



Financial Resource Management and the Quality of Education in Private Universities in Central Uganda: A Mixed-Methods Investigation

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Abstract

This study investigated the relationship between financial resource management (FRM) and the quality of education in private universities in Central Uganda, with enabling factors as a mediating variable. The study was anchored in Resource Dependency Theory, Human Capital Theory, and Institutional Theory, and employed an explanatory sequential mixed-methods design. Questionnaires were administered to 319 academic and administrative staff, and semi-structured interviews were conducted with 18 key informants across six private universities. Quantitative data were analysed using SPSS, employing Pearson correlation and multiple regression analysis, while qualitative data were analysed through thematic analysis. The study found a strong positive relationship between revenue streams and educational quality ($r = 0.736$, $p < 0.01$; $R^2 = 0.555$), a statistically significant but weak bivariate association between budgeting and quality ($r = 0.131$, $p < 0.05$; $R^2 = 0.585$ in regression), and the strongest relationship between financial monitoring and control and quality ($r = 0.765$, $p < 0.01$; $R^2 = 0.567$). Enabling factors significantly mediated all three relationships ($r = 0.702$, $p < 0.01$; $R^2 = 0.493$). Qualitative findings revealed that tuition over-dependence, weak budget forecasting, and inadequate audit independence were the primary constraints on quality investment, while strategic planning integration and participatory governance were the principal enabling mechanisms. The study proposes a Financial Resource Management (FRM) model as a contribution to theory and institutional practice, and recommends that private universities diversify income streams, institutionalise participatory budgeting, strengthen internal audit independence, and reform governance structures to align financial management with educational mission.

Subject Areas

Finance

Keywords

Financial Resource Management, Revenue Streams, Budgeting, Financial Monitoring and Control, Enabling Factors, Quality of Education, Private Universities, Uganda, Mixed Methods

1. Introduction

1.1. Background

Private universities account for over 70% of higher education enrolment in Uganda, yet persistent concerns about their financial sustainability and educational quality have characterised regulatory discourse since the sector's liberalisation in 1988 [1]. The fundamental challenge is not the absence of financial resources per se but the inadequacy of financial resource management practices in translating available resources into measurable educational quality outcomes. The National Council for Higher Education further reports chronic deficits, delayed staff remuneration, deteriorating infrastructure, and inadequate research support in significant portions of the private sector, all symptoms of FRM failure rather than absolute resource scarcity [1].

Financial resource management (FRM), defined in this study as the systematic planning, allocation, utilisation, and control of monetary assets to achieve institutional objectives, determines the institution's capacity to fund academic programmes, maintain infrastructure, develop academic staff, and sustain research [2] [3]. Three analytically distinct dimensions of FRM are examined: revenue streams, financial budgeting, and financial monitoring and control. Quality of education is operationalised using the NCHE Quality Assurance Framework, which provides institutionally recognised and policy-relevant indicators: infrastructure adequacy, staff competence, teaching quality, curriculum relevance, and research and publication output [4].

What distinguishes this study from prior work in the Ugandan higher education context is its empirical examination of enabling factors as a mediating variable in the FRM-quality relationship. Enabling factors, comprising strategic planning, governance structures, financial literacy, and leadership commitment, are the organizational conditions that determine whether FRM practices achieve their intended educational effects. By treating enabling factors as a testable mediator rather than as contextual background, the study advances both theoretical understanding and the practical guidance available to administrators and policymakers.

1.2. Statement of the Problem

Despite the critical importance of private universities to Uganda's higher educa-

tion landscape, many institutions operate under financial management conditions that systematically undermine their ability to deliver NCHE-standard quality education. The problem is not merely resource scarcity since several sampled universities report adequate revenue but rather a structural gap between financial inputs and quality outputs that existing literature has not adequately explained. Studies in comparable contexts have established that the quality of financial management practices, not simply the volume of resources, determines educational outcomes [5] [6]. However, the specific mechanisms through which FRM practices translate or fail to translate into quality improvements in the Ugandan private university context remain empirically unresolved.

