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BUDGETING AND HEALTH SERVICE DELIVERY IN NGAI SUB-COUNTY, OYAM DISTRICT

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Abstract

This study assessed the impact of budgeting on health service delivery in Ngai Sub-County, Oyam District, within Uganda's decentralized public financial management context. Using a descriptive cross-sectional mixed-methods design, data were collected from health workers/facility managers, local government officials, and community members, with a sample of 367 determined using the Krejcie and Morgan approach; quantitative data were analyzed in SPSS and qualitative data were thematically analyzed. Descriptive results indicated moderate perceptions of budget adequacy, transparency, alignment to priority needs, fairness, and visible facility improvements, but respondents strongly agreed that delays in budget approval negatively affect service delivery (mean = 3.58). Correlation and regression analyses showed a strong positive and statistically significant relationship between budgeting and health service delivery ($r = 0.621$, $p = 0.000$), with budgeting explaining 38.6% of variation in service delivery outcomes and a positive predictive effect ($B = 0.658$). The study concludes that budgeting significantly improves service delivery when it is credible and timely. It recommends shortening approval timelines, ensuring predictable releases, strengthening transparency and community participation, improving needs-based allocation, and allowing controlled flexibility with stronger facility capacity in budgeting and procurement.

Keywords: Budgeting, Health service delivery, Budget credibility, Decentralization, Transparency, Ngai Sub-County.

Introduction

Budgeting is a central public financial management (PFM) function through which governments translate policy intentions into financed plans, specify spending limits, and establish accountability expectations regarding what services can realistically be delivered with available resources (Barroy et al., 2024; Musiega et al., 2024). In health systems, the budget cycle, covering planning, allocation, execution, and monitoring, shapes the availability of medicines and supplies, staffing and staff facilitation, outreach and prevention activities, and facility readiness, thereby influencing access, continuity, quality, and efficiency of health service delivery (Musiega et al., 2024; Ravishankar et al., 2024). Contemporary evidence increasingly shows that service delivery outcomes are affected not only by the size of health budgets but also by budget credibility, predictability and timeliness of releases, procurement and commitment controls, and the strength of financial reporting and oversight, because these features determine whether planned inputs actually reach facilities and are converted into outputs (Musiega et al., 2024; Ravishankar et al., 2024). When budgets are not

credible, where approved plans are consistently misaligned with releases or where funds arrive late, frontline units often respond by deferring activities, purchasing less efficiently, or failing to maintain essential stocks, which weakens service availability and undermines quality improvements (Musiega et al., 2024). This implies that budgeting is best understood as a governance mechanism as well as a financing tool: it can enable strategic prioritisation for service delivery, but it can also embed inefficiencies and inequities when allocation rules, execution bottlenecks, or weak accountability structures dominate decision-making (Barroy et al., 2024; Musiega et al., 2024).

Decentralisation is widely promoted on the premise that shifting some fiscal and managerial authority closer to communities increases responsiveness and allocative efficiency because local actors may have better information about local health needs and delivery constraints (Ravishankar et al., 2024). Nevertheless, a recent systematic review of reviews found that the effects of decentralisation on health systems are frequently mixed and, in many settings, more negative than positive, especially where financing and governance arrangements do not provide adequate decision space, managerial capability, and enforceable accountability at subnational levels (Barker et al., 2023). This critique is particularly salient for budgeting research because decentralisation may devolve responsibility for outcomes without devolving sufficient fiscal autonomy, timely resources, or procurement flexibility to support credible budget execution, thereby producing an "implementation gap" between local plans and actual service delivery (Barker et al., 2023; Ravishankar et al., 2024). In devolved and partially devolved systems, fragmentation of funding pools, line-item rigidities, and compliance-driven controls can dilute strategic purchasing and weaken performance incentives, even when local governments formally lead planning and budgeting processes (Ravishankar et al., 2024; Barroy et al., 2024). Accordingly, the analytical task is not to assume that decentralisation automatically improves services, but to examine how the design and practice of budgeting, including participation, transparency, and execution discipline, either enable or constrain the conversion of public funds into tangible service delivery outputs (Musiega et al., 2024; Barker et al., 2023).

In Uganda, health services are delivered within a decentralised governance framework where local governments and facilities are expected to plan and implement health activities using grant resources guided by sector-specific rules and budget guidelines issued by the Ministry of Health (Ministry of Health [Uganda], 2020; Ministry of Health [Uganda], 2023). While such guidelines are designed to strengthen standardisation and accountability, they can also constrain flexibility in responding to local shocks and recurrent operational gaps, particularly in rural settings where facilities frequently face staffing pressures, supply chain disruptions, and infrastructure deficits (Ravishankar et al., 2024). Financing-flow analyses further indicate that multiple financing channels and complex flows can complicate local planning, reduce visibility over resources, and make it harder to align budgets with facility needs and performance priorities (ThinkWell, 2021; Ravishankar et al., 2024). These realities suggest that improving health outcomes in decentralised contexts may require not only additional resources, but also reforms that strengthen budget formulation and execution, enhance the visibility of flows, and ensure that financial controls support (rather than unintentionally obstruct) service delivery objectives (Barroy et al., 2024; Ravishankar et al., 2024).

