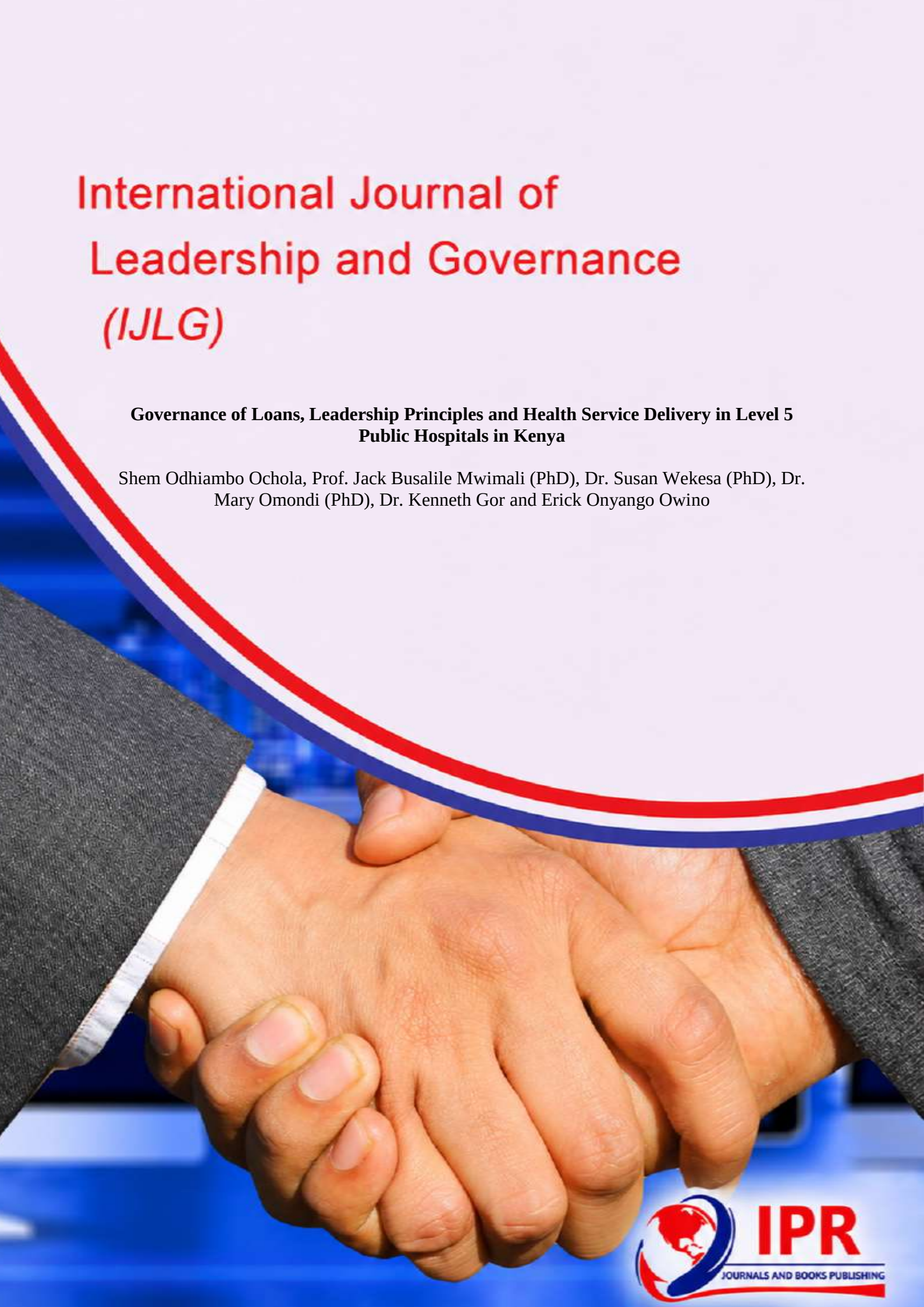
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Abstract

Purpose: This study examined governance of loans, leadership principles and health service delivery in level 5 public hospitals in Kenya.