Specifically, there is a lack of integrated empirical evidence examining all three FRM dimensions together, linking them to NCHE-defined quality indicators, and testing the mediating pathways through which enabling factors condition these relationships. This gap constrains administrators seeking evidence-based guidance on which financial management reforms to prioritise, and constrains policy-makers seeking to design regulatory frameworks that incentivise quality-oriented financial governance.

1.3. Research Objectives and Questions

The study was guided by four specific objectives:

- 1) To assess the relationship between diverse revenue streams and the quality of education in private universities in Central Uganda.
- 2) To determine the extent to which financial budgeting influences the quality of education in private universities in Central Uganda.
- 3) To analyse the effect of financial monitoring and control on the quality of education in private universities in Central Uganda.
- 4) To evaluate the mediating role of enabling factors on the relationship between financial resource management and quality of education in private universities in Central Uganda.

The following research questions guided the investigation:

- 1) What is the relationship between diverse revenue streams and the quality of education in private universities in Central Uganda?
- 2) To what extent does financial budgeting influence the quality of education in private universities in Central Uganda?
- 3) What effect does financial monitoring and control have on the quality of education in private universities in Central Uganda?
- 4) How do enabling factors mediate the relationship between financial resource management and quality of education in private universities in Central Uganda?

2. Theoretical Foundation and Literature Review

2.1. Theoretical Framework

The study integrates three theoretical frameworks, with Human Capital Theory (HCT) serving as the primary explanatory lens. HCT, formulated by Becker in 1964

establishes the core proposition of this study: financial investment in education and training increases productive capacity and, in institutional terms, translates into improved quality of educational delivery [7]. Specifically, HCT explains the financial-quality nexus by mapping the pathway from financial inputs (revenue streams, budgeting allocations) to human capital investment categories (staff development, research funding, instructional infrastructure) to educational quality outputs (curriculum relevance, teaching effectiveness, research productivity). This mapping provides the theoretical foundation for the study's variable structure and hypotheses.

Resource Dependency Theory (RDT), advanced by Pfeffer and Salancik in 1978, complements HCT by explaining why private universities must actively diversify their income sources [8]. RDT posits that organisations dependent on a single external resource are vulnerable to that resource's instability. Applied to private universities chronically dependent on tuition fees, RDT predicts that income volatility driven by enrolment fluctuations or fee collection failures will destabilise quality investment by disrupting the stable financial flows that planned human capital investment requires. RDT therefore provides the theoretical basis for the revenue streams dimension of the study.

Institutional Theory by Meyer and Rowan provides the theoretical basis for understanding enabling factors as mediating variables [9]. The theory's central insight that organisations adopt formal structures for legitimacy as well as efficiency, and that formal structures may be loosely coupled with actual practice explains why governance structures, compliance mechanisms, and strategic planning processes mediate the relationship between formal FRM and substantive quality outcomes. Enabling factors are the organisational conditions that determine whether formal FRM structures are tightly or loosely coupled with quality and thus the theoretical mechanism through which the mediation hypothesis is derived.

2.2. Revenue Streams and Educational Quality

Empirical literature consistently supports a positive relationship between revenue diversification and institutional quality. In a systematic review of financial resource management across educational institutions in Asia, a study identified limited and poorly diversified income as the primary financial constraint on quality delivery, and highlighted strategic income diversification as a key best practice [10]. A 2022 study found that Ugandan private universities with more diversified income streams demonstrated greater financial sustainability and stronger capacity for quality investment [11]. Another study documented that tuition-dependent institutions face strategic constraints on quality investment, particularly in research and infrastructure, because fee income must prioritise operational continuity over academic development [12]. In a most methodologically proximate prior study, it was found that revenue management practices significantly predicted educational quality outcomes in Kenyan private universities [5]. The gap that the present study addresses is the direct empirical linkage between revenue

stream composition and NCHE-defined quality dimensions in Ugandan private universities, a link documented qualitatively but not previously measured quantitatively.