Ngai Sub-County in Oyam District provides a relevant rural case for examining these dynamics because local budgeting practices can critically shape routine service readiness and the implementation of essential health activities. In rural and devolved health systems, persistent service readiness challenges, often reflected in medicines availability, staffing adequacy, and basic infrastructure functionality, are frequently linked to weaknesses in budget credibility, execution

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discipline, and accountability arrangements (Musiega et al., 2024; Ravishankar et al., 2024). At the same time, rigorous interpretation requires avoiding a single-cause narrative: service delivery performance is also affected by interacting constraints such as procurement lead times, human resource availability, and oversight capacity, which may mediate or confound observed budget–outcome relationships (Barker et al., 2023; Musiega et al., 2024).

The study is theoretically anchored in Principal–Agent Theory, which explains how a principal delegates authority and resources to an agent to act on its behalf under conditions of information asymmetry, divergent incentives, and imperfect monitoring, thereby creating risks of moral hazard, adverse selection, and implementation slippage (Ravishankar et al., 2024; Musiega et al., 2024). In Uganda's decentralised health financing arrangement, the central government (principal) sets policy objectives, defines grant rules, and allocates resources, while local governments and health facility managers (agents) are responsible for planning, budgeting, executing expenditures, and reporting results (Ministry of Health [Uganda], 2020; Ravishankar et al., 2024). Where accountability is fragmented or compliance-oriented, agents may prioritise expenditures that are easier to justify administratively rather than those that maximise frontline service outputs, especially when late releases and rigid line items constrain operational decision-making (Musiega et al., 2024; Barroy et al., 2024). From this perspective, strengthening transparency, aligning incentives with service outputs, and improving the coherence between budgeting rules and facility-level realities are central mechanisms through which budgeting can more reliably translate into improved health service delivery in rural local governments.

Literature review

Budgeting is widely recognised as a central public financial management (PFM) function through which governments translate policy commitments into funded plans, set spending limits, and create enforceable expectations about what services can be delivered with available resources (Musiega et al., 2024; Piatti-Fünfkirchen & Schneider, 2018; World Bank, 2025). In the health sector, budgeting matters because it determines whether service delivery units can finance the inputs required for routine and emergency care, such as medicines, diagnostics, human resources, utilities, facility maintenance, and outreach, while also shaping incentives for efficiency, transparency, and accountability (Barroy et al., 2024; Musiega et al., 2024). Contemporary PFM research emphasises that budgeting affects health system performance not only at the allocation stage but through the entire budget cycle, including planning and prioritisation, budget execution (cash management and procurement), and monitoring and audit processes (Musiega et al., 2024; Piatti-Fünfkirchen & Schneider, 2018). This perspective is consistent with global health financing guidance that positions PFM as an enabling (or constraining) environment for purchasing, provider autonomy, and the ability of health systems to convert public spending into accessible and quality services (Cashin et al., 2017).

A prominent strand of scholarship stresses that budget credibility, the extent to which approved budgets are honoured during execution, can be as important as nominal budget levels (Musiega et al., 2024; Piatti-Fünfkirchen & Schneider, 2018). Where budgets are repeatedly revised, released late, or not released as planned, managers may be forced into reactive reprioritisation and ad hoc implementation, undermining service readiness and continuity (Musiega et al., 2024; World Bank, 2025). PFM case evidence from the health sector shows that deficiencies in cash flow arrangements, accounting controls, and expenditure rules can become "stumbling blocks" that limit frontline managers' ability to procure inputs and deliver services even when budgets exist on paper (Piatti-Fünfkirchen & Schneider, 2018). In addition, international guidance on aligning PFM and health financing highlights that rigid line-item controls, fragmented flows, and weak accountability can

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constrain purchasing and limit the strategic use of funds for performance and equity goals (Cashin et al., 2017). Consequently, effective health budgeting must be judged not only by what is allocated but by whether resources are predictable, spendable, and traceable through functional execution and oversight systems (Barroy et al., 2024; Musiega et al., 2024).

Budget execution processes strongly influence whether health budgets translate into service outputs, particularly through budget credibility, cash disbursement delays, provider autonomy, and procurement practices (Musiega et al., 2024; World Bank, 2025). When execution systems function poorly, they can distort the input mix and weaken operational performance, partly by delaying procurement, reducing the timeliness of maintenance and outreach, and weakening incentives for results-oriented management (Musiega et al., 2024; Piatti-Fünfkirchen & Schneider, 2018). Empirical evidence from devolved health systems shows that limited provider autonomy and weak procurement practices are associated with lower technical efficiency and reduced ability to align spending with facility needs and service delivery priorities (Barasa et al., 2023). Recent global policy analysis similarly documents that health sectors frequently face execution bottlenecks, such as delayed disbursements, weak links between spending and outputs, limited transparency in granular spending data, and weak reporting on arrears, that constrain facility operations and reduce value for money (World Bank, 2025). Evidence from applied reform efforts also suggests that strengthening PFM within health departments, such as embedding financial managers closer to service units, can improve budget management and accountability, reinforcing the case that PFM capability is integral to service delivery performance (Wishnia et al., 2021).

