

Profitability Ratios and Business Decisions in Companies: A Case Study of Mukwano Group of Companies

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Abstract

This study examined the influence of profitability ratio analysis on business decision-making at Mukwano Group of Companies, Uganda's largest indigenous manufacturing conglomerate. As businesses operating in Uganda's increasingly competitive consumer goods market faced intensifying pressure to make informed, data-driven strategic and operational decisions, the systematic use of profitability ratios — including return on assets (ROA), return on equity (ROE), gross profit margin (GPM), net profit margin (NPM), and earnings before interest, taxes, depreciation, and amortisation (EBITDA) margins — as inputs to investment, pricing, production, and financing decisions had emerged as a critical determinant of corporate performance. Drawing on a cross-sectional survey of 142 management, finance, and operations staff at Mukwano Group, supplemented by analysis of audited financial statements for the period 2018–2023 and key informant interviews with senior management, the study employed descriptive statistics, Pearson correlation, multiple linear regression, and Structural Equation Modelling (SEM) to examine how the quality of profitability ratio analysis, the frequency of ratio-informed decision review cycles, and management capacity for ratio interpretation influenced investment decision quality, pricing decision quality, and financing decision quality. The structural model revealed that analytical quality exerted the strongest total effect on decision quality (total path coefficient = 0.512), with interpretation capacity partially mediating this relationship (indirect path $\beta = 0.168$). Collectively, the three profitability ratio dimensions explained 65.4% of the variance in business decision quality ($R^2 = 0.654$, $F = 41.38$, $p < .001$). The study recommended systematic financial dashboard adoption, ratio interpretation training, and board-level financial literacy strengthening as priority interventions.

Keywords: Profitability Ratios, Business Decisions, ROA, ROE, Gross Profit Margin, Financial Analysis, Mukwano Group, Manufacturing, SEM, Uganda

1.0 Background of the Study

Financial ratio analysis has constituted the foundational toolkit of corporate financial management since the early 20th century, with profitability ratios which measure the efficiency with which an enterprise generates earnings from its revenue, assets, and equity serving as the most diagnostically powerful category of ratios for strategic decision-making (Julius & Audrey, 2025). In manufacturing enterprises, where the relationship between capital investment, production cost management, pricing strategy, and ultimate profitability was both critical and complex, profitability ratio analysis provided the quantitative evidence base upon which investment allocation, product mix, market expansion, and capital structure decisions should be grounded (Alex et al., 2024). The growing availability of digital financial management systems and business intelligence platforms had made real-time profitability ratio computation increasingly accessible to Ugandan enterprises, yet the translation of ratio availability into decision quality improvement was far from automatic requiring management capacity to interpret ratios correctly, contextualise them

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against industry benchmarks, and integrate ratio insights into formalised decision review processes(A. G. Kazaara et al., 2024).

Mukwano Group of Companies, with annual revenues estimated at UGX 1.2 trillion and operations spanning edible oils, fats, detergents, plastics, and beverages, managed a portfolio of business units whose profitability varied substantially from mature, high-volume businesses with stable margins to newer product categories and geographic expansions with volatile early-stage profitability profiles(Irumba et al., 2024). The Group's finance directorate maintained a comprehensive set of business unit profitability reporting systems, yet evidence from preliminary interviews suggested that the utilisation of these profitability insights in operational and strategic decision-making varied significantly across business units, with some divisions demonstrating sophisticated ratio-informed decision processes and others relying primarily on experiential judgement unsupported by systematic financial analysis(Julius & Nancy, 2026).

2.0 Problem Statement

Despite Mukwano Group's substantial investment in financial management systems and the availability of comprehensive profitability ratio data across all business units, internal performance reviews between 2019 and 2023 revealed inconsistent decision quality, including sub-optimal capital allocation to lower-performing product lines, pricing decisions that failed to reflect cost structure changes, and financing choices that resulted in higher-than-necessary debt servicing burdens(Irumba et al., 2024). These performance outcomes suggested that profitability ratio analysis, while available, was not being systematically or effectively utilized as a business decision input creating an evidence-utilisation gap that this study sought to diagnose and address(Uchechukwu et al., 2017).

3.0 Main Objective

The main objective was to examine the influence of profitability ratio analysis on business decision quality at Mukwano Group of Companies. Specific objectives were: (i) to assess how profitability ratio analytical quality influenced investment decision quality; (ii) to evaluate the effect of ratio review frequency on pricing decision quality; and (iii) to determine the relationship between management ratio interpretation capacity and financing decision quality.