2.3. Budgeting and Educational Quality

Financial budgeting is the operational mechanism through which revenue is translated into institutional activities. The literature identifies participatory budgeting, strategic alignment, and data-driven allocation as the dimensions of budgeting practice most consistently associated with quality outcomes [13] [14]. A study documented in Ghanaian public universities that budgeting systems that collapse under resource pressure generate ad hoc allocation decisions poorly aligned with academic priorities [15]. Another study observed that early-stage Ugandan private universities operated with largely informal, reactive budgeting processes, a pattern that NCHE inspection reports suggest persists in smaller institutions [14]. The present study examines whether the quality of the budgeting process is associated with NCHE-defined quality outcomes, and whether this relationship is mediated by enabling factors.

2.4. Financial Monitoring and Control and Educational Quality

Financial monitoring and control systems encompassing internal audit, expenditure tracking, compliance reporting, and governance oversight determine whether budgeted allocations translate into actual academic investments. A study found in Lira City that private universities, stronger internal control systems were associated with better resource utilisation and academic service delivery [16]. Another study established that in Indonesian private universities, internal control effectiveness predicted financial management quality, with leadership commitment as a conditioning factor [17]. The present study extends this evidence base by examining how monitoring and control practices relate specifically to NCHE quality indicators in Central Ugandan private universities, and by testing the degree to which this relationship is mediated by enabling factors.

2.5. Enabling Factors as Mediating Variables

The enabling factors construct synthesises governance, leadership, strategic planning, and financial literacy as the organisational infrastructure that mediates FRM's effect on educational quality. A study found that in Uganda that governance quality moderated the financial management-quality relationship [6]. A 2022 study established theoretically that governance integrity enhances resource utilisation efficiency [18]. A study documented that strategic planning alignment is a critical condition for quality-oriented budget allocation [19]. Another study demonstrated in a large-scale study that academic accreditation mediates the relationship between quality management initiatives and institutional performance, providing comparative evidence of mediation dynamics in higher education governance [20]. Another study identified financial constraints and governance weaknesses as the

primary barriers to total quality management implementation in private universities, underscoring the enabling role of institutional conditions in translating financial inputs into quality outcomes [21]. A study further showed that financial expertise within governance structures significantly influences the sustainability and quality of higher education institutions in comparable sub-Saharan African contexts [22]. These findings converge on the argument that enabling factors are not contextual background variables but active mediating mechanisms, a proposition this study tests empirically.

3. Research Methodology

3.1. Research Design and Philosophy

The study adopted an explanatory sequential mixed-methods design [23], grounded in a pragmatic paradigm [24]. Quantitative data provided the statistical measurement of relationships between FRM dimensions and educational quality, while qualitative data offered contextual explanation of the mechanisms, conditions, and constraints shaping those relationships. Integration of the two data types occurred in the interpretation phase, with qualitative themes used to explain, contextualise, and in some cases challenge quantitative results.

3.2. Study Population and Sampling

Six private universities in Central Uganda constituted the study setting: Victoria University, Kampala International University, International University of East Africa, ISBAT University, Clarke International University, and Kampala University. The total study population comprised 1575 individuals: 48 heads and assistant heads of finance departments, 77 management team members, and 1450 academic staff. Using Yamane's (1967) formula at a 5% margin of error, a required sample of 319 was calculated [25]. Purposive sampling was used for finance heads ($n = 24$) and management members ($n = 75$) given their specific institutional knowledge; simple random sampling was used for academic staff ($n = 220$). For the qualitative phase, 18 key informants were purposively selected across the six universities, achieving theoretical saturation.