The decentralisation literature adds an important governance lens by examining how authority and resources are distributed across levels of government and how this distribution shapes accountability and service performance. While decentralisation is often justified on the grounds that local decision-makers are closer to communities and thus better positioned to align spending with local preferences and constraints, evidence syntheses show mixed results, with outcomes shaped heavily by decision space, administrative capacity, and accountability arrangements (Sapkota et al., 2023; Abimbola et al., 2019). A systematic review of reviews concluded that decentralisation frequently produces inconsistent effects across health system functions and is often associated with more negative than positive results, particularly where financing and governance do not provide adequate subnational capability and enforceable accountability (Sapkota et al., 2023). Complementing this, a realist synthesis identifies mechanisms through which decentralisation can alter equity and efficiency, such as "close to ground" responsiveness and "watching the watchers" accountability, while also warning that decentralisation can exacerbate inequities through "voting with feet" dynamics that concentrate resources and capacity in better-off areas (Abimbola et al., 2019). These strands converge on a critical point for budgeting research: decentralisation may devolve responsibility for service outcomes without devolving sufficient fiscal autonomy, predictable funding, or administrative capacity to execute budgets effectively, thereby producing a persistent implementation gap between plans and service delivery (Sapkota et al., 2023; World Bank, 2025).

Empirical work on fiscal decentralisation and health outcomes further reinforces this cautionary position. For example, evidence from China reports that fiscal decentralisation was associated with adverse health outcomes in the study context, suggesting that changes in fiscal incentives and local revenue capacity can affect health investment and outcomes in ways that are not automatically beneficial (Chen, 2023). Although findings differ across settings and institutional arrangements, these results strengthen the argument that decentralisation designs must be evaluated in relation

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to equalisation mechanisms, expenditure responsibilities, and accountability incentives, rather than assumed to improve outcomes by default (Sapkota et al., 2023; Abimbola et al., 2019). In practice, this implies that decentralised budgeting reforms need accompanying measures that protect poorer jurisdictions from chronic underfunding and capability gaps, including predictable transfers, strengthened oversight, and investment in PFM capacity at subnational and facility levels (Piatti-Fünfkirchen & Schneider, 2018; World Bank, 2025).

Community participation, including participatory budgeting, is frequently discussed as a mechanism for strengthening accountability and responsiveness in decentralised contexts, particularly by incorporating citizen priorities and strengthening social oversight of public expenditure choices. A systematic scoping review of participatory budgeting evaluations reported impacts across political, economic/budgetary, and population outcomes, indicating that participatory budgeting can influence allocation patterns and may affect wellbeing and inequalities, although results vary substantially by context and by the design quality of participatory processes (Campbell et al., 2018). Importantly, participatory approaches are not substitutes for technical competence and functional execution systems: participatory decisions can only translate into services if cash is released as planned, procurement functions efficiently, and financial reporting supports accountability and course correction (Musiega et al., 2024; World Bank, 2025). In that regard, the literature increasingly treats participation and PFM strengthening as complementary, participation may improve legitimacy and oversight, while PFM reforms create the operational capacity for budgets to translate into real inputs and services (Cashin et al., 2017; Wishnia et al., 2021).

Overall, the literature indicates that budgeting influences health service delivery through multiple interacting mechanisms: the credibility of budgets and predictability of releases; the effectiveness of execution systems (including procurement and provider autonomy); the strength of reporting, audit, and oversight linking spending to outputs; and the governance context, including decentralisation design and citizen accountability (Musiega et al., 2024; Piatti-Fünfkirchen & Schneider, 2018; Barasa et al., 2023; Sapkota et al., 2023; Abimbola et al., 2019; Campbell et al., 2018; World Bank, 2025). The implication is that improving health service delivery requires not only increased allocations but also reforms that strengthen budget execution and accountability, so that resources are reliably transformed into service readiness and quality at facility and community levels (World Bank, 2025; Barroy et al., 2024).

Methodology

Design of the study

This study employed a descriptive cross-sectional research design to investigate the effect of budgeting on health service delivery in Ngai Sub-County. A cross-sectional design was appropriate because it enables the researcher to collect data at a single point in time and to efficiently assess relationships between study variables as they exist naturally, without manipulating the study environment.

A mixed-methods approach was adopted to strengthen the credibility and interpretive depth of findings by integrating quantitative and qualitative evidence. Quantitative data supported measurement of community perceptions and experiences of healthcare services, while qualitative evidence from key actors (health workers, facility managers, and local government officials) provided contextual explanations of budgeting processes, implementation constraints, and service delivery realities (Creswell & Plano Clark, 2018). This integration enhanced robustness of the findings by allowing triangulation between numerical trends and stakeholder narratives on how budgeting practices shape health service delivery outcomes.

