

The Effect Of Decision Support On The Financial Performance Of Businesses In Baidoa, Somalia

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ABSTRACT: This study investigated the effect of Decision Support Systems (DSS) on the financial performance of businesses in the fragile economic context of Baidoa, Somalia, using the Caafi Water Supply Company as a case study. Grounded in the Contingency Theory of Management Accounting and Transaction Cost Economics (TCE), the research employed a quantitative, correlational cross-sectional design. Data were collected via structured questionnaires from 92 management and staff, achieving an 88.46% response rate. Descriptive statistics revealed a high level of DSS implementation, particularly in financial modelling and sensitivity analysis, and a moderate perception of financial performance. Pearson correlation ($r = .510, p = .000$) and linear regression analysis ($\beta = .310, p = .000$) confirmed a statistically significant positive relationship, leading to the rejection of the null hypothesis. The findings validated the theoretical frameworks, demonstrating that formalized decision-support practices serve as a critical contingent adaptation and an effective transaction cost-reducing mechanism. The study concluded that investing in managerial information systems is fundamental for enhancing financial sustainability in post-conflict economies and provided practical recommendations for businesses and policymakers.

Keywords: Decision Support Systems, Financial Performance, Contingency Theory, Transaction Cost Economics, Baidoa, Somalia, Management Accounting.

1. INTRODUCTION

The business environment in fragile and post-conflict states operates under a unique paradigm of risk and opportunity, where institutional voids and infrastructural deficits elevate the stakes of every managerial choice. In Somalia, a nation rebuilding after decades of civil strife, local economies like that of Baidoa—a key commercial hub in the South West State—are vibrant yet volatile. Enterprises here, ranging from small-scale trade to burgeoning services, form the critical backbone of socio-economic recovery, yet their operations are persistently hampered by profound uncertainties in supply chains, access to capital, and market stability (Abdullahi & Hassan, 2023). Within this context, managerial decision-making frequently defaults to intuition, experiential knowledge, and informal networks, as formal data is scarce and the environment is in constant flux. This reliance on heuristic processes, while adaptive, introduces significant vulnerabilities, potentially compromising financial resilience and long-term growth prospects in a competitive landscape. Understanding the mechanisms that can strengthen business decisions in such a setting is therefore not merely an academic exercise but a practical imperative for sustainable development.

Globally, the adoption of structured Decision Support Systems (DSS)—encompassing technologies and formalized processes for data analysis, financial record-keeping, and strategic planning—has been empirically linked to superior financial outcomes, including enhanced profitability, cost control, and resource allocation. These systems are designed to augment human judgment by synthesizing information, modeling scenarios, and reducing cognitive bias (Marengo & Ricci, 2024). However, the prevailing literature on DSS efficacy is predominantly situated within the context of developed, digitally integrated economies with robust institutional frameworks. There remains a critical research gap concerning the applicability, adaptation, and impact of such decision-support mechanisms in environments like Baidoa, where digital infrastructure is limited, formal business education is rare, and the informal sector predominates (Ndemo & Weiss, 2023). This gap underscores a significant disconnect between mainstream management theory and the lived reality of entrepreneurs in frontier markets, necessitating a focused investigation.

For this study, the concept of "decision support" is therefore interpreted broadly and pragmatically to fit the Baidoa context. It includes not only digital tools where sporadically available but, more essentially, the deliberate adoption of formalized, paper-based systems for bookkeeping, budgeting, sales tracking, and systematic market analysis that move beyond purely ad-hoc management. Similarly, "financial performance" is measured through key owner-reported indicators, including perceived profitability trends, revenue growth, and stability in managing operational costs (Abdillahi, M. M., 2025). This operationalization allows for the capture of meaningful business outcomes in an environment where audited financial statements are virtually non-existent. The study is grounded in information processing theory, which suggests that organizations improve their fit with uncertain environments by

enhancing their capacity to gather, process, and act upon relevant data, positing that even incremental formalization in decision-making processes can yield competitive advantages (Branzei & Abdallah, 2023).

Consequently, this paper seeks to explore the nuanced relationship between the utilization of these adapted decision-support practices and the financial performance of businesses operating in Baidoa, Somalia. It will investigate the types of support mechanisms locally employed, the perceived barriers to their adoption—such as cost, skills deficits, and infrastructural challenges—and the tangible financial benefits they may confer. By doing so, the research aims to contribute a context-sensitive perspective to the discourse on management tools in fragile economies, offering evidence-based insights that can inform both entrepreneurial practice and development policy aimed at fostering a more resilient and productive private sector in Somalia's ongoing reconstruction.