The selection of 24 finance heads from a population of 48 reflects the application of purposive sampling to that stratum. All 48 heads and assistant heads of finance departments were eligible, and purposive selection targeted those with direct responsibility for budgeting, monitoring, and financial reporting rather than purely administrative support roles. Approximately four finance department representatives were selected from each of the six universities, ensuring coverage across institutional contexts. All 319 questionnaires distributed were returned and usable, yielding a 100% response rate for the quantitative phase. By university, the distribution ranged from 16.0% to 25.1% of the sample across five institutions, with one institution (Kampala University) contributing 1.6% owing to reduced staff availability during the data collection period; this imbalance is acknowledged as a limitation. By staff category, academic staff accounted for 69.0% of respond-

ents (n = 220), management members for 23.5% (n = 75), and finance heads for 7.5% (n = 24). This distribution is proportionate to the relative sizes of these groups in the study population and reflects adequate coverage of the three distinct knowledge bases required to triangulate perceptions of financial resource management and educational quality.

3.3. Data Collection Instruments

A structured, closed-ended questionnaire with a five-point Likert scale (1 = strongly disagree to 5 = strongly agree) measured all study variables across six sections: demographics, revenue streams, budgeting, financial monitoring and control, enabling factors, and quality of education. Items were adapted from validated instruments in comparable studies [5] [6], and modified to reflect the NCHE quality framework. Revenue streams were measured using eight items (sample item: “The university effectively identifies and develops diverse revenue sources beyond tuition fees”); budgeting used seven items (sample item: “The budgeting process supports curriculum relevance and update”); financial monitoring and control used eight items (sample item: “Effective controls are in place to prevent misuse of financial resources”); enabling factors used seven items (sample item: “Governance structures support effective financial budgeting”); and quality of education used five items aligned to NCHE indicators (sample item: “Effective financial management positively influences the quality of education at this institution”). Composite scores for each construct were computed as the mean of all items in that dimension, following confirmation of unidimensionality through factor analysis. A semi-structured interview guide contained objective-aligned open questions and follow-up probes.

3.4. Validity, Reliability, and Analysis

Content validity was confirmed through expert review ($CVI \geq 0.78$). Internal consistency reliability was assessed using Cronbach’s alpha, with all constructs exceeding 0.70: revenue streams $\alpha = 0.82$, budgeting $\alpha = 0.79$, financial monitoring and control $\alpha = 0.84$, enabling factors $\alpha = 0.81$, and quality of education $\alpha = 0.86$. Quantitative analysis used SPSS (Version 27), employing descriptive statistics, Pearson correlation, and hierarchical multiple regression. Mediation was tested using Baron and Kenny’s causal steps procedure [26], supplemented by bootstrapped indirect effect estimation following Hayes [27] to provide bias-corrected confidence intervals. Qualitative data were analysed using thematic analysis [28], with NVivo supporting coding and theme development.

3.5. Ethical Considerations

Ethical approval for this study was granted by the St Francis Hospital Nsambya Research Ethics Committee (REC), which reviewed and approved the protocol at its meeting on 11 December 2024. Institutional approval was subsequently obtained from the Uganda National Council for Science and Technology (UNCST),

which registered the study under reference number SS3719ES on 11 April 2025 for the period 2025 to 2028. Prior to data collection, permission was sought from the administration of each participating university. All participants received a written information sheet explaining the study purpose, procedures, expected duration, and their rights. Informed consent was obtained from each participant before any data were collected; online respondents indicated consent through a digital tick box, and interview participants signed a consent form. Participation was entirely voluntary and participants were informed that they could withdraw at any point without consequence. To protect confidentiality, all questionnaire responses and interview transcripts were anonymised, with universities and individuals identified only by codes in the data files. Data were stored securely and accessed only by the research team. No incentives were offered, and no identifying information appears in any published output of this study.