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Population and Sample Size

The study targeted three categories of respondents: health workers and facility managers, local government officials, and community members. Health workers and facility managers were targeted because they are directly involved in implementing and managing healthcare services at facility level and thus hold practical knowledge of operational effects of budgeting and resource allocation. Local government officials were included because of their administrative and governance roles in health planning and budgeting, while community members were selected to provide user-level perspectives on the availability, accessibility, and quality of healthcare services.

The sample size was determined using the Krejcie and Morgan (1970) sample size determination table, which provides recommended sample sizes at a 95% confidence level and 5% margin of error. Based on local administrative records, Ngai Sub-County had an estimated population of 8,000 residents (Community Information System data, 2021; HMIS District Health Information System data; UBOS), and the corresponding sample size was 367 respondents. The sample was distributed across respondent categories to ensure inclusion of both institutional perspectives (service providers and administrators) and community experiences of healthcare service delivery.

Table 1: Target population and sample size of respondents

Category of respondents	Population (N)	Sample (n)	Sampling technique
Health workers & facility managers	50	25	Purposive sampling
Local government officials	30	15	Purposive sampling (the methodology also notes a simple random component for broader representation)
Community members	7,920	327	Stratified random sampling
Total	**8,000**	**367**	**Mixed**

Data Collection Procedure and Tools

The study employed both probability and non-probability sampling procedures. Purposive sampling was used to select 25 health workers and facility managers and 15 local government officials because these groups were considered information-rich and directly involved in healthcare delivery, governance, and budgeting processes. Purposive sampling is appropriate where the researcher must intentionally select participants with specialized knowledge relevant to the study phenomenon (Patton, 2002). The methodology further indicates that for local government officials, a combination of simple random and purposive approaches was used to ensure broader representation while still capturing specialized roles associated with fiscal decentralization implementation (Flick, 2018).

For community members, stratified random sampling was applied to select 327 participants, involving division of the population into subgroups (strata) such as gender, age, and socioeconomic status to ensure proportional representation (Bryman, 2016). Stratification increased the likelihood that the sample reflected the diversity of the community and enabled analysis of perceptions across different demographic groupings (Creswell, 2014).

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Data were collected using semi-structured interviews, a structured questionnaire survey, and focus group discussions (FGDs), with each method selected to meet specific informational needs of the study (Creswell & Creswell, 2018). Semi-structured interviews were conducted with health workers, facility managers, and local government officials to generate in-depth qualitative evidence on budgeting processes, fiscal decentralization challenges, and service delivery constraints; the semi-structured format allowed flexibility while ensuring coverage of core study themes (Kallio et al., 2016). The survey method was applied to community members using a questionnaire with closed-ended and Likert-scale items to quantify perceptions regarding service availability, accessibility, and quality (Bryman, 2016). FGDs were conducted with selected community groups to capture shared perspectives, stimulate interactive discussion, and illuminate community-level dynamics influencing health service delivery (Krueger & Casey, 2015).

Validation

All data collection instruments (questionnaire, interview guide, and FGD guide) were developed and pre-tested in a similar setting to assess clarity, relevance, and effectiveness, and the instruments were refined based on pre-test feedback (Creswell & Creswell, 2018). Content validity was ensured through expert review to evaluate whether items aligned with study objectives and adequately covered the intended constructs. The Content Validity Index (CVI) was computed and reported as 0.84 (27/32), exceeding the recommended minimum threshold of 0.80 (Lawshe, 1975).

Reliability was assessed through a pilot study involving 20 participants, and internal consistency was tested using Cronbach's alpha, where values of 0.70 and above are generally considered acceptable (Tavakol & Dennick, 2011). The reported alpha coefficients exceeded 0.70 across all scales, indicating strong internal consistency and that the instrument reliably measured the intended constructs (Nunnally & Bernstein, 1994).

Table 2: Reliability results (Cronbach's alpha)

Section/Scale	Items	Cronbach's alpha
Budgeting	8	0.93
Expenditure	8	0.92
Community participation	8	0.94
Health service delivery (dependent variable)	8	0.93
Overall	**27**	**0.94**

3.5 Data Analysis

Quantitative and qualitative approaches were used in data analysis. Quantitative data were coded and analysed in IBM SPSS (version 26), using descriptive statistics (frequencies, means, standard deviations) to summarise respondent characteristics and responses, and inferential statistics (correlation and regression analysis) to examine relationships between fiscal decentralization variables and health service delivery outcomes (Field, 2013).

Qualitative data from interviews and FGDs were analysed using thematic content analysis, which involves identifying and interpreting patterns and themes in textual data (Braun & Clarke, 2006). The study used integration of qualitative and quantitative results to strengthen interpretation by triangulating findings across methods (Jick, 1979).

3.6 Ethical Considerations

Ethical procedures were observed throughout the research process. Before fieldwork, the researcher obtained an official introductory letter from Kampala International University and used it

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to secure permission from local authorities, health officials, and relevant community leaders. Informed consent was obtained from all participants after explaining the purpose, procedures, and risks of the study, ensuring that participation was voluntary (Creswell, 2018).