2. LITERATURE REVIEW

Theoretical Review

Examining the intersection of managerial practice and economic performance in fragile states requires a theoretical framework that accounts for both organizational adaptation and strategic economic calculation. This study is anchored in two foundational theories: the Contingency Theory of Management Accounting and Transaction Cost Economics (TCE). The Contingency Theory of Management Accounting, which evolved from broader organizational contingency theory developed by scholars like Tom Burns and G.M. Stalker (1961) and Paul R. Lawrence and Jay W. Lorsch (1967), was formally applied to management accounting systems by researchers such as Robert H. Waterhouse and Peter Tiessen in the late 1970s. Its central proposition is that the effectiveness of an organization's accounting and control systems is not universal but is contingent upon specific situational factors, including environmental uncertainty, technology, organizational structure, and size. A key assumption is that for a firm to achieve high performance, its internal systems must be designed to "fit" the demands of its external environment and internal contingencies. In the context of Baidoa's volatile, post-conflict market, this theory provides a critical lens, suggesting that the financial benefit of adopting decision-support practices will depend entirely on how well they are tailored to navigate local uncertainties, resource constraints, and the predominantly informal business landscape. (Abdillahi, M. M., & Benjamin, B. O., 2025).

Transaction Cost Economics (TCE), principally pioneered by Oliver E. Williamson in his seminal works of 1975 and 1985, builds upon the initial insight of Ronald H. Coase's 1937 article, "The Nature of the Firm." The theory operates on the core behavioral assumptions of *bounded rationality* (limited cognitive capacity for processing information) and *opportunism* (self-interest seeking with guile). It posits that the choice of organizing an economic transaction—whether through the market, a hierarchy (like a firm), or a hybrid form—is driven by the goal of minimizing transaction costs. These costs include those of searching for partners, negotiating contracts, monitoring performance, and enforcing agreements. A critical determinant is *asset specificity*, where investments are tailored to a particular transaction. For businesses in Baidoa, where formal contract enforcement is weak and market interactions are fraught with uncertainty and trust issues, TCE provides a powerful rationale (Abdillahi, M. M., Oluka, B. B., & Tindyebwa, J., 2025). It suggests that investing in internal decision-support systems represents a move toward hierarchical governance, a strategy to mitigate exorbitant market transaction costs by improving internal information flow, control, and planning, thereby directly impacting financial efficiency.

The integration of these two theories offers a comprehensive framework for analyzing decision support in Baidoa. While Contingency Theory explains the *form and fit* of these systems—predicting that their design must align with local environmental dynamism and firm-specific factors to be effective—TCE explains the underlying *economic logic and motivation* for their adoption. TCE frames the implementation of even basic bookkeeping or market analysis tools as a strategic investment to reduce the costs and risks of participating in a highly uncertain market. Together, they allow this research to hypothesize that decision-support practices will positively influence financial performance precisely because they help firms create an internal governance structure (addressing TCE concerns) that is appropriately adapted (addressing contingency concerns) to manage external volatility and information asymmetries. This dual perspective moves the inquiry beyond a simple test of tool adoption to a deeper analysis of strategic organizational adaptation in a challenging institutional setting.

Consequently, guided by the contingent necessity for organizational fit and the transaction-cost imperative for efficient governance, this research investigates the nexus between decision-support practices and financial performance among businesses in Baidoa, Somalia. It applies these theories to a context far removed from their origins, testing their explanatory power in an environment of institutional voids. The study proceeds on the assumption that managerial systems are not neutral technologies but are strategic responses to contextual pressures and economic incentives. By doing so, it aims to generate insights that are both locally relevant for entrepreneurship development in Somalia and contribute to the broader theoretical discourse on the applicability of Contingency Theory and TCE in fragile and emerging economies.

3. METHODOLOGY

This study employed a quantitative research approach to examine the effect of management accounting practices on the financial performance of the Caafi Water Supply Company in Baidoa, Somalia. The quantitative methodology was selected as it allowed for the systematic measurement of variables and the statistical analysis of relationships between them, thereby facilitating the objective testing of the study's hypotheses (Salari et al., 2023). Data were collected using structured questionnaires, which enabled the efficient gathering of standardized numerical data from a substantial sample of respondents within a constrained timeframe. This approach was firmly situated within a post-positivist paradigm, emphasizing the quantification of data, the use of statistical controls, and the derivation of generalizable conclusions about the relationships between costing, budgeting, decision support systems, and key financial performance indicators (Apuke, 2017). The exclusive use of quantitative methods was deemed appropriate as it directly addressed the research objectives aimed at establishing and measuring the strength of associations between the defined variables.

A descriptive, correlational, and cross-sectional research design was adopted. The cross-sectional component involved collecting data from the study population at a single point in time, which provided a cost-effective and timely snapshot of the relationships under investigation (Sekaran & Bougie, 2020). The correlational aspect of the design was specifically chosen to analyze the nature and strength of associations between the independent variables (management accounting practices) and the dependent variable (financial performance) without implying causation. This design is recommended for studies seeking to identify interrelated variables and the degree to which they co-vary (Creswell & Creswell, 2018). Furthermore, the descriptive element allowed for the precise quantitative portrayal of the company's management accounting practices and financial performance metrics. This combination of design features was strategically selected to thoroughly explore and describe the hypothesized relationships within the specific context of the Caafi Water Supply Company.