Methodology: The study adopted a convergent parallel mixed-methods design grounded in pragmatism, covering 13 of the 19 Level 5 public hospitals in Kenya. A simple random sample of 372 health personnel was drawn, yielding 252 valid responses (67.74%). This was complemented by 20 key informant interviews (KIIs) with county chief officers and 13 patient interviews. Quantitative data were analysed using descriptive statistics and moderated regression, while qualitative data were analysed thematically to provide contextual depth.

Findings: The findings revealed that governance of loans was positively and significantly associated with staff-perceived service delivery (b=0.308, p<.001), explaining 18.4% of its variance (R2=0.184), a medium effect. Additionally, leadership principles significantly moderated this relationship (b=0.3100, p<.001, ΔR2=0.0805). Conditional effects reveal that the positive impact of loan governance more than doubles when leadership principles move from low (b=0.1720) to high (b= 0.4280) levels. Qualitatively, while loans were recognized for infrastructure upgrades, respondents highlighted significant threats from repayment pressures, restrictive conditions, and political interference in accountability mechanisms.

Unique Contribution to Theory, Practice and Policy: County governments should strengthen debt-management systems by aligning borrowing decisions with long-term fiscal sustainability, prioritising concessional loans, and ensuring that repayment obligations do not compromise recurrent health expenditures or future service delivery.

Keywords: *Governance of Loans, Leadership Principles, Health Service Delivery*

JEL Codes: *G38, M12, I18*

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INTRODUCTION

The devolution of healthcare services in Kenya, established under the 2010 Constitution, fundamentally restructured the governance of fiscal resources by transferring primary health service delivery responsibilities to 47 county governments (Tsofa et al., 2017). This shift was premised on the expectation that bringing resources and decision-making closer to the people would enhance equity, accountability, and responsiveness (Abasili & Akinboye, 2019; Muia, 2008). Under this framework, county governments assumed responsibility for managing the bulk of health sector financing, including planning, budgeting, and resource distribution for county health facilities, among them Level 5 (county referral) hospitals (Korir et al., 2021). However, a growing body of evidence shows that the health effects of public financing depend not only on the funds allocated but also on how those funds are governed (Babcock, 2019; Cao et al., 2023). In Kenya, despite county health budget allocations more than doubling from KSh 96 billion in 2014/15 to KSh 228 billion in 2019/20 (World Bank, 2022), service delivery remains undermined by persistent medical supply shortages and large pending bills. These failures point to deeper deficiencies in the governance of financial resources, including weak accountability and monitoring frameworks, resource inefficiencies estimated at 20% to 50%, and counties' failure to meet revenue collection targets (Kimathi, 2017; Moses et al., 2021; KIPPRA, 2023; Ngigi & Busolo, 2019).

Existing literature has largely concentrated on fiscal decentralisation, budget allocation, and technical efficiency, with limited engagement with the governance of specific financing streams (Kairu et al., 2021; Waduu et al., 2024). Level 5 public hospitals are financed through several streams, namely county government allocations, conditional grants, donor funding, hospital-generated revenue, and loan-financed capital projects. This study focuses on loans, whose governance has attracted the least empirical attention. Development assistance for health is projected to decline in some countries, and projected growth in government health spending may not offset that decline, so African health systems will depend more heavily on domestic revenue and borrowing (Apeagyei et al., 2024). As reliance on borrowing increases, how borrowed funds are governed at the subnational level becomes decisive, since rising subnational debt can undermine health-system capacity by constraining local fiscal space, and debt-servicing obligations can crowd out health sector resources (Cao et al., 2023; Coccia & Benati, 2024; Chipunza & Ntsalaze, 2024).

Under Article 212 of the Constitution, a county government may borrow only if the national government guarantees the loan and the county assembly approves it. The decision to borrow therefore rests with the county executive and the county assembly, within the national framework of the Public Finance Management Act, 2012 and the oversight of the National Treasury. Loan governance is thus a county-level macro-fiscal process, yet it shapes hospital-level outcomes through the county treasury's control over the funds that reach hospitals. The fiscal relationship between the county treasury and Level 5 hospital management operates through three linked channels. The county treasury determines whether loan proceeds are channelled to hospital infrastructure, equipment, or other county priorities, and when those funds are released to the hospital. Repayments are met from the county's budget and revenue, which narrows the fiscal space available for health recurrent expenditure, including the operating budgets of Level 5 hospitals.