Confidentiality was ensured through anonymization of data and secure storage, with identifying information excluded from reporting (Israel & Hay, 2006). Participants were informed of their right to withdraw at any stage without repercussions (Homan, 2017). The study adhered to the ethical principle of non-maleficence by taking steps to minimise any potential harm, physical, psychological, or emotional, associated with participation (Orb et al., 2001).

Results

Descriptive data analysis was used for the quantitative data, whereas the qualitative findings from interviews were transcribed verbatim, and those from FGDs were presented using thematic analysis.

Descriptive statistics on Budgeting and Health Service Delivery

This section presents the descriptive statistical analysis of community members' perceptions regarding budgeting and its effects on healthcare service delivery in Ngai Sub-County. Responses to eight Likert-scale items were analyzed using frequency distribution, mean, and standard deviation. Table 7 summarizes the percentage distribution, valid response counts, mean scores, and standard deviations for each item. These measures provide a nuanced understanding of community perceptions regarding the outcomes of budgetary decisions on local health services.

Table 3: Descriptive Statistics on Budgeting and Health Service Delivery (n=280)

Statement	SA (5)	A (4)	N (3)	D (2)	SD (1)	Valid N	Mean	Std. Dev
The health sector budget in Ngai Sub-County is adequate to meet community needs.	56 (20.7%)	94 (34.8%)	49 (18.1%)	44 (16.3%)	28 (10.1%)	271	3.40	1.26
Budgeting for health services is done transparently.	50 (18.5%)	84 (31.2%)	55 (20.4%)	51 (18.9%)	30 (11.0%)	270	3.27	1.27
Health budgets are aligned with priority needs such as drugs and staff.	58 (22.0%)	88 (33.1%)	45 (17.0%)	42 (15.9%)	32 (12.0%)	265	3.37	1.31
The budgeting process ensures fairness in distribution of health resources.	66 (25.2%)	85 (32.6%)	41 (15.6%)	38 (14.4%)	32 (12.2%)	263	3.44	1.33
Delays in budget approval negatively affect service delivery.	72 (27.0%)	96 (35.9%)	40 (14.8%)	33 (12.3%)	25 (10.0%)	266	3.58	1.28
The budget directly contributes to improved quality of healthcare services.	52 (19.3%)	83 (30.7%)	57 (21.1%)	47 (17.5%)	30 (11.4%)	269	3.29	1.28

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Communities are informed about budget allocations for health.	47 (17.8%)	78 (29.6%)	55 (20.7%)	50 (19.2%)	32 (12.7%)	262	3.21	1.29
Budget allocations have led to visible improvements in local health facilities.	60 (23.1%)	79 (30.4%)	48 (18.5%)	40 (15.2%)	33 (12.8%)	260	3.36	1.33

Source: ***Primary Data (2025)***

Descriptive findings show that budgeting in Ngai Sub-County is moderately rated across all dimensions, indicating partial effectiveness in supporting health service delivery. Budget adequacy received moderate agreement (M=3.40, SD=1.26), suggesting that current allocations are sufficient for routine operations but inadequate for service expansion, rising costs, staffing gaps, and infrastructure development. Variations in perception reflect differences in facility capacity, patient volume, and efficiency of fund utilization.

Transparency, alignment with priorities, and fairness were also rated moderately. Budgeting transparency (M=3.27, SD=1.27) and community awareness of allocations (M=3.21, SD=1.29) point to incomplete information sharing and limited citizen engagement. Alignment of budgets with priority needs such as drugs and staffing (M=3.37, SD=1.31), together with moderate perceptions of fairness (M=3.44, SD=1.33), indicate that while many facilities receive essential inputs, notable discrepancies and perceived inequities remain due to administrative inefficiencies and uneven allocation practices.

Delays in budget approval emerged as the most critical constraint (M=3.58, SD=1.28), with respondents reporting disruptions to procurement, staff facilitation, and facility maintenance. These delays undermine service continuity and operational efficiency, highlighting the importance of timely approvals and predictable releases for effective service delivery.

Overall, budgeting moderately influences health service delivery in Ngai Sub-County. While visible improvements such as renovations, equipment acquisition, and staffing support were noted (M=3.36, SD=1.33), the impact on service quality remains constrained by weaknesses in timeliness, transparency, equity, and public awareness. Strengthening oversight, participatory budgeting, and timely, needs-based allocations is essential to maximize the benefits of fiscal decentralization, a focus further explored through qualitative insights in the subsequent section.

Inferential Statistics on Budgeting and Health Service Delivery

To determine whether budgeting significantly impacts health service delivery in Ngai Sub-County, a Pearson Product-Moment Correlation Coefficient (r) and a simple linear regression analysis were performed. The correlation measured the strength and direction of the relationship between budgeting practices (independent variable) and health service delivery (dependent variable), while regression quantified the predictive influence of budgeting on health outcomes.

