near-real-time cash monitoring through lightweight tools, and the reconciliation of accounting and treasury data into a single managerial dashboard. This trajectory—which may combine partial externalization of compliance tasks with internalization of day-to-day financial steering—suggests that digital tools amplify an existing procedural discipline rather than create it from scratch. This observation is particularly relevant for rural SMEs, where "offline-first" solutions and batch synchronization can compensate for infrastructural limitations.

5.2. *Comparison with previous work*

Our results confirm that information quality and procedural discipline support more rational decision-making, reduce errors and waste, and align behaviors with strategic objectives, in line with both agency theory and the resource-based view. The principal contribution here is a shift in analytical focus: from the level of control to the degree of integration. The convergence of accounting and treasury data shortens the delay between signal and managerial response, improves internal information flows, and limits vulnerability to liquidity shocks. This refinement extends the analysis of Djimaldé and Mignenan (2025) by detailing the micro-foundations of integration—harmonized reference frameworks, periodic reconciliations, cross-validation practices—that render integration operational, even in the absence of sophisticated technological infrastructure. It also nuances Kasim and Hussin (2018): under resource constraints, integration remains effective provided that routines are explicit, recurrent, and followed; digitalization then acts as a modular amplifier (ERP building blocks, cloud tools), rather than a prerequisite.

Finally, the external validity of these findings must be strengthened. Because the present study primarily captures urban realities, incorporating more heterogeneous rural samples within longitudinal designs would make it possible to test the presumed causal direction of the relationships, assess the role of different infrastructural baselines, and adapt digital integration trajectories to rural constraints. Such an extension is essential both for generalizing the recommendations and for designing differentiated, context-sensitive support mechanisms.

6. Implications, limitations, and future directions

The study shows that, in the Chadian context, control of accounting and financial information is not a mere administrative requirement but a strategic lever. The ability of an SME to generate reliable, traceable, and actionable information becomes a rare and difficult-to-imitate resource that underpins economic survival, access to finance, budgetary discipline, and risk management. In other words, information governance is directly tied to external credibility and to the firm's ability to remain solvent and legitimate in an unstable, under-capitalized environment.

At the managerial level, the results suggest that SME leaders must treat information control as an organizational capability in its own right. This requires simple but regular routines: cash monitoring, systematic reconciliation of inflows and outflows, readable dashboards, and continuous alignment between accounting results and immediate financial constraints. Such steering practices strengthen short-term decision-making (pricing, supplier negotiation, working capital management) and reinforce credibility with banks, buyers, and public partners. In Chad, the ability to demonstrate coherent and trustworthy financial information is both an internal management tool and an argument for gaining access to economic opportunities.

At the level of public policy, the findings indicate that SME support cannot be reduced to generic entrepreneurial training or promises of credit access. It must include the strengthening of internal control capabilities: assistance in building financial dashboards, support for the adoption of simple digital tools, and the establishment of minimal reporting standards that SMEs can present to banks or fiscal authorities. Development is not only a matter of injecting additional external resources; it is equally a matter of demonstrating disciplined use of those resources.

At the theoretical level, the study shifts attention away from the classic emphasis on external constraints (institutional environment, financing conditions, infrastructure) and shows that internal determinants—particularly the structuring and integration of accounting and financial information—play a central role in performance. It suggests that in highly uncertain economies, performance should not be understood solely as an end-state financial outcome, but as an organizational capacity to remain intelligible, financeable, and credible.

A major limitation must, however, be acknowledged. The empirical design is cross-sectional, based on data collected at a single point in time. The study can therefore identify robust associations between the level of informational control and performance indicators, but it cannot establish causality. It remains possible that stronger control improves performance; it is equally plausible that already high-performing firms, better capitalized and more structurally mature, are simply more capable of formalizing and integrating their accounting and financial practices. The cross-sectional nature of the data therefore constrains causal inference and calls for caution in normative interpretation.

Two main avenues follow from this. First, longitudinal studies of Chadian SMEs are needed to track changes in informational control practices and assess their effects over time on profitability, solvency, and resilience to shocks. Such designs would make it possible to test causality directly: does the strengthening of integrated informational control precede and generate performance gains, or does it follow them? Second, it becomes essential to incorporate managerial financial literacy explicitly into future models. The results suggest that possessing tools is not sufficient; managers must be able to interpret financial signals and convert them into action. Two firms may have similar dashboards, but only one will actively use them as decision supports. Investigating this interpretive capacity—human rather than purely technical—is crucial for designing realistic capacity-building programs.

In sum, the study advances two core ideas. For SME leaders, accounting and financial information control is a strategic survival function, not an administrative burden. For policymakers and SME support institutions, the challenge is not only to inject capital into Chadian SMEs, but to reinforce their ability to produce, interpret, and defend credible financial information in a structurally constrained environment.