National conditional grants, such as those earmarked for Level 5 hospitals, and loan conditionalities come with usage and reporting requirements that limit how hospital management may spend. Since the county treasury controls budget releases, procurement

approvals, and the terms attached to these funds, hospital management has limited fiduciary autonomy, and its room to plan, procure, and deliver services depends largely on how well the county governs its loans. In this study, the governance of loans therefore refers to the county-level processes through which loans are authorised, allocated, monitored, and repaid, assessed through their effect on Level 5 hospitals as the units of analysis. These processes are characterised by demands for sustainability (managing debt without jeopardising future budgets), utility (allocating funds to high-impact health projects), and conditionality (the terms and policy conditions attached to borrowing), within the limits set by Article 212 and the Public Finance Management Act.

Crucially, governance frameworks do not operate on their own; they are enacted by leaders at both the county and hospital levels. Leadership is integral to translating policy into practice (Andrews, Pritchett, & Woolcock, 2017), yet its role in moderating the relationship between fiscal governance and service delivery in devolved systems remains underexplored (McCollum et al., 2018; George et al., 2023). In Kenya's devolved context, uneven leadership quality can undermine or strengthen the governance of fiscal resources, shaping whether borrowed funds are managed sustainably, allocated to high-impact health priorities, and safeguarded against political interference. Proactive leadership theory suggests that leaders who exhibit ethical stewardship, strategic direction, and equitable advocacy are better positioned to anticipate fiscal risks, scrutinise loan terms, and ensure that borrowed funds align with local service priorities (Bateman & Crant, 1993; Crant, 2000). This paper fills that gap by examining how county-level governance of loans is associated with health service delivery in Level 5 public hospitals, and the moderating role of leadership principles in this relationship.

Statement of the Problem

Despite Kenya's devolution of healthcare services in 2010 and a surge in county health allocations from KSh 96 billion in 2014/15 to KSh 228 billion in 2019/20 (World Bank, 2022), health service delivery remains uneven across counties. Level 5 public hospitals continue to face severe operational constraints, including a persistent 46-49% shortage of essential medical supplies and rising pending bills (Ministry of Health, 2024). These shortages have several proximate causes, most notably delayed exchequer disbursements from the National Treasury and unpaid bills owed to suppliers such as KEMSA. However, these causes do not operate in isolation from county borrowing. To bridge infrastructure and equipment gaps, counties increasingly rely on loans and loan-type financing, including equipment leasing arrangements such as the Managed Equipment Services (MES) programme. This reliance introduces fiscal risks that interact with the proximate causes of shortages. Debt-servicing and lease obligations are met from the same county budgets and revenues that finance recurrent operations, so rising subnational debt narrows fiscal space and can crowd out allocations for essential medicines and supplies (Cao et al., 2023; Coccia & Benati, 2024; Chipunza & Ntsalaze, 2024). Where county liquidity is already constrained by delayed disbursements, these obligations can deepen supplier arrears and weaken hospitals' capacity to procure.

The problem is compounded when loan-financed investments are poorly governed. Stalled projects and unutilised equipment yield no service benefit while the repayment burden continues, and equipment that is installed but not supported by adequate maintenance, staffing, or consumables draws further on recurrent budgets. Together, these effects point to a disconnect between loan-financed inputs and health outcomes, which is symptomatic of deeper deficiencies in the governance of loans rather than of funding alone. This is evidenced by weak accountability (Kimathi, 2017) and resource inefficiencies of 20-50% (Moses et al., 2021).

Loans are contracted at the county level, but their consequences are felt at the facility level, where hospital management, which has limited fiduciary autonomy, absorbs the effects of decisions on loan allocation, repayment, and project completion.