Table 1: Correlation between Budgeting and Health Service Delivery

Variable	N	Pearson's r	Sig. (2-tailed)	Interpretation
Budgeting and Health Service Delivery	260	0.621	0.000	Strong positive and significant relationship

Source: *SPSS Output (2025)*

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Table 2: Model Summary of Regression Analysis

Model Description	R	R^2	Adjusted R^2	Std. Error	Sig. (p)
Budgeting and Health Service Delivery	0.621	0.386	0.381	0.525	0.000

Source: *SPSS Output (2025)*

Table 3:Regression Coefficients for Budgeting and Health Service Delivery

Predictor	Unstandardized B	Std. Error	Standardized Beta	t	Sig.
Constant	1.248	0.134	N/A	9.313	0.000
Budgeting	0.658	0.047	0.621	13.979	0.000

Source: *SPSS Output (2025)*

The results reveal a strong positive and statistically significant relationship between budgeting and health service delivery in Ngai Sub-County ($r=0.621$, $p < 0.01$). This finding indicates that effective budgeting, characterized by adequacy, transparency, and timely approval, correlates with improved availability of medical supplies, staffing, and overall service quality. Regression analysis further shows that budgeting explains 38.6% of the variation in health service delivery ($R^2=0.386$), with a standardized beta coefficient of 0.621 ($p < 0.01$), suggesting that a one-unit improvement in budgeting practices leads to a 0.658-unit increase in health service delivery performance. The significant p-value confirms that the relationship is not due to chance, implying that better fiscal planning and resource allocation directly enhance the efficiency and quality of healthcare provision. Consequently, the study accepts the alternative hypothesis that budgeting has a significant impact on health service delivery in Ngai Sub-County.

Conversely, qualitative insights show that while fiscal decentralization has improved resource allocation, infrastructure, and participatory planning, challenges like delayed or rigid funding and limited technical capacity hinder effectiveness as presented below:

Qualitative Findings on the impact of budgeting on health service delivery

Respondent HW01 remarked,

> *"The funds we now receive at our health facility come more directly from the district or central government and are often clearly designated for specific programs, such as maternal and child health or immunization campaigns. For instance, we now have a separate allocation just for maternal health, which has enabled us to consistently stock important supplies like delivery kits, gloves, and basic medications for expectant mothers. In the past, we would sometimes go several months without restocking due to delays or budget constraints, but things have improved significantly under the current system. We feel more in control of our operations."*

This response illustrates a significant improvement in the financial governance and responsiveness within health facilities under fiscal decentralization. The respondent points to the direct and program-specific nature of current funding, which has helped streamline procurement and ensure continuity of essential services. The presence of earmarked budgets for maternal health indicates a shift toward focused and results-driven financial planning. The respondent's sense of operational control suggests enhanced autonomy and capacity at the local level. Timely procurement of critical supplies like delivery kits plays a vital role in improving maternal outcomes, thus showing that fiscal decentralization, when implemented effectively, contributes positively to the quality of healthcare services.

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Respondent LG03 expressed,

> *"Although financial allocations do reach the sub-county health facilities, the process is not consistent in terms of timing or amount. Sometimes we plan for a specific quarter's activities, only for the funds to arrive much later, or for a different amount than initially communicated. This disrupts our procurement process and makes it nearly impossible to maintain consistent drug stocks. On top of that, staff morale suffers when allowances or essential service payments are delayed, especially for outreach workers who depend on those reimbursements. We end up spending more time adjusting budgets than actually delivering healthcare."*

On this, the respondent conveys the serious operational constraints posed by delayed and unpredictable funding under the decentralized framework. While the funds do arrive, their untimely or erratic disbursement negatively impacts both logistics and human resources. The disruption of procurement cycles leads to intermittent drug stockouts, which compromise the continuity and reliability of service delivery. Furthermore, the effect on staff morale and motivation, particularly among outreach personnel, suggests a broader impact on the quality of care. The administrative burden of constant budget revisions also detracts from time and focus that should be devoted to service delivery. This insight reveals that decentralization must be supported by strong financial coordination mechanisms to realize its full potential.

Respondent FM05 observed,

> *"In previous years, even small infrastructure issues like a leaking roof or broken door hinges would require multiple approvals from the district health office, often delaying repairs for months. Now, with the quarterly operational funds we receive directly, we can prioritize and address minor maintenance issues without going through lengthy processes. Just last month, we used part of our allocation to replace broken maternity beds and fix the plumbing in the outpatient department. These small changes make a huge difference in service quality and client satisfaction. Patients notice when the environment is clean, functioning, and dignified."*

This response reveals the empowering effect of fiscal decentralization on facility-level autonomy and responsiveness. By granting health facilities the discretion to address maintenance issues using their operational funds, the system has reduced dependence on external approvals and enhanced efficiency. The ability to quickly repair maternity beds and outpatient plumbing demonstrates how financial control can translate into improved healthcare experiences. Moreover, the respondent emphasizes that these "small" infrastructural upgrades have a notable impact on patient perceptions, dignity, and trust in the health system. Fiscal decentralization, therefore, has implications not only for technical service delivery but also for the broader experience of care and patient satisfaction.