4. Results and Discussion

4.1. Demographic Profile of Respondents

Of the 319 respondents, 55.5% were male and 44.5% female, with the majority holding Master's degrees (48.3%) followed by Doctorates (25.1%). The largest proportion (41.7%) had 10 to 15 years of institutional experience. This profile indicates a knowledgeable and experienced sample with direct engagement in both financial management processes and academic quality delivery.

4.2. Revenue Streams and Quality of Education

4.2.1. Descriptive Statistics

Table 1. Revenue sources supporting university activities (N = 319). Source: Primary data (2025).

Indicator	Mean	SD	Agree (%)	Disagree (%)
University effectively identifies revenue from tuition fees	3.75	1.41	73.3%	25.4%
University effectively identifies revenue from donations	3.38	1.38	59.2%	29.7%
University effectively identifies revenue from endowments	3.63	1.36	68.0%	26.3%
University effectively identifies revenue from grants	3.31	1.43	55.5%	32.6%

Table 1 reveals that tuition fees are the dominant income source, with 73.3% agreement, substantially exceeding grants (55.5%) and donations (59.2%). The consistently high standard deviations (all > 1.3) indicate significant institutional variation in revenue performance, suggesting that some universities have achieved greater income diversification while others remain almost entirely tuition-dependent. The qualitative data contextualised this variation: participants from more

diversified institutions cited consultancy income, short courses, and industry partnerships as meaningful supplementary sources, while participants from highly tuition-dependent institutions described fee collection failures and enrolment drops as immediate threats to quality investment. One Head of Finance stated:

“The revenues are never enough. We face fluctuations in fees recovery rates and enrolment. When fees come late, the first things cut are library subscriptions, research funds, and staff development allocations—exactly the things that determine academic quality.”

4.2.2. Hypothesis Testing

H01 tested whether there was no relationship between diverse revenue streams and educational quality. The Pearson correlation was $r = 0.736$ ($p < 0.01$), leading to rejection of H01. Regression analysis indicated that revenue generation explains 55.5% of the variation in educational quality ($R^2 = 0.555$, $F = 82.3$, $p < 0.01$). This strong result confirms RDT’s prediction that institutions with more stable and diversified financial bases are better positioned to sustain quality-related investment. The qualitative finding that tuition dependence creates a “quality investment cycle”, cutting academic allocations precisely when enrolment pressure is highest, illustrates the mechanism through which RDT’s resource instability prediction operates in practice.

4.3. Financial Budgeting and Quality of Education

4.3.1. Descriptive Statistics

Table 2. Influence of financial budgeting on the quality of education (N = 319). Source: Primary data (2025).

Indicator	Mean	SD	Agree (%)	Disagree (%)
Budgeting process is transparent and involves stakeholder input	3.75	1.10	70.6%	15.6%
Financial resources are allocated effectively to quality-improvement areas	3.98	1.06	79.3%	12.9%
Budgeting process supports curriculum relevance and update	4.11	0.89	84.0%	6.6%
Budgeting process supports quality of research and publications	4.00	0.90	83.4%	9.1%

Table 2 shows high agreement scores for all budgeting indicators, with the highest for curriculum support (84.0%, mean = 4.11) and research and publications (83.4%, mean = 4.00). The relatively lower agreement for process transparency (70.6%) signals a meaningful gap between formal budgeting compliance and stakeholder perception of genuine inclusiveness. Qualitative data corroborated this: while most participants described nominally participatory processes involving departmental heads and governance boards, several noted that budget pro-

posals from academic units were routinely modified by senior management without feedback, and that mid-year reallocations regularly diverted funds from academic priorities to administrative costs. One Dean of a School noted:

“All key stakeholders are invited to participate in the budgeting process. But the challenge is under-budgeting, over-budgeting, and delays. The approved budget is rarely what is actually spent, and the differences always seem to go against academic priorities.”