Empirically, government reports and academic studies have documented trends in budget allocation and technical efficiency (Kairu et al., 2021; Waduu et al., 2024), but they inadequately explore how borrowed funds are governed. Existing debt literature relies largely on national or aggregate data (Cao et al., 2023; Yang et al., 2022), leaving a critical gap. Limited evidence exists on how loans are governed in terms of sustainability, utility, and conditionality, and on how this governance transmits to service delivery in Level 5 hospitals. The moderating role of leadership in translating loan governance into tangible health improvements also remains under-theorised in Kenya's devolved context (Andrews, Pritchett, & Woolcock, 2017). This study therefore investigated the relationship between county-level governance of loans and health service delivery in Kenya's Level 5 public hospitals, and the extent to which this relationship was contingent upon leadership principles. By moving beyond a narrow focus on financial inputs to examine the governance and leadership variables that determine how borrowed funds are used, the study aimed to provide evidence that could help devolution fulfil its promise of equitable and effective healthcare delivery.

Research Objectives

i. To evaluate the influence of governance of loans on delivery of health services in level 5 public hospitals in Kenya.
ii. To establish the moderating influence of leadership principles on the relationship between governance of loans and delivery of health services in level 5 public hospitals in Kenya.

Research Hypotheses

HA1: Governance of loans has a positive and significant influence on the delivery of health services in level 5 public hospitals in Kenya.

HA2: Leadership principles significantly moderate the relationship between governance of loans and the delivery of health services in level 5 public hospitals in Kenya.

LITERATURE REVIEW

Theoretical Review

The governance of loans is anchored in principal-agent theory, originally advanced by Ross (1973) and Jensen and Meckling (1976). The theory was developed to explain the contractual relationship in which one party, the principal, delegates decision-making authority to another, the agent, to act on their behalf. It asserts that principals and agents have divergent interests and unequal access to information, and that this asymmetry allows agents to pursue their own interests rather than those of the principal (Eisenhardt, 1989; Milward & Provan, 1998). Consequently, the theory contends that principals must establish incentive structures, monitoring systems, and bonding mechanisms to align agent behaviour with principal objectives. It also acknowledges that where agents are accountable to multiple principals, conflicting policy directives can further exacerbate misalignment between their incentives and those of the principals (Bertelli & Lynn, 2004; Waterman & Meier, 1998).

The theory rests on three core assumptions; hierarchical structures, asymmetric information, and divergent interests between principals and agents (Konyango, 2019). It assumes that the electorate, as principal, cannot directly observe the government's efforts, while elected

officials, as agents, maximise their utility in ways that do not entirely coincide with the utility of voters (Plaek et al., 2020). It further assumes that agents possess the discretion to pursue their interests within the limitations set by the principals' policies, incentive mechanisms, and oversight (Konyango, 2019). A main weakness of the theory, however, is that it lacks a straightforward way to identify the full range of options available to agents within decentralized governance structures. While it effectively diagnoses problems of information asymmetry and incentive misalignment, it provides less guidance on how agents exercise choice among multiple accountability demands.

The theory is particularly pertinent to Kenya's devolved context, where citizens serve as primary principals delegating authority to elected officials and appointed administrators who act as agents expected to uphold public interests (Mudliar & O'Brien, 2021). In the specific case of loans, this relationship is multi-layered. County executives, including the county health executive, act as agents who commit and spend borrowed funds, while citizens, county assemblies, lenders, and the national government as guarantor serve as principals. Hospital managers, such as the Level 5 medical superintendent, occupy a further tier. They act as agents of the county health department, which is itself an agent of the county executive and assembly, and they absorb the consequences of loan decisions taken above them. Loan conditionality functions as a monitoring mechanism, and transparency, public reporting, and audit reduce the information asymmetry that allows borrowed funds to be diverted or misallocated. Poor governance practices, such as lack of transparency and accountability in service provision, emerge precisely when these principal-agent issues remain unaddressed.