Respondent HW06 shared,

> *"While we do get funds, a major challenge is that the money is often tied to specific activities or programs that may not reflect our current most urgent needs. For example, we might receive funding for a sensitization campaign about malaria prevention, but at the same time, we lack basic medical supplies such as gloves, syringes, or even soap. This kind of budget allocation creates a situation where we conduct outreach with no supplies to offer in the clinic. The mismatch makes it hard to deliver complete and effective services, and sometimes patients lose confidence in our capacity."*

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This response highlights a structural limitation within the decentralized funding system, rigid budget lines that limit flexibility. While programmatic funding for public health campaigns is important, it becomes counterproductive if facilities lack the supplies to respond to patient needs. The respondent underscores a disconnect between budget allocations and frontline realities. Conducting awareness drives without corresponding clinical readiness leads to a fragmented approach to healthcare. Moreover, this mismatch diminishes institutional credibility in the eyes of the community. The insight calls for a shift from strictly earmarked budgets to more flexible, demand-driven planning that empowers health workers to address real-time needs.

Respondent LG04 noted,

> *"One of the most significant improvements we've seen under the new funding structure is the involvement of local council leaders and community representatives in health budgeting processes. Before, all financial decisions were made at the district or national level with little regard for local priorities. Now, these leaders sit on budgeting committees and can voice what the community actually needs, be it expanding the immunization outreach schedule, renovating the maternity ward, or even ensuring that health workers have housing. Their involvement ensures that resources are not only well-targeted but also that the community feels ownership over local health development."*

This statement draws attention to the participatory governance model introduced through fiscal decentralization. By involving local political and community actors in financial decision-making, the process becomes more democratic and context-sensitive. Local leaders' contributions help align financial allocations with pressing community needs, such as infrastructure improvements and expanded outreach services. Moreover, this inclusion fosters a sense of collective responsibility and ownership, enhancing transparency and accountability in resource use. The result is a health system that is both responsive and rooted in local priorities, a hallmark of successful decentralization.

Respondent FM07 explained,

> *"Previously, we kept handwritten records of our expenses, and it was very hard to track how funds were used or to prepare clear reports. Since we introduced digital financial tracking systems and trained our staff on how to use them, we now have a much clearer picture of our expenditures. This has not only improved accountability but has also made it easier for us to request additional funds when necessary. For instance, last quarter, we used our digital records to show how we exhausted our immunization budget, and the district granted us an emergency top-up. This kind of transparency was not possible before, and it builds trust with our funders."*

This response illustrates how fiscal decentralization, when paired with technological improvements, can strengthen financial accountability and transparency. The adoption of digital tracking tools enables health facilities to monitor fund usage more accurately and produce reliable financial reports. As noted by the respondent, such documentation becomes instrumental when advocating for supplementary funding. Moreover, the capacity to present clear, evidence-based justifications enhances credibility and fosters stronger relationships with district and central authorities. Ultimately, this financial visibility supports better planning, reduces the risk of misuse, and allows health facilities to operate more sustainably and effectively.

Discussion of the Findings

The study demonstrates that budgeting is a major determinant of health service delivery in Ngai Sub-County. Quantitative results show a strong, positive, and statistically significant relationship

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between budgeting and health service delivery ($r=0.621$, $p < .01$). Regression analysis further indicates that budgeting explains a substantial proportion of variation in service delivery outcomes ($R^2=0.386$), confirming that budgeting practices have material implications for service availability, continuity, and perceived quality. These findings align with peer-reviewed evidence showing that public financial management, including budget formulation, execution, and monitoring, shapes service delivery efficiency through resource alignment, timeliness of inputs, health worker motivation, and the input mix available at facilities (Musiega et al., 2024).

Descriptive results indicate moderate agreement that the health budget is adequate (mean=3.40) and aligned with priority needs such as drugs and staff (mean=3.37). This suggests that budgeting supports routine operations but remains insufficient for service expansion and addressing persistent structural gaps. Consistent with the literature, the effectiveness of public spending depends not only on allocation levels but also on whether budgets are credible and executed in ways that translate allocations into usable inputs at the point of care (Piatti-Fünfkirchen & Schneider, 2018). In Ngai Sub-County, budget adequacy can therefore be interpreted as sufficient for routine functions but limited for service readiness improvements, reflecting execution constraints and prioritisation challenges noted in public financial management research (Musiega et al., 2024).

Timeliness and budget credibility emerge as the most binding constraints, with delays in budget approval receiving the highest agreement among budgeting indicators (mean=3.58). Qualitative evidence shows that delayed or unpredictable releases disrupt procurement, cause intermittent stockouts, and reduce staff morale due to delayed allowances and outreach facilitation. These findings mirror empirical evidence linking cash disbursement delays to interrupted services, demotivated staff, higher supplier costs, weak tendering credibility, and poor budget absorption, all of which undermine efficiency and service continuity (Musiega et al., 2024; Piatti-Fünfkirchen & Schneider, 2018). While decentralised budgeting improves planning proximity, its benefits are constrained when execution discipline and cash-flow management are weak.