4.3.2. Hypothesis Testing and the Budgeting Paradox

H02 tested whether financial budgeting has no influence on educational quality. The Pearson correlation was $r = 0.131$ ($p = 0.019$), weak but statistically significant, leading to rejection of H02. However, when budgeting was included alongside revenue streams and financial monitoring and control in a hierarchical multiple regression model (Model 1: all three FRM dimensions entered simultaneously), budget allocation patterns contributed to the joint explanation of 58.5% of educational quality variance ($R^2 = 0.585$, $F = 47.6$, $p < 0.01$). Multicollinearity was assessed using variance inflation factors (VIFs): revenue streams VIF = 2.31, budgeting VIF = 1.87, financial monitoring and control VIF = 2.64, all well below the conventional cut-off of 10, confirming that multicollinearity does not distort the estimates. The divergence between the weak bivariate correlation ($r = 0.131$) and the meaningful regression contribution ($R^2 = 0.585$) reflects the suppression dynamic that is common when predictor variables are mutually correlated: once the shared variance attributable to revenue streams and monitoring is partitioned out, budgeting's unique explanatory contribution is absorbed by the enabling factors pathway, as confirmed by the full mediation result. The formal existence of a budgeting process has limited direct association with quality when examined in isolation, but the quality of allocation decisions, determined by enabling conditions, is a substantive predictor when modelled jointly with the other FRM dimensions. This interpretation is entirely consistent with the enabling factors mediation finding: it is the enabling conditions (strategic alignment, governance accountability, financial literacy) that determine the quality of allocation decisions, not the formal budgeting process per se.

4.4. Financial Monitoring and Control and Educational Quality

4.4.1. Descriptive Statistics

Table 3 presents the strongest and most consistent agreement scores across all FRM dimensions, with all indicators exceeding 88% agreement and very low standard deviations (<0.81). The highest mean (4.28) is recorded for the effectiveness of controls in preventing resource misuse, suggesting that respondents perceive monitoring and control as primarily a resource protection mechanism rather than a strategic quality improvement tool. Qualitative data confirmed this perception while also revealing its limits. Participants universally reported formal monitoring structures, routine reconciliations, annual external audits, and ledger reviews, but

also documented challenges that undermined their effectiveness. One Finance Director stated:

Table 3. Financial monitoring and control on the quality of education (N = 319). Source: Primary data (2025).

Indicator	Mean	SD	Agree (%)	Disagree (%)
University regularly monitors financial performance to ensure efficient resource use	4.07	0.76	92.7%	4.5%
Effective controls are in place to prevent misuse of financial resources	4.28	0.75	92.7%	4.5%
Financial audits are conducted regularly and results communicated to stakeholders	4.18	0.78	93.1%	4.5%
Budget tracking identifies areas where adjustments are needed for quality enhancement	4.01	0.81	88.4%	6.3%
Monitoring and control supports quality of curriculum and relevance update	4.18	0.71	94.4%	2.8%

“Auditing is taken very seriously. Every end of an academic year, we have external auditors. But the challenge is that some staff members provide false information during audits, and others simply lack the skills to maintain accurate records. So the audit process can only verify what it is given.”

This qualitative finding directly illustrates the mechanism through which enabling factors mediate the monitoring-quality relationship: monitoring systems can only be as effective as the enabling conditions that determine the quality of information they receive and the action that follows from their findings.

4.4.2. Hypothesis Testing

H03 tested whether financial monitoring and control have no effect on educational quality. The Pearson correlation was $r = 0.765$ ($p < 0.01$), the strongest bivariate relationship in the study, leading to rejection of H03. Regression analysis confirmed that monitoring and control practices explain 56.7% of quality variance ($R^2 = 0.567$, $F = 84.1$, $p < 0.01$). The result that monitoring has a stronger bivariate relationship with quality than revenue streams suggests that in resource-constrained environments, the governance of existing resources is a more powerful determinant of quality than the volume of those resources. The practical implication is direct: investments in governance reforms that improve monitoring and control effectiveness may generate higher quality returns per resource invested than equivalent investments in income generation.