The multi-principal character of this arrangement is central to understanding why loan conditionality may not translate into compliance or results. Where an agent answers to several principals whose objectives differ, the agent faces competing mandates that cannot all be satisfied at once, and the resulting goal congestion weakens the monitoring and incentive mechanisms that the theory prescribes for a single principal (Bertelli & Lynn, 2004; Waterman & Meier, 1998). In Kenya's county health system, the principals' demands on the same agent are in tension. The National Treasury, as guarantor, requires timely debt repayment and adherence to loan terms, which makes debt servicing a first claim on county revenues. The county assembly, as the approving and oversight body, may press for politically visible projects that serve local constituencies, including loan-financed facilities that are not necessarily the highest-impact health investments. Citizens, who are the ultimate principals, expect accessible and affordable care, including free or subsidized services, which depends on adequate recurrent funding for medicines and supplies. Lenders add a further layer through conditions on how funds are used and reported. The county health executive and the Level 5 hospital superintendent must respond to all of these demands at once, yet satisfying one often comes at the expense of another. Prioritising repayment and patronage projects can crowd out recurrent allocations for essential medicines, while prioritizing free care can strain the revenue needed to service debt. Because no single principal can observe or sanction the agent's trade-offs, agents can justify allocation decisions by pointing to whichever principal's demand they favoured, which blurs accountability and increases the scope for diversion or misallocation of borrowed funds.

This multi-principal conflict links directly to the loan conditionality and accountability dimensions of the study. Conditionality is intended to align the agent's use of funds with the lender's and guarantor's objectives, but where it competes with the assembly's and citizens' demands, it may be met in form rather than in substance, or may be satisfied at the cost of

service delivery objectives. The effectiveness of conditionality, transparency, and audit therefore depends on whether the agent can reconcile competing accountability demands. The theory thus underpins the conditionality and accountability dimensions of the loans construct and supports the study's first hypothesis.

To address the theory's limitation regarding agent discretion, the study bridges it with the Decision Space Approach (Bossert, 1998), which captures the actual range of choice and authority delegated to lower-level actors. Decision space refers to the authority, options, rights, and obligations that central authorities delegate to decentralised entities regarding various tasks and resources, and greater decision space enables managers to make more creative, contextually responsive decisions (Roman, Cleary, & McIntyre, 2017). This approach explains how hospital managers and county officials exercise discretion over fiscal planning, resource allocation, and expenditure management when pulled by competing principals. It also explains why even adequate loan financing may fail to produce desired results if managers operate within narrow decision spaces that constrain their ability to align borrowed funds with local priorities. Complementing this, Proactive Leadership Theory (Bateman & Crant, 1993; Crant, 2000) explains the role of leadership in navigating these constraints. Leaders who exhibit ethical stewardship, strategic direction, and equitable advocacy are better placed to reconcile competing principal demands, anticipate fiscal risks, and protect recurrent health spending, so the same governance of loans is predicted to yield better service delivery where such leadership is present and weaker results where it is not. This is the basis for the study's moderation hypothesis.

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Conceptual Framework

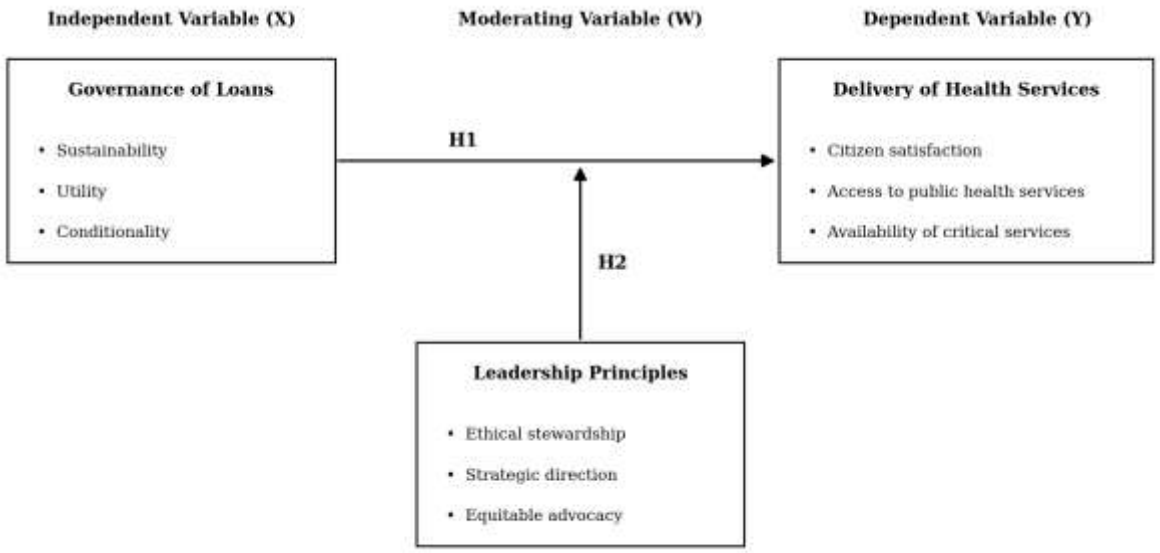


Figure 1: Conceptual Framework (H1: direct path; H2: moderation by leadership principles)