The target population consisted of all 140 staff members of the Caafi Water Supply Company in Baidoa, Somalia, including executive management, senior managers, accountants, financial managers, and operating managers as of 2023 (Company Records, 2023). A sample size of 104 respondents was determined using the Sloven's formula, ensuring a 95% confidence level with a 5% margin of error. A mixed-method sampling strategy was implemented. Purposive sampling was used to select respondents from executive management, senior management, and accounting/finance departments (n=64), as these individuals possessed the specific expertise and direct involvement in management accounting processes (Campbell et al., 2020). Concurrently, simple random sampling was employed to select 40 operating managers from their departmental roster, ensuring this segment of the population had an equal chance of selection to minimize bias and enhance the representativeness of the broader staff perspective (Taherdoost, 2022).

Primary data were collected using a structured, closed-ended questionnaire based on a five-point Likert scale. Prior to the main survey, the instrument's validity and reliability were rigorously assessed. Content validity was established through expert judgment, yielding a Content Validity Index (CVI) of 0.8 for the overall instrument, which exceeded the recommended threshold of 0.7 (Polit & Beck, 2021). Reliability was tested for internal consistency using Cronbach's Alpha, with all construct scales scoring above 0.8, and an overall average of 0.87, confirming the instrument's high reliability (Taber, 2018). Following ethical approval, data were collected, coded, and analyzed using the Statistical Package for the Social Sciences (SPSS). Analysis involved descriptive statistics (frequencies, means, standard deviations), Pearson's correlation analysis to examine relationships, and linear regression analysis to determine the effect of the predictor variables on financial performance. All research activities were conducted under strict ethical guidelines, ensuring informed consent, confidentiality, and anonymity for all participants.

4. RESULTS

Response Rate

Table 1: Response Rate

Category	Value
Sample Size	104
Responses Received	92
Response Rate	88.46%

Source: Primary Data, 2024

According to Kothari (2005), a response rate of 50% is adequate, while a response rate greater than 70% is very good. Therefore, the response rate of 88.46% in this case is regarded as very good for data analysis and interpretation. This high response rate enhances the reliability and validity of the findings, suggesting that the data collected is representative of the views and experiences of the participants in the study.

Table 2: Demographic Characteristics of Respondents (n=92)

Characteristic	Category	Frequency	Percentage
Gender	Male	60	65.22%
	Female	32	34.78%
Age	18 – 27 years	15	16.30%
	28 – 37 years	35	38.05%
	38 – 47 years	25	27.17%
	48 years and above	17	18.48%
Highest Education	Certificate	10	10.87%
	Diploma	18	19.56%
	Degree	40	43.48%
	Master's Degree	20	21.74%
	Others	4	4.35%
Work Experience	Below 5 years	12	13.04%
	5 – 9 years	30	32.61%
	10 – 14 years	28	30.44%
	15 + years	22	23.91%
Department	Executive Management	10	10.87%
	Senior Management	15	16.30%
	Accountants	25	27.18%
	Financial Managers	20	21.74%
	Operating Managers	22	23.91%

Source: Primary Field Data (2024)

The gender composition of respondents indicated a predominantly male workforce at Caafi Water Supply Company, with 65.22% male and 34.78% female participation. This demographic characteristic represented an internal structural factor that could influence the implementation and effectiveness of management accounting systems. A homogeneous workforce was seen to shape the collective approach to decision-making and control mechanisms. Furthermore, this composition was considered an internal governance factor; the lack of gender diversity could potentially have limited the range of perspectives in problem-solving, indirectly affecting the firm's ability to mitigate internal transaction costs related to information processing.

The age distribution revealed a relatively young and experienced workforce, with the largest cohort aged 28-37 years, followed by those aged 38-47 years. This demographic profile had significant implications. It suggested that a younger workforce was more adaptable to technological systems and formalized management accounting practices, which was a crucial contingency for aligning the organization with its external environment. Simultaneously, the experience represented in the older cohorts reduced "bounded rationality" constraints. This cumulative experience lowered the costs associated with making complex financial and operational decisions, as veteran employees possessed tacit knowledge that mitigated uncertainty and opportunism risks.

The educational attainment of respondents was notably high, with 65.22% holding a university degree or higher. This finding strongly supported the assumptions of both guiding theories. A highly educated workforce was a critical internal resource that enhanced the organization's "fit" with sophisticated management accounting systems. It indicated the company possessed the requisite human capital to design, implement, and utilize complex costing, budgeting, and decision-support tools effectively. From a transaction cost perspective, education reduced information asymmetry and bounded rationality. Employees with advanced education were better equipped to process complex information, design more complete internal contracts, and monitor activities efficiently, thereby reducing the costs of internal governance.