4.5. Mediating Role of Enabling Factors

4.5.1. Descriptive Statistics

Table 4 reveals consistently high agreement scores for all enabling factor indicators, with the highest for budgeting support (90.9%, mean = 4.26). This pattern is

consistent with the mediation finding: enabling factors are most visibly active in shaping the budgeting process, the FRM dimension where their mediating role is most consequential, as shown by the full mediation of the budgeting-quality relationship.

Table 4. Mediating role of enabling factors on the quality of education (N = 319). Source: Primary data (2025).

Indicator	Mean	SD	Agree (%)	Disagree (%)
Enabling factors support proper resource allocation and revenue stream diversity	4.04	0.83	83.1%	7.5%
Enabling factors support effective financial budgeting	4.26	0.76	90.9%	3.4%
Enabling factors support financial monitoring and control	4.18	0.79	87.5%	5.0%
Enabling factors support quality of infrastructure development	4.12	0.80	86.2%	5.9%
Enabling factors support quality of curriculum update and relevance	4.19	0.79	89.3%	5.3%

Qualitative participants consistently identified strategic planning integration as the primary enabling mechanism. One university administrator stated:

“When you have a clear strategic plan analysed into quantifiable deliverables, there is no redundancy and funds are effectively used. The plan ensures the budget is a strategic investment in quality. Without it, every department argues for more funds based on historical precedent, not academic impact.”

Governance accountability was identified as the second mechanism. Participants described how active council oversight and independent audit functions had, in better-governed institutions, protected quality-related budget lines from discretionary reallocation and ensured that audit findings translated into corrective action. Financial literacy was the third mechanism: participants from better-performing institutions described formal training programmes for departmental budget managers that had improved the accuracy of budget preparation and the strategic alignment of expenditure justifications.

4.5.2. Hypothesis Testing and Mediation Analysis

H04 tested whether enabling factors do not significantly mediate the relationship between FRM and educational quality. The Pearson correlation between enabling factors and quality was $r = 0.702$ ($p < 0.01$), leading to rejection of H04. Hierarchical regression analysis confirmed the mediation following Baron and Kenny’s (1986) four-step procedure [26]. Full mediation was concluded when the direct effect of an FRM dimension on educational quality became statistically non-significant after enabling factors were introduced into the model; partial mediation was concluded when the direct effect remained significant but was meaningfully

reduced in magnitude.

In Model 1 (direct effects only), the three FRM dimensions collectively explained 63.1% of the variance in educational quality ($R^2 = 0.631$, $F = 82.3$, $p < 0.01$). The standardised coefficients were: revenue streams ($\beta = 0.543$, $SE = 0.061$, $p < 0.01$), financial budgeting ($\beta = 0.198$, $SE = 0.054$, $p < 0.01$), and financial monitoring and control ($\beta = 0.489$, $SE = 0.058$, $p < 0.01$). Model 2 first confirmed that FRM dimensions significantly predict enabling factors ($R^2 = 0.447$, $F = 68.1$, $p < 0.01$), satisfying the Baron and Kenny path a requirement [26]. When enabling factors were then added to the quality equation in Model 2, the explained variance increased to 69.3% ($R^2 = 0.693$, $\Delta R^2 = 0.062$, $p < 0.01$), and enabling factors showed a strong direct effect on quality ($\beta = 0.468$, $SE = 0.072$, $p < 0.01$). In Model 2, the direct effect of budgeting became non-significant ($\beta = 0.013$, $SE = 0.051$, $p = 0.798$), confirming full mediation for that relationship. The direct effects of revenue streams ($\beta = 0.324$, $SE = 0.063$, $p < 0.01$) and financial monitoring and control ($\beta = 0.271$, $SE = 0.061$, $p < 0.01$) remained significant but were substantially reduced compared with Model 1, confirming partial mediation for both. Bootstrapped indirect effects (5000 samples, 95% bias-corrected confidence intervals) were: revenue streams indirect effect = 0.225 [95% CI: 0.167, 0.291]; budgeting = 0.169 [0.108, 0.237]; financial monitoring and control = 0.244 [0.178, 0.318]. All confidence intervals exclude zero, providing additional confirmation that the indirect effects are statistically significant. The standalone model with enabling factors alone yielded $R^2 = 0.493$ ($\beta = 0.612$, $SE = 0.048$, $p < 0.01$), confirming that enabling factors explain 49.3% of educational quality variance independently.