The governance of loans concerns how county governments manage borrowed funds to ensure financial accountability, facilitate prudent investments, and address health priorities. It is characterized by three dimensions: sustainability, the county's ability to service debts without jeopardizing future budgets or service quality; utility, whether loan funds are allocated to impactful, transformative health initiatives that yield measurable improvements; and conditionality, the extent to which loan terms and policy conditions, particularly from external lenders, influence the autonomy of national and local governments.

Leadership principles refer to the values and behaviors that define how leaders utilize resources, set priorities, and promote equity within the health system. These are founded on three dimensions: ethical stewardship, demonstrating integrity, transparency, and accountability in resource management; strategic direction, the leader's vision and capacity to prioritize, make sound investment decisions, and guide the health sector toward long-term sustainability; and equitable advocacy, championing fairness and ensuring that fiscal resources are allocated across all segments of the population, including vulnerable groups.

Health service delivery is operationalized as staff-perceived service delivery, defined as the judgement of health personnel on whether the hospital meets the population's needs. It has three dimensions, each measured by one Yes/No item: citizen satisfaction, whether staff consider patients satisfied under the existing fiscal structure; access to public health services, whether the fiscal structure allows easy access; and availability of critical services, whether essential medical equipment and supplies are sufficient for diagnosis and treatment.

Staff perception is used as a proxy for service delivery for several reasons. First, the study is concerned with how the fiscal and governance environment shaped by county loans is experienced at the facility level. Hospital staff, including clinicians, pharmacy and laboratory personnel, and administrators, work daily with the supplies, equipment, and budget releases that this environment determines, and so are well placed to judge whether the hospital can meet

patients' needs. Second, objective performance indicators such as bed occupancy, stock-out rates, waiting times, and clinical outcomes are generally recorded for the hospital as a whole. They are not disaggregated by financing stream, and they are affected by many factors besides loan governance, such as delayed exchequer disbursements, supplier arrears, and staffing levels. This makes them difficult to attribute to the governance of loans, whereas perceptions of how the fiscal structure affects service delivery can be elicited directly. Third, facility-level records across Level 5 hospitals are often incomplete or not comparable, so a standardized survey measure allowed consistent data collection across all study sites within the available time and resources.

The study nevertheless acknowledges the limitations of this approach. Staff perception is a subjective and indirect measure and does not replace objective hospital performance metrics such as stock-out rates, service utilization, or health outcomes. Staff may also be inclined to rate their own institution favorably or unfavorably, and measuring each dimension with a single Yes/No item limits sensitivity and reliability. Because the same respondents also rated governance and leadership, common-source bias may inflate the observed associations. Patient-reported aspects of quality, such as respect, communication, cleanliness, and waiting times, were not measured in the survey and were explored only through patient interviews. The findings should therefore be read as evidence of how staff perceive the effect of loan governance on service delivery and not as a direct measurement of hospital performance. Future studies could triangulate these perceptions with routine facility data, such as the Kenya Health Information System, and with patient-reported measures.

METHODOLOGY

The study adopted a convergent parallel mixed-methods design, in which quantitative and qualitative data were collected concurrently, analysed separately and then merged during interpretation (Creswell & Plano Clark, 2018). The design was guided by the philosophy of pragmatism, which holds that the research question, rather than a single paradigm, should determine the methods used (Johnson & Christensen, 2017). The primary objective of this design was to enhance the validity and richness of the results as a result of combining several sources of data covering the research questions in distinct yet complementary ways.