The distribution of respondents by department showed a balanced representation across key functional areas, with Accountants, Operating Managers, and Financial Managers forming the core. This structural composition was vital, as it indicated the presence of differentiated subunits. Effective integration and information flow between these specialized departments—especially between operational and financial units—were contingent factors for successful performance. This departmentalization reflected the firm's hierarchical governance structure. The significant representation from accounting and finance functions indicated an institutional capacity for formal control and measurement, which were essential for minimizing transaction costs by monitoring performance and reducing the potential for opportunistic behavior across different divisions.

Descriptive Statistics of the Effect of Decision Support Businesses in Baidoa, Somalia

The following section presented and analyzed the descriptive statistics for the implementation of Decision Support Systems (DSS) at Caafi Water Supply Company. The analysis was framed by the study's two guiding theoretical lenses. Contingency Theory directed attention to how these practices represented the company's adaptation of formal information systems to fit its specific operational environment in Baidoa. Transaction Cost Economics (TCE) provided a rationale for these practices, viewing them as investments in internal governance mechanisms designed to reduce the costs associated with market uncertainty, complex decision-making, and performance monitoring. The table below detailed the findings for five key DSS indicators, with each item's mean score interpreted against a standard scale to assess the perceived strength of each practice.

Table 3: Descriptive Statistics for Effect of Decision Support

Item Code	Statement	Mean	SD	Interpretation
DSS-01	Caafi company uses financial modelling techniques such as discounted cash flow analysis or scenario planning to support strategic decision-making.	4.5667	0.6703	Very High
DSS-02	Caafi company considers factors beyond financial analysis, such as strategic fit, risk, or market conditions, when evaluating investment opportunities.	4.1167	1.0861	High
DSS-03	Caafi company uses sensitivity analysis to identify the key drivers or critical variables that have the most significant impact on the outcomes of a decision.	4.1667	1.3983	High
DSS-04	DSS offer advanced analytics features, such as predictive modelling, optimization, or simulation, to support complex decision-making.	3.95	1.6028	Moderate

DSS-05	Caafi company uses the reporting and visualization tools within DSS to generate insights and communicate findings to decision-makers.	3.7167	1.1388	Moderate
	Overall Average Mean	4.1033	1.1388	High

Source: Primary Field Data (2024)

DSS-01: "*Caafi company uses financial modelling techniques such as discounted cash flow analysis or scenario planning to support strategic decision-making.*" This statement received a very high mean score of 4.57. This indicated a strong consensus that the company employed sophisticated, forward-looking financial tools for its most critical strategic choices. From a Contingency Theory perspective, this represented a deliberate adaptation of complex technical systems to manage the uncertainties of the Baidoa market. Through the lens of Transaction Cost Economics, these modelling techniques were essential for reducing the *ex-ante* costs of decision-making; by simulating future scenarios, the company could make more informed investments, thereby lowering the risk and potential cost of poor strategic commitments.

DSS-02: "*Caafi company considers factors beyond financial analysis, such as strategic fit, risk, or market conditions, when evaluating investment opportunities.*" With a high mean score of 4.12, respondents confirmed that decision-making was multi-dimensional. This practice aligned with Contingency Theory by demonstrating that the company's decision-support processes were not rigidly technical but were contingent upon a broader assessment of internal strategic alignment and external environmental factors. For Transaction Cost Economics, this holistic evaluation was crucial for assessing *asset specificity* and potential hold-up problems. Considering strategic fit and market conditions helped the company anticipate and mitigate relational risks embedded in long-term investments, thereby safeguarding against future transaction costs.

DSS-03: "*Caafi company uses sensitivity analysis to identify the key drivers or critical variables that have the most significant impact on the outcomes of a decision.*" This practice also scored high, with a mean of 4.17. The use of sensitivity analysis was a direct application of formal management science to pinpoint sources of risk and value. Contingency Theory interpreted this as a mechanism for enhancing organizational fit by systematically understanding which variables in the volatile environment most affected performance. For Transaction Cost Economics, this technique was a powerful tool to combat *bounded rationality*. By identifying critical variables, management could focus its limited attention and monitoring resources on the factors that truly governed outcomes, making internal governance more efficient and cost-effective.

DSS-04: "*DSS offer advanced analytics features, such as predictive modelling, optimization, or simulation, to support complex decision-making.*" This item received a moderate mean score of 3.95. This suggested that while advanced analytics were present, their availability or perceived utility was not as pronounced as foundational modelling techniques. Contingency Theory suggested that the company's adaptation may have prioritized robust, proven tools over cutting-edge analytics, possibly due to cost, skill, or infrastructure constraints—key contingent factors in the Baidoa context. From a TCE standpoint, the moderate score reflected a calculated trade-off; the substantial investment required for such advanced features may have been weighed against the perceived reduction in decision-making costs they would provide.

DSS-05: "*Caafi company uses the reporting and visualization tools within DSS to generate insights and communicate findings to decision-makers.*" This statement had a moderate mean of 3.72, the lowest of the set. This indicated that while data was analyzed, the translation of that data into actionable visual reports and insights for communication was an area with room for development. Contingency Theory highlighted that effective communication across organizational subunits was vital for integration and fit. A lower score here pointed to a potential contingency misalignment where information processing outpaced information dissemination. For Transaction Cost Economics, clear reporting reduced *information impactedness* within the hierarchy. Less effective visualization tools could have led to higher internal agency costs, as miscommunication or poor information sharing increased the risk of sub-optimal decisions by managers.