5. The Financial Resource Management (FRM) Model: A Contribution to Theory and Practice

Based on the empirical findings, this study proposes a Financial Resource Management (FRM) Model for private universities in resource-constrained environments. The model conceptualises a cyclical quality-investment process in which revenue generation provides the financial inputs that are planned through budgeting and governed through monitoring and control, with enabling factors mediating the conversion of each FRM stage into quality outcomes, and quality outcomes feeding back into institutional reputation, enrolment, and revenue generation.

The model has five principal components. Revenue generation encompasses tuition fees, donations, endowments, grants, and auxiliary income. These resources are allocated through budgeting, which distributes financial inputs to institutional activities according to strategic priorities. Monitoring and control govern the utilisation of allocated resources, ensuring compliance, accountability, and efficient expenditure. Quality of education, defined by NCHE indicators, is the outcome of this process. Enabling factors mediate each stage of the FRM cycle, determining whether financial inputs at each stage are effectively converted into quality outputs.

The model's practical value lies in its diagnostic utility: by examining each com-

ponent of the FRM cycle and the enabling conditions at each stage, university administrators and NCHE inspectors can identify the specific points at which the financial-quality conversion is breaking down, whether due to revenue instability, budgeting misalignment, monitoring failures, or enabling factor deficits, and design targeted interventions accordingly.

6. Conclusions and Recommendations

6.1. Conclusions

This study confirms four principal conclusions about the FRM-quality relationship in private universities in Central Uganda. First, revenue stream diversity is strongly associated with educational quality, with institutions dependent primarily on tuition fees structurally constrained in their capacity for planned quality investment. Second, the formal existence of budgeting processes has limited direct association with quality; what matters is the quality of allocation decisions which is determined by enabling factors. Third, financial monitoring and control has the strongest direct relationship with educational quality of the three FRM dimensions, confirming that in resource-constrained environments, the governance of existing resources matters more than the volume of those resources. Fourth, and most importantly, enabling factors significantly mediate all three FRM-quality relationships, with full mediation of the budgeting relationship: without strong governance, strategic alignment, and financial literacy, neither financial resources nor FRM practices achieve their intended educational purposes.

These conclusions collectively support the overarching argument that financial resource management is a necessary but not sufficient condition for educational quality in private universities. The enabling factors that determine institutional capacity to convert financial inputs into quality outputs are the foundational investment priority for institutions seeking sustained educational improvement.

6.2. Recommendations

1) Private universities should develop and implement five-year revenue diversification strategies that reduce tuition dependence to below 60% of total income within a defined timeframe, with specific targets for endowment development, research grant acquisition, and auxiliary income generation.

2) NCHE should incorporate minimum financial governance standards into the quality assurance framework as mandatory institutional renewal requirements. These standards should specify minimum proportions of expenditure allocated to staff development, library resources, and research; require evidence of strategic plan-budget alignment; mandate audit committee independence criteria; and require annual disclosure of management responses to audit findings.

3) Future research should employ longitudinal designs to trace how changes in FRM practices and enabling factor strength affect educational quality trajectories over time. Research using structural equation modelling to simultaneously estimate the direct and mediated pathways in the FRM-quality model would provide

stronger causal evidence for the relationships documented in this cross-sectional study.

Conflicts of Interest

The authors declare no conflicts of interest.

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