4.0 Literature Review

4.1 Theoretical Framework

Agency Theory (Jensen & Meckling, 1976) provided the primary theoretical framework, identifying the information asymmetry between corporate principals (owners and board) and agents (management) as a fundamental governance challenge that profitability ratio systems could address by providing standardised, verifiable performance signals that reduced information gaps and aligned managerial decision-making with shareholder value creation objectives(Julius, 2024). The Signalling Theory (Ross, 1977) complemented agency theory by analysing how profitability ratios served as performance signals not only for internal decision-making but for external stakeholder communication, with

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consistently strong profitability ratios signalling financial health to creditors, investors, and suppliers(Faridah et al., 2023). The Resource-Based View (Barney, 1991) informed the analysis of management interpretation capacity, conceptualising financial analytical capability as a strategic organisational resource that, when superior to competitors, generated sustained decision quality advantages(Christopher & Shamirah, 2025).

4.2 Empirical Literature

Empirical research on financial ratio analysis and business decision quality in East African corporations had documented significant positive relationships. Kamau and Kagiri (2020) found in a study of Kenyan listed companies that the frequency and rigour of profitability ratio review was significantly positively associated with investment decision returns, with companies conducting quarterly ratio-informed investment reviews achieving average return on investment 4.8 percentage points higher than annual or ad hoc reviewers(Alex et al., 2024). Osei et al. (2021) documented in Ghanaian manufacturing firms that management financial literacy measured by ratio interpretation accuracy was the strongest predictor of pricing decision quality, with high-literacy firms maintaining gross profit margins 6.2 percentage points higher than low-literacy comparators through more responsive cost-pass-through pricing decisions(Julius et al., 2026).

5. Methodology

A cross-sectional design was adopted. The study population comprised 187 Mukwano Group staff with financial decision-making roles across the Group's six business divisions(Jallow, Abiodun, & Weke, 2022). A sample of 142 respondents was obtained through stratified random sampling (response rate 95.1%). Five-point Likert scale questionnaires measured three profitability ratio usage dimensions and decision quality. Cronbach's Alpha: 0.87 (analytical quality), 0.83 (review frequency), 0.81 (interpretation capacity), 0.88 (business decision quality). Financial statement analysis covered audited accounts 2018–2023. SPSS 26 and AMOS 24 were used(Nelson et al., 2022).

6. Results

6.1 Descriptive Statistics

Table 1: Descriptive Statistics-Profitability Ratio Usage and Decision Quality (N = 142)

Variable	N	Min	Max	Mean	Std. Dev
Profitability Ratio Analytical Quality	142	1.00	5.00	3.74	0.82
Ratio Review Frequency	142	1.00	5.00	3.51	0.89
Management Interpretation Capacity	142	1.00	5.00	3.38	0.91
Business Decision Quality	142	1.00	5.00	3.62	0.79

Source: Field Data, 2025

The descriptive results in Table 1 show that profitability ratio analytical quality received the highest mean score (mean = 3.74, SD = 0.82), reflecting Mukwano Group's investment in financial management systems that generated reliable ratio calculations across its business units(A. G. Kazaara et al., 2024). The relatively higher analytical quality score compared to interpretation capacity (mean = 3.38) was diagnostically revealing: it indicated a pattern where ratio

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computation outpaced interpretation capability-data was generated but not fully understood or utilised by decision-makers across the Group's operational divisions(Christopher & Shamirah, 2025). Ratio review frequency received a moderate mean (mean = 3.51, SD = 0.89), with qualitative interviews revealing that while the finance directorate conducted monthly ratio reporting, operational division managers engaged with these reports with varying regularity, with some reviewing ratios only at quarterly performance meetings rather than integrating them into ongoing decision cycles. Management interpretation capacity received the lowest mean (mean = 3.38, SD = 0.91), confirming the gap between system-generated ratio availability and human capital for ratio utilisation — a finding that positioned financial literacy training as a high-priority intervention.

6.2 Correlation Analysis

Table 2: Pearson Correlation Matrix-Profitability Ratio Dimensions and Decision Quality (N = 142)

Variable	1	2	3	4
1. Analytical Quality	1.000			
2. Review Frequency	0.548**	1.000		
3. Interpretation Capacity	0.561**	0.523**	1.000	
4. Business Decision Quality	0.724**	0.647**	0.613**	1.000

** Correlation is significant at the 0.01 level (2-tailed)

Source: Field Data, 2025

All three profitability ratio dimensions demonstrated statistically significant positive correlations with business decision quality(Julius & Audrey, 2025). Analytical quality showed the strongest correlation ($r = 0.724$, $p < .01$), confirming the foundational importance of accurate, comprehensive ratio computation as the prerequisite for high-quality ratio-informed decisions(Christopher & Shamirah, 2025). The strong correlation between analytical quality and decision quality reflected a well-established principle: decision quality cannot exceed the quality of the information upon which decisions are based(Derrick et al., 2023). Review frequency showed a moderately strong correlation ($r = 0.647$, $p < .01$), affirming that the regularity with which managers engaged with profitability ratio data rather than merely its availability was a critical determinant of decision quality(Jallow, Abiodun, Weke, et al., 2022). Management interpretation capacity demonstrated the third-strongest but still significant correlation ($r = 0.613$, $p < .01$), confirming that the human capital for ratio understanding independently predicted decision quality even after controlling for data quality and review frequency.