Study Setting and Population

The study was conducted in 13 of the 19 Level 5 public hospitals in Kenya, located in 10 counties. Hospitals were included on the basis of the availability of their workforce data in the Kenya Health Labour Market Analysis (KHLMA). The target population was the 12,676 health personnel employed in these hospitals. The sample size was determined using the Krejcie and Morgan (1970) formula:

$$s = \chi^2 NP(1 - P) / [d^2(N - 1) + \chi^2 P(1 - P)]$$

Where s is the required sample, N is the population (12,676), χ^2 is the chi-square value for one degree of freedom at the 95% confidence level (3.841), P is the population proportion (0.50) and d is the margin of error (0.05). This gives a sample of 372 respondents were selected by simple random sampling from the staff lists of the 13 hospitals. Of the 372 questionnaires administered, 252 were completed and returned, a response rate of 67.74%. Before the main study, the questionnaire was pilot-tested with 41 respondents at Gatundu Level 5 Hospital, which was excluded from the main sample. The pilot results were used to refine item wording and to check reliability.

To contextualise the quantitative findings and examine the underlying dynamics of healthcare financing and leadership, qualitative data were collected through semi-structured key informant interviews (KIIs) with 20 county chief officers (10 chief officers of health and 10 chief officers of finance) and 13 patients (one per hospital). Participants were purposively selected according to their knowledge and the positions they held in health governance and in budget planning and implementation. Interviews were audio-recorded with consent and transcribed verbatim. Transcripts were analysed using reflexive thematic analysis (Braun & Clarke, 2006), with codes organised under the sub-constructs of the conceptual framework. Each participant is identified by a code (KII-CO-H for chief officers of health, KII-CO-F for chief officers of finance and KII-PT for patients). Because the number of interviews was fixed by the sampling design (one chief officer of health and one of finance per participating county, and one patient per hospital), the qualitative sample was defined by position rather than by data saturation.

Data Analysis

Quantitative data were analysed in SPSS version 25. Composite scores were computed as item means. Hypothesis HA1 was tested with simple linear regression, and HA2 with PROCESS Model 1 (Hayes, 2022) using mean-centred predictors. Because respondents are nested within 13 hospitals, observations from the same hospital may not be fully independent; standard errors were not adjusted for this clustering, which is acknowledged as a limitation.

Ethical Considerations

The study was licensed by the National Commission for Science, Technology and Innovation (NACOSTI) under Licence No. NACOSTI/P/23/24042. Authorisation was also obtained from the county departments of health and the management of each hospital. All participants gave informed consent after being told the purpose of the study, that participation was voluntary and that they could withdraw at any time. Questionnaires were anonymous, and interview data were stored securely and reported using participant codes only.

FINDINGS

Reliability Analysis

The reliability of instruments refers to the consistency of a measure, meaning that a measure should produce similar results when administered multiple times. To improve reliability, similar items are included in the measure. Table 1 below presents the results of the reliability analysis conducted.

Table 1: Reliability Analysis

Variable	Number of Items	Cronbach's Alpha / KR-20	Remarks
Governance of loans to hospitals	7	.814	Reliable
Leadership principles	7	.765	Reliable
Delivery of services in public hospitals	3	.757 (KR-20)	Reliable

All multi-item scales were assessed for internal consistency reliability using Cronbach's alpha. For the service delivery scale, whose three items are dichotomous, the equivalent Kuder-Richardson Formula 20 (KR-20) is reported (Kuder & Richardson, 1937). The minimum acceptable coefficient was established at 0.70 (Gliem & Gliem, 2003). Results, presented in Table 1, demonstrate that all variables exhibited satisfactory internal consistency. The coefficients were as follows: 0.814 for the governance of loans to hospitals, 0.765 for

leadership principles, and 0.757 (KR-20) for the delivery of services in level 5 public hospitals. These findings indicate that the coefficients for all variables exceeded the threshold of 0.70, thereby confirming that all items and statements within the questionnaire meet the reliability criterion ($\alpha > 0.70$). A three-item scale is, however, a minimal measure of service delivery, and this is noted as a limitation.

Validity Test

Validity testing was conducted to evaluate the extent to which the research instrument accurately measured the intended constructs and to assess the precision with which the collected data represented the phenomena under study. To strengthen content and face validity, the instrument underwent expert review. Research Supervisors and experts were consulted to provide critical assessments based on their professional expertise. Their recommendations were systematically incorporated into subsequent revisions of the instrument, thereby enhancing its overall validity.