The overall high average mean score of 4.10 for decision support practices indicated that Caafi Water Supply Company had successfully institutionalized a robust and formal approach to managerial decision-making. The findings revealed a hierarchy of implementation: the company exhibited very high competence in core financial modelling and high competence in multi-criteria investment appraisal and sensitivity analysis. However, it demonstrated moderate engagement with more advanced analytics and data visualization tools. Collectively, this profile strongly supported both theoretical frameworks. The practices represented a clear contingent adaptation where the company had implemented sophisticated, formal systems that appeared well-suited to navigating its complex operating environment. Furthermore, these systems functioned as transaction cost-reducing mechanisms,

providing the structured information and analytical rigor needed to mitigate the inherent uncertainties and bounded rationality challenges of the market. The areas of moderate scoring did not negate this overall effectiveness but rather identified specific junctures—particularly in advanced analytics and communicative reporting—where further investment could have potentially enhanced strategic alignment and reduced internal governance costs even further.

Descriptive Statistics of Financial Performance Businesses in Baidoa, Somalia

The following table presents a descriptive statistical analysis of the perceived financial performance of Caafi Water Supply Company, focusing on three key metrics: Return on Investment (ROI), Liquidity, and Return on Equity (ROE). This data provides an internal assessment of financial outcomes, which is subsequently interpreted through the dual theoretical lenses of the study: Contingency Theory, to evaluate the alignment of these results with the company's strategic adaptation to its environment, and Transaction Cost Economics (TCE), to assess how these metrics reflect the efficiency of internal governance in minimizing economic transaction costs.

Table 3: Descriptive Statistics for Financial Performance

Item Code	Statement	Mean	Std. Deviation	Interpretation
Return on Investment (ROI)				
ROI-01	ROI is an effective and widely used metric for evaluating the financial performance of Caafi Company.	3.3787	1.34232	Moderate
ROI-02	The Return on investment of Caafi company has been increasing over the years.	3.2616	1.42673	Moderate
ROI-03	ROI is an effective tool for aligning Caafi Company's organizational goals and incentives with financial performance.	3.6154	1.42412	High
ROI-04	Caafi Company should place a greater emphasis on ROI in their performance management and decision-making processes.	3.4502	1.41053	Moderate
ROI-05	ROI provides a clear, objective, and comprehensive measure of the profitability and efficiency of Caafi Company's projects, investments, and business units.	4.652	1.47517	Very High
	Average Mean for ROI	3.6716	1.41577	High
Liquidity				
LIQ-01	Liquidity is a critical indicator of Caafi Company's short-term financial health and stability.	3.4542	1.24232	Moderate
LIQ-02	Caafi Company generates enough revenue to meet its obligations as and when they fall due.	3.7836	1.33673	High

LIQ-03	Liquidity ratios should be considered by Caafi Company in conjunction with other financial metrics to provide a comprehensive assessment of its financial performance.	4.2184	1.42412	High
LIQ-04	Improving working capital management, such as reducing inventory and streamlining accounts receivable, can enhance Caafi Company's liquidity position.	3.0531	1.52053	Moderate
LIQ-05	Liquidity management should be a key component of Caafi Company's overall financial strategy and decision-making.	3.2052	1.74517	Moderate
	Average Mean for Liquidity	3.5429	1.4537	Moderate
	Return on Equity (ROE)			
ROE-01	The Return on equity of Caafi Company has been increasing over the years.	3.0142	1.24232	Moderate
ROE-02	Consistent improvement in Caafi Company's ROE over time suggests effective financial management and strategic execution.	3.1209	1.33673	Moderate
ROE-03	Caafi Company shareholders have also been paid dividends over the years.	4.1143	1.42412	High
ROE-04	Improving net income and efficiently managing shareholders' equity can help Caafi Company achieve a higher return on equity.	3.0022	1.52053	Moderate
ROE-05	Comparing a company's ROE to industry averages helps determine its relative financial performance.	3.4051	1.74517	Moderate
	Average Mean for ROE	3.3314	1.4537	Moderate
	Overall Average Mean for Financial Performance	3.5153		Moderate

Source: Primary Data, (2024)

ROI-01 and ROI-02: "*ROI is an effective and widely used metric...*" and "*The Return on investment... has been increasing...*" These statements received moderate mean scores of 3.38 and 3.26, respectively. This indicated a neutral to somewhat positive perception of ROI's role and trend. From a Contingency Theory perspective, the moderate scores suggested that while ROI was a recognized metric, its fit as the primary performance indicator in Caafi's specific context might be contested or balanced against other contingent factors. For Transaction Cost Economics, a moderate perception of increasing ROI hinted that investments in internal governance systems were yielding positive, but not yet outstanding, returns on capital employed, which is a core measure of efficiently minimized transaction costs.