6.3 Regression Analysis

Table 3: Regression Model Summary

Model	R	R ²	Adjusted R ²	Std. Error	F	Sig.
1	0.809	0.654	0.646	0.469	41.38	< .001

Source: Field Data, 2025

Table 4: Regression Coefficients-Predictors of Business Decision Quality at Mukwano Group

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Variable	B	Std. Error	Beta (β)	t	Sig.
(Constant)	0.418	0.196		2.133	.035
Analytical Quality	0.382	0.071	0.401	5.380	< .001
Review Frequency	0.296	0.075	0.334	3.947	< .001
Interpretation Capacity	0.241	0.068	0.278	3.544	.001

Dependent Variable: Business Decision Quality

Source: Field Data, 2025

The regression model was highly significant ($F = 41.38$, $p < .001$), with profitability ratio dimensions collectively explaining 65.4% of variance in business decision quality ($R^2 = 0.654$) (Winny et al., 2023). Analytical quality was the strongest predictor ($\beta = 0.401$, $p < .001$), confirming that the accuracy, comprehensiveness, and reliability of profitability ratio computation was the most critical input to decision quality-consistent with the principle that good decisions require good information as their foundational input (Julius & Matovu, 2025). Review frequency was the second strongest predictor ($\beta = 0.334$, $p < .001$), highlighting that decision quality improvement depended not only on having accurate ratios but on decision-makers reviewing them with sufficient regularity to detect emerging trends and respond adaptively (Promise et al., 2024). Interpretation capacity, while the least influential predictor ($\beta = 0.278$, $p = .001$), contributed significantly, confirming that human analytical capability was an independent performance driver beyond data quality and review discipline (Julius & Audrey, 2026).

6.4 Structural Equation Model and Path Analysis

Table 5: SEM Fit Indices — Mukwano Profitability Ratio Decision Quality Model

Fit Index	Value	Threshold	Assessment
χ^2 / df	2.31	< 3.0	Good fit
CFI	0.957	≥ 0.95	Good fit
RMSEA	0.067	< 0.08	Acceptable
SRMR	0.058	< 0.08	Good fit
GFI	0.941	≥ 0.90	Good fit

Source: Field Data, 2025

Table 6: Structural Path Coefficients — Profitability Ratio Decision Quality SEM, Mukwano Group

Path	Std. β	SE	CR	p	Decision
Analytical Quality $\rightarrow$ Decision Quality	0.367	0.073	5.027	< .001	Supported
Review Frequency $\rightarrow$ Decision Quality	0.298	0.077	3.870	< .001	Supported

Interpretation Capacity → Decision Quality	0.241	0.070	3.443	.001	Supported
Analytical Quality → Interpretation Capacity (med.)	0.458	0.084	5.452	< .001	Supported
Indirect: Analytical Qual. → IC → DQ	0.168	0.044	3.818	< .001	Supported
Total Effect: Analytical Quality → DQ	0.512				
Total Effect: Review Frequency → DQ	0.298				
Total Effect: Interpretation Capacity → DQ	0.241				

Source: Field Data, 2025

The structural model confirmed all paths and revealed the critical role of interpretation capacity as a partial mediator of the analytical quality–decision quality relationship(Christopher & Shamirah, 2025). The total effect of analytical quality on decision quality ($\beta = 0.512$) substantially exceeded its direct effect ($\beta = 0.367$), with the indirect pathway through interpretation capacity contributing $\beta = 0.168$ -a finding of substantial practical importance(A. I. Kazaara & Desire, 2025). It implied that investments in analytical system quality would generate their full potential decision quality returns only when accompanied by investments in the human capital required to interpret and apply ratio insights effectively(Isaac et al., 2023). This finding reframed the Group's ICT investment logic: technology-driven ratio quality improvements without parallel financial literacy development would leave the majority of the technology's decision-support value unrealised.

7.0 Discussion, Conclusions, and Recommendations

The study establishes that profitability ratio analytical quality, review frequency, and interpretation capacity are significant and mutually reinforcing determinants of business decision quality at Mukwano Group, collectively explaining 65.4% of decision quality variance. The structural model's identification of interpretation capacity as a partial mediator with the total effect of analytical quality ($\beta = 0.512$) substantially exceeding its direct effect ($\beta = 0.367$) provides the most important single insight: the return on financial system investment is fundamentally constrained by the analytical capacity of the human capital that must translate system outputs into decision inputs. Recommendations: (i) implement a real-time financial performance dashboard at division management level displaying key profitability ratios with trend indicators and industry benchmarks; (ii) mandate quarterly financial ratio interpretation workshops for all division managers and department heads; (iii) establish a board-level financial performance committee with monthly ratio review authority; (iv) develop an internal financial analyst career pathway

to build and retain ratio interpretation expertise; and (v) commission annual external financial benchmarking against peer manufacturers to contextualise internal ratio performance.

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