Conclusion

The survey of 253 SMEs, complemented by 25 qualitative interviews, shows that control of accounting and financial information is a central determinant of organizational performance. Considered separately, accounting control and financial control are each positively associated with performance. However, their integration produces the strongest effect ($r = 0.62$; $p < 0.001$), exceeding the effect of accounting control alone ($r = 0.56$) or financial control alone ($r = 0.49$). In other words, value does not lie solely in the reliability of each subsystem, but in their consolidation into a coherent architecture that reduces information asymmetry, accelerates the circulation of relevant data, and aligns operational, budgetary, and strategic decisions. The interviews confirm these mechanisms, underscoring that integration improves visibility over cash flows, enables anticipation of liquidity tensions, supports margin and inventory adjustments, and strengthens compliance.

For SME leaders, the managerial implication is unambiguous: it is no longer sufficient to "keep the books"; information must be organized and treated as a strategic asset. This entails harmonizing accounting and financial reference frameworks, defining rules for data governance, deploying interoperable (often light, modular, cloud-based) digital tools, and institutionalizing steering routines grounded in consolidated indicators rather than fragmented reports. Such an integrated architecture supports targeted resource allocation, liquidity risk management, and rapid adjustment to commercial or regulatory shocks. It also reinforces external credibility: coherent, traceable information functions as a signal of reliability to banks, partners, and public authorities. For accountants and financial advisors, the role increasingly resembles that of system architects who help SMEs shift from a logic of fiscal compliance to one of forward planning, simulation, and anticipation. For public authorities, the findings call for a reorientation of SME support: rather than focusing exclusively on credit facilitation, policy should strengthen informational maturity through certified financial training, fiscal incentives for digital tooling, interoperable reporting standards adapted to small firms, and sector-specific advisory schemes.

From a scientific perspective, the study makes three main contributions. First, it proposes and tests an integrative model in which accounting control, financial control, and their systemic combination are analyzed simultaneously, enabling the identification of cumulative and synergistic effects rather than merely additive ones. Second, it empirically demonstrates the role of informational integration as an internal coordination mechanism that supports performance not only by improving information quality, but also by accelerating managerial response cycles. Third, it anchors these findings in the observed practices of Chadian SMEs, thereby situating the model in a context characterized by resource scarcity, structural uncertainty, and chronic liquidity pressure. Methodologically, the combined use of a robust quantitative sample and qualitative interviews exploring steering routines, treasury arbitrage, and data consolidation

practices enhances the interpretive validity of the model and moves beyond a purely declarative account of managerial practice.

That said, several limitations must be acknowledged. First, the data are largely self-reported, which exposes the analysis to social desirability bias and possible under-reporting of internal weaknesses. Second, although the sample is statistically meaningful, it primarily reflects urban and semi-formal SMEs whose practices are relatively structured and whose access to accounting expertise and basic digital tools is higher than that of rural firms. Companies operating in peripheral areas—which tend to be more informal, more exposed to seasonal cycles, and less connected to the banking system—are under-represented. The scope of the conclusions should therefore be interpreted with caution: the study primarily describes the dynamics of urban firms embedded in a partially formalized institutional environment.

Most importantly, the cross-sectional nature of the analysis precludes strong causal claims. The associations observed between integrated informational control and performance do not suffice to prove that integration causes performance. Reverse causality is plausible: firms that are already more profitable, better capitalized, and more structurally disciplined may simply be better equipped to integrate accounting and financial flows. The model should therefore be understood as theoretically and empirically grounded, but not yet causally demonstrated.

These limitations point to three main directions for future research. First, longitudinal designs are needed. Tracking the same SMEs over time would make it possible to assess whether strengthening integrated informational control translates into sustained improvements in profitability, solvency, cash resilience, and access to finance, and to observe how SMEs absorb macroeconomic shocks (import cost spikes, supply disruptions, fiscal instability) and adjust their internal routines in response. Second, cross-national comparisons—both within Central Africa and in economies with similar entrepreneurial structures (high informality, cash-based transactions, low banking penetration)—would allow us to test the transferability of the model. The goal would be to distinguish between context-specific mechanisms (chronic liquidity pressure, infrastructural fragility, weak contractual security in Chad) and more generalizable mechanisms shared by SMEs operating under institutional scarcity. Such comparative work would strengthen the theoretical reach of the model and inform the design of coherent regional policy instruments.

Third, the model would benefit from the explicit integration of sustainability and responsibility metrics, namely environmental, social, and governance (ESG) indicators. At present, performance is mainly conceptualized in economic, financial, and operational terms. Yet for SMEs subject to local social pressures (employment, wage regularity, local sourcing, service continuity) and emerging regulatory expectations (tax compliance, traceability, formalization), the ability to demonstrate coherent financial governance may increasingly function as a lever of social legitimacy. Incorporating ESG variables would make it possible to capture not only the economic contribution of integrated control, but also its role in social sustainability (job

protection, payment discipline, mitigation of supplier distress) and progressive regulatory alignment.

More broadly, future research should articulate three dimensions that are still too often examined separately: digital maturity (including the gradual use of cloud solutions and modular ERP components), managerial financial literacy (the leader's effective ability to interpret accounting and treasury signals and convert them into action), and organizational sustainability (the firm's capacity to remain solvent, credible, and socially acceptable over time). Connecting these dimensions will allow researchers to determine whether integrated informational control is not only a driver of immediate performance, but also a foundation for durable, responsible competitiveness among SMEs operating under severe structural constraints, as is the case in Chad.

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