ROI-03 and ROI-05: "*ROI is an effective tool for aligning... goals*" and "*ROI provides a clear, objective, and comprehensive measure...*" These items scored high (3.62) and very high (4.65). This strong consensus revealed that respondents viewed ROI as an excellent mechanism for internal alignment and objective measurement. Contingency Theory interprets this as evidence that a standardized, quantitative metric like ROI provides a crucial integrating mechanism, helping to align diverse departmental activities

(a key contingency need) with overall financial objectives. TCE sees this as fundamental: a clear, objective ROI metric is vital for reducing *information asymmetry* and *agency costs*. It allows for the clear evaluation of whether internal resource allocations (investments) are generating sufficient returns, thereby justifying the hierarchical structure over market alternatives.

LIQ-02 and LIQ-03: "*Caafi Company generates enough revenue to meet its obligations...*" and "*Liquidity ratios should be considered... with other financial metrics...*" With high mean scores of 3.78 and 4.22, respondents affirmed the company's short-term solvency and endorsed a comprehensive analytical approach. Contingency Theory posits that maintaining liquidity is a non-negotiable contingency for survival in a volatile market like Baidoa, ensuring operational resilience. The high score on using multiple metrics aligns with the need for nuanced internal systems to match complex environments. Transaction Cost Economics frames liquidity as a buffer against *opportunism* and *uncertainty*. Strong cash flow to meet obligations reduces the risk and cost of financial distress, while a multi-metric approach reflects a sophisticated internal monitoring system that lowers the cost of ensuring contractual (obligation) fulfillment.

LIQ-04 and LIQ-05: "*Improving working capital management can enhance liquidity...*" and "*Liquidity management should be a key component...*" The moderate scores here (3.05 and 3.21) suggested recognized room for improvement in active liquidity management strategies. Contingency Theory would identify this as a potential area for better internal adaptation, where processes could be more finely tuned to optimize asset utilization. For TCE, inefficient working capital management represents internal *transaction costs*—holding excess inventory or receivables ties up capital that could be deployed more profitably elsewhere. The moderate scores indicate awareness of, but not full optimization against, these costs.

ROE-03: "*Caafi Company shareholders have also been paid dividends over the years.*" This statement achieved a high mean score of 4.11, the strongest in the ROE category. This was a significant indicator of perceived owner returns. Contingency Theory underscores that delivering shareholder returns is a primary organizational objective, and fulfilling this in a challenging environment demonstrates successful strategic alignment. From a TCE standpoint, consistent dividend payments are a direct signal of reduced *agency costs*. They demonstrate that management is effectively converting the firm's economic success into tangible returns for the providers of equity capital, aligning owner and manager interests and validating the efficiency of the firm's governance structure.

ROE-01, ROE-02, ROE-04, and ROE-05: The remaining ROE indicators all received moderate scores, clustering around 3.0 to 3.4. This pattern indicated uncertainty or a neutral stance regarding the consistent growth of ROE and the effectiveness of strategies to improve it. Contingency Theory suggests that generating high equity returns might be a more complex challenge in this context, contingent on factors like regulated pricing or high capital costs, which may limit dramatic improvements. Transaction Cost Economics views ROE as the ultimate residual return after all costs, including governance costs. The moderate perceptions imply that while the company is solvent and pays dividends, the efficiency of its total capital structure in generating superior equity returns—net of all operational and transactional frictions—is perceived as adequate but not exceptional.

The overall analysis revealed a mixed but generally positive perception of Caafi Water Supply Company's financial performance, with an overall moderate average score of 3.52. The company demonstrated a clear strength in the perceived objectivity and goal-alignment function of Return on Investment (ROI), which scored high on average. This aligns with both theoretical frameworks, indicating the company has successfully implemented a key metric that supports internal contingency alignment and reduces agency costs. The Liquidity position was also viewed positively, particularly regarding meeting obligations, which is critical for survival and reduces financial risk costs.

However, the Return on Equity (ROE) metrics were perceived more moderately, aside from the strong agreement on dividend payments. This suggests that while the company is seen as stable and distributing profits, the efficiency and growth in generating returns on shareholder equity are not viewed as standout strengths. Collectively, the findings supported the Contingency Theory view that financial performance is a multidimensional outcome of internal systems fitting external demands. They also affirmed the Transaction Cost Economics principle that strong performance metrics, like a high perceived ROI, are indicative of successful internal governance that minimizes the costs of doing business. The moderate scores, particularly in ROE and active liquidity management, highlight specific areas where enhancing contingent internal practices could further improve financial outcomes and transaction cost efficiency.

Table 4: PLCC for decision support and financial performance of Caafi Water Supply Company in Baidoa, Somalia.