Transparency and community engagement were only moderately rated, with budgeting transparency (mean=3.27) and community awareness (mean=3.21) indicating incomplete information flows and limited public visibility over health allocations. Limited transparency weakens social accountability and can sustain perceptions of unfairness, even where allocation rules exist, thereby reducing trust and community collaboration. Peer-reviewed evidence confirms that accountability and community awareness are key pathways through which public financial management influences service delivery and efficiency (Musiega et al., 2024). These findings suggest a need for stronger disclosure practices, including facility-level budget information, simplified public reporting, and effective feedback mechanisms.

Moderate perceptions of fairness (mean=3.44) and visible facility improvements (mean=3.36) indicate that budgeting has generated tangible gains, but unevenly across facilities. Qualitative narratives describing quicker minor maintenance and small upgrades supported by operational funds demonstrate how limited facility autonomy can improve service environments and client satisfaction. However, the coexistence of visible improvements with perceived inequities reflects decentralisation literature showing that responsiveness improves unevenly where capacity, accountability, and reliability of releases differ across facilities (Ravishankar et al., 2024). Equity in service delivery therefore depends on transparent allocation criteria, predictable releases, and facility-level capacity.

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Another key issue is the tension between earmarking and flexibility in facility spending. While earmarked funds protect essential interventions, respondents reported rigid funding structures that limit responses to urgent operational needs, creating mismatches between funded activities and binding constraints. This challenge is well documented in public financial management research, which shows that rigid controls and line-item budgeting can limit provider autonomy, delay execution, and distort the input mix (Musiega et al., 2024; Piatti-Fünfkirchen & Schneider, 2018). The findings support the need for flexibility with accountability to allow managers to address immediate service readiness constraints without weakening fiduciary control.

Overall, the findings confirm that budgeting affects health service delivery through interacting pathways, including adequacy and prioritisation, credibility and timeliness, transparency and accountability, and facility-level autonomy. Regression results show that budgeting is influential but not the sole determinant of service outcomes, with other factors such as supply chain performance, staffing availability, and managerial capacity also shaping service delivery. This aligns with evidence that public financial management is necessary but not sufficient, as service performance depends on how financial rules interact with procurement systems, human resources, governance incentives, and facility management practices (Musiega et al., 2024).

Conclusion

The study concludes that budgeting significantly influences health service delivery in Ngai Sub-County, as shown by a strong positive correlation and a regression model explaining a substantial share of service delivery variation ($r=0.621$, $p < .01$; $R^2=0.386$). However, service gains are highly dependent on budget credibility and execution. Delays in approvals and releases, along with rigid spending arrangements, disrupt procurement, contribute to stockouts, and weaken staff facilitation and motivation, limiting consistent service availability. These findings are consistent with evidence that poor budget credibility, disbursement delays, limited provider autonomy, and weak procurement practices reduce health system efficiency and frontline service capacity (Musiega et al., 2023; Musiega et al., 2024).

Implications

1) The findings imply that budgeting should be treated as a direct lever for improving health service delivery in Ngai Sub-County rather than a procedural requirement, given its strong association with service outcomes. Health-sector planning and budgeting at sub-county and district levels should therefore be explicitly linked to service readiness priorities, including medicines, staffing facilitation, routine operations, and maintenance.
2) Budget credibility and timeliness emerge as critical performance issues. Since approval and release delays were strongly associated with service disruptions, improving predictability of releases and reducing approval bottlenecks is likely to yield immediate improvements in service continuity even without increased overall funding.
3) The results further imply a need to strengthen transparency and community awareness to improve accountability and perceived fairness. Moderate ratings on transparency and awareness suggest insufficient communication of budgeting decisions at facility and community levels, weakening social oversight and trust, especially where improvements appear uneven.
4) Finally, decentralisation gains are likely to be maximised when facilities have controlled autonomy to address routine operational gaps while operating within clear accountability

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frameworks. Evidence that facilities resolved maintenance issues more quickly under direct operational funding indicates that controlled flexibility, combined with monitoring, can enhance responsiveness and visible service quality.

Recommendations

1) Strengthen budget credibility by shortening approval timelines and ensuring predictable quarterly releases to facilities, as delays disrupt procurement, outreach, and staff facilitation. Early communication of release schedules and expected amounts should reduce repeated re-planning and emergency purchasing.
2) Improve needs-based allocation by using objective indicators such as facility workload, catchment population, staffing gaps, and stockout experience to guide prioritisation and reduce perceived inequities. Conduct routine in-year budget performance reviews linking planned and executed spending to service outputs for timely corrective action.
3) Enhance transparency and accountability by requiring facilities and sub-county offices to publicly display simplified budget information and hold periodic community feedback meetings. Participation should be made meaningful by documenting agreed priorities and reporting back on funded and implemented activities.
4) Increase controlled facility flexibility by allowing limited reallocation within approved ceilings for urgent operational needs, accompanied by clear documentation and periodic audits. Targeted capacity building for facility managers in procurement planning, financial reporting, and budget tracking should be provided to strengthen execution.

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