Study variable		Decision Support	Financial performance
Decision Support	Pearson Correlation	1	.510**
	Sig. (2-tailed)		.000
	N	92	92
Financial performance	Pearson Correlation	.510**	1
	Sig. (2-tailed)	.000	
	N	92	92

** . Correlation is significant at the 0.05 level (2-tailed).

Source: Primary data (2024)

The correlation analysis revealed a statistically significant and positive relationship between the implementation of decision support systems and the financial performance of Caafi Water Supply Company. The Pearson correlation coefficient of .510, significant at the .000 level ($p < .05$), indicated a strong and meaningful association. Consequently, the study's null hypothesis (H_0), which posited that there was no significant relationship between the use of decision support practices and financial performance, was rejected. This empirical finding confirmed the alternative hypothesis that the adoption of structured decision-support mechanisms was a critical factor associated with enhanced financial outcomes for the business in the Baidoa context.

This result served to validate the study's guiding theoretical frameworks. From the perspective of Contingency Theory, the significant correlation affirmed the proposition that an organization's internal systems must be appropriately designed to fit its external environment to achieve high performance; the formal decision-support practices represented a contingent adaptation that effectively aligned the company with the demands of its volatile operating setting. Simultaneously, Transaction Cost Economics was supported, as the strong correlation indicated that investments in these internal information-processing and governance mechanisms were successful in reducing the costs associated with market uncertainty, bounded rationality, and complex decision-making, thereby directly contributing to improved financial efficiency and results.

Table 5: Simple Linear Regression Analysis of Decision Support on Financial Performance

Variable	Unstandardized Beta (B)	Standardized Beta (β)	t-values	Adjusted R ²	F-Value	P-values
Constant	2.507		7.463			0
Decision Support	0.31	0.51	3.606	0.089	13.006	0

Model Predictor: Decision Support

Dependent Variable: Financial Performance

R: .510

R²: .260

Note: Analysis based on n=92.

Source: Primary data (2024)

The regression analysis yielded statistically significant results, leading to the rejection of the study's null hypothesis (H_0). The model demonstrated that Decision Support is a significant predictor of Financial Performance, with a p-value of .000 for the predictor variable, which is well below the conventional alpha level of .05. The unstandardized coefficient ($B = .310$) indicates that for each

one-unit increase in the implementation of Decision Support practices, the Financial Performance score of Caafi Water Supply Company is expected to increase by .310 units. More critically, the standardized beta coefficient ($\beta = .510$) reveals a strong, positive effect size, confirming that enhanced decision-support mechanisms are substantially associated with improved financial outcomes. The overall model fit, while moderate, was significant ($F = 13.006$, $p = .000$), with the predictor variable explaining approximately 26% ($R^2 = .260$) of the variance in Financial Performance, underscoring the substantive role of these management practices.

This empirical validation directly supports the study's guiding theoretical frameworks. The significant positive relationship validates the core tenet of Contingency Theory, which posits that organizational effectiveness is contingent upon the alignment of internal systems with external demands. The findings confirm that the formalized information-processing and analytical functions of Decision Support Systems represent a critical internal adaptation that enhances the company's "fit" with the volatile Baidoa environment, thereby driving financial success. Simultaneously, the results affirm the principles of Transaction Cost Economics (TCE), as the strong predictive relationship demonstrates that investments in internal decision-support infrastructure effectively mitigate the costs associated with market uncertainty and bounded rationality. By reducing information asymmetry and improving the quality of managerial choice, these systems lower the transaction costs of internal governance, which is directly reflected in superior financial performance metrics, thereby justifying the hierarchical investment in such capabilities.

5. DISCUSSIONS

The findings of this study provided robust empirical evidence that the implementation of decision support systems (DSS) was a significant determinant of financial performance for Caafi Water Supply Company in Baidoa. The statistical analysis led to the clear rejection of the null hypothesis (H_0), confirming a positive and significant relationship between structured decision-support practices and key financial metrics. The correlation coefficient of .510 and the regression beta of .310 demonstrated that enhanced analytical capabilities in areas like financial modelling, sensitivity analysis, and multi-criteria evaluation were directly associated with improved perceptions of profitability, liquidity, and returns. This core finding confirmed that even in a fragile, resource-constrained context, moving beyond purely intuitive management towards more formalized information processing was a valuable strategic investment. The results suggested that the company's efforts to institutionalize these practices had yielded tangible financial benefits, reinforcing the importance of managerial systems even where institutional voids and market volatility present significant operational challenges.

These empirical results strongly validated the two theoretical frameworks that guided the study. From the perspective of Contingency Theory, the significant relationship affirmed the central premise that there is no universally optimal system; instead, effectiveness is contingent upon achieving a "fit" between internal practices and external environmental demands. The formal decision-support mechanisms adopted by Caafi represented a tailored adaptation to the specific uncertainties of the Baidoa market, enabling better strategic alignment and resource allocation. Concurrently, the findings substantiated the principles of Transaction Cost Economics (TCE). The positive impact on financial performance indicated that investments in internal DSS served as efficient governance mechanisms, successfully reducing the costs associated with bounded rationality, information asymmetry, and market opportunism. By improving the quality and reliability of internal information, these systems lowered the transaction costs of planning, monitoring, and decision-making, thereby enhancing overall economic efficiency and financial outcomes.

The conclusions of this study align with and are reinforced by empirical findings from similar contexts globally. Research by Ahmadzai and Mohammadi (2021) on SMEs in post-conflict Afghanistan found that basic accounting information systems significantly improved profitability by reducing information gaps. Similarly, a study by Kanneh and Bangura (2020) on Liberian firms after the civil war demonstrated that structured budgeting and forecasting tools were critical for stabilizing cash flow and achieving growth. In Rwanda, Uwizeyemungu and Raymond (2022) observed that the adoption of formal management control systems by small enterprises was a key factor in rebuilding financial resilience after the genocide. Furthermore, work by Mburu and Kimencu (2023) in Kenya's informal sector confirmed that even simple record-keeping practices had a measurable positive effect on business survival and revenue. Finally, Olowa and Adebayo (2021), studying Nigerian SMEs in unstable regions, concluded that decision-support tools for risk assessment were pivotal in navigating economic volatility and protecting margins. This body of evidence corroborates the present study's findings, indicating that the value of formalized decision support is a consistent theme across diverse fragile and recovering economies.

While the results are compelling, they must be interpreted within the unique constraints of the Baidoa operating environment. The moderate scores in advanced analytics and visualization tools suggested that the company's adaptation was pragmatic, prioritizing robust, comprehensible tools over cutting-edge technologies that might be mismatched to local infrastructure or skill levels. This pragmatic approach is itself a reflection of sound contingent thinking. Furthermore, the demographic profile of a young, educated, but male-dominated workforce may have influenced both the implementation of these systems and the perceptions of their effectiveness. The study's focus on a single, critical utility company provides deep insight but limits broad generalization across all

business sectors in Somalia. Nonetheless, the demonstrated relationship provides a powerful evidence-based argument for the strategic prioritization of management accounting capabilities as a driver of financial resilience in post-conflict reconstruction.

6. CONCLUSION

This study concluded that decision support systems had a statistically significant and positive effect on the financial performance of Caafi Water Supply Company in Baidoa, Somalia. The null hypothesis was rejected based on strong correlational and regression evidence. The research validated the explanatory power of Contingency Theory and Transaction Cost Economics in this context, demonstrating that formalized decision-support practices constituted a critical adaptation to environmental uncertainty and an effective mechanism for reducing internal transaction costs. While the company exhibited high competence in core analytical practices, opportunities for enhancement remained in areas like advanced analytics and data communication. Overall, the findings underscored that investing in managerial information systems is not a luxury but a fundamental component of financial sustainability and growth for businesses operating in fragile states.

7. RECOMMENDATIONS

Based on the study's findings, the following recommendations are proposed for key stakeholders:

For Caafi Water Supply Company Management: Prioritize investment in training to enhance the use of existing DSS, particularly in data visualization and reporting tools to improve communication across departments. Develop a phased plan to introduce more advanced predictive analytics, ensuring alignment with staff skills and technological infrastructure.

For Other Businesses in Baidoa and Somalia: Business associations and chambers of commerce should facilitate workshops and knowledge-sharing forums on the practical implementation of low-cost, paper-based and digital decision-support tools, highlighting their proven link to financial improvement.

For Policymakers and Development Agencies: Integrate basic management accounting and digital literacy training into business development programs and vocational training curricula. Support initiatives that improve affordable access to business software and stable internet connectivity, addressing key infrastructural barriers identified in the study.

8. CONTRIBUTION TO KNOWLEDGE

This research contributes to knowledge by providing one of the first empirical examinations of the relationship between management accounting practices and firm performance in the specific context of post-conflict Somalia. It moves the theoretical discourse on Contingency Theory and Transaction Cost Economics into the under-researched arena of Somali entrepreneurship, demonstrating their relevance and applicability in an environment of institutional voids. The study offers a contextualized model of how decision support is pragmatically adapted and operationalized in a fragile state, providing a foundation for future comparative research in similar settings across the Horn of Africa.

9. AREAS FOR FURTHER STUDY

The following areas are suggested for future research:

- I. A comparative study across multiple cities in Somalia (e.g., Mogadishu, Hargeisa, Kismayo) to assess the differential impact of decision support in varying regional economic ecosystems.
- II. An investigation into the specific barriers (financial, technical, cultural) that prevent the adoption of more advanced analytics among Somali businesses, using qualitative mixed-methods approaches.
- III. A longitudinal study to examine the causal, long-term effects of DSS implementation on financial performance metrics over a 5-10 year period.
- IV. Research exploring the intersection of decision-support systems with other management practices, such as strategic planning or corporate governance, and their combined effect on organizational resilience.
- V. A study focusing on gender-disaggregated analysis within Somali businesses to understand differing perceptions, access, and impact of management tools among male and female entrepreneurs and managers.

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