Table 2: Validity Test

Variable	**Loans**		**Leadership Principles**		
Sub Constructs	1	2	1	2	3
Loadings		.487	.566		
	.862		.913		
	.873		.922		
	.524				.983
		.759	.589		
		.735		.779	
				.828	
Eigenvalue	2.187	1.267	2.383	1.572	1.011
% of Variance	36.455	21.120	34.049	22.459	14.448
Average Loading	0.75	0.66	0.75	0.80	0.98
Average Variance Extracted (AVE)	0.522		0.658		
Square root of AVE	0.722		0.811		
Composite Reliability (CR)	0.862		0.928		
Cronbach's Alpha/Internal reliability	0.814		0.765		

Table 2 presents the results of the validity and reliability tests for the constructs governance of loans and leadership principles. The factor loadings are satisfactory, with most items loading above the recommended threshold of 0.50 and several exceeding 0.70, indicating strong associations between the observed variables and their respective constructs. One loan item loaded at .487, slightly below the .50 threshold set in the study; it was retained because it was close to the threshold, it contributed to the content coverage of the construct, and the reliability of the loans scale was high ($\alpha = .814$). The exploratory factor analysis extracted two loan factors rather than the three conceptual dimensions of sustainability, utility and conditionality, so the loans construct is analysed as a single composite and the three sub-constructs are used descriptively. All extracted components have eigenvalues greater than one, satisfying Kaiser's criterion for factor retention. The total variance explained by the governance of loans construct is 57.58 percent, while leadership principles explain 70.96 percent of the variance, demonstrating adequate explanatory power and confirming the appropriateness of the factor structure. The Average Variance Extracted (AVE) values of 0.522 for governance of loans and 0.658 for leadership principles exceed the minimum recommended level of 0.50, confirming

adequate convergent validity. Discriminant validity was assessed using the Fornell and Larcker (1981) criterion, which requires the square root of each construct's AVE to exceed its correlation with other constructs (Table 3).

Table 3: Discriminant Validity (Fornell-Larcker Criterion)

Construct	Governance of Loans	Leadership Principles	AVE
Governance of Loans	**0.722**		0.522
Leadership Principles	0.369	**0.811**	0.658

Note. Diagonal values (bold) are the square roots of AVE; the off-diagonal value is the inter-construct correlation.

The square root of the AVE for each construct (0.722 and 0.811) exceeds the correlation between the two constructs, which supports discriminant validity.

Descriptive Statistics

Governance of Loans

Respondents indicated their level of agreement with the statements on governance of loans extended to the county health institutions. The findings are presented in Table 4 below.

Table 4: Governance of Loans

Statement	SD (1)	D (2)	N (3)	A (4)	SA (5)	Mean	Std Dev
Sustainability							
Q1. The national and county governments have an effective revenue-sharing framework.	13.10%	2.40%	25.00%	12.70%	46.80%	3.78	1.394
Q7. Counties face challenges in the timely repayment of commercial bank loans for health service delivery.[a]	0.40%	9.50%	16.70%	48.40%	25.00%	3.88	0.907
Sub-Aggregate	6.80%	6.00%	20.90%	30.60%	35.90%	3.83	1.151
Utility							
Q2. Commercial bank loans impact the financing of healthcare infrastructure in public hospitals.	0.00%	15.10%	27.40%	48.80%	8.70%	3.51	0.854
Q3. Loans from the IMF has improved delivery of health services in public hospitals.	2.00%	7.90%	19.00%	69.00%	2.00%	3.61	0.747
Q4. World Bank loans have impacted healthcare outcomes, particularly access to specialized services in public hospitals.	0.40%	7.50%	18.70%	70.20%	3.20%	3.68	0.676
Sub-Aggregate	0.80%	10.20%	21.70%	62.70%	4.60%	3.60	0.759
Conditionality							
Q5. The conditionality attached to IMF loans has negatively affected the quality of healthcare services in public hospitals.[a]	0.80%	5.20%	19.40%	69.80%	4.80%	3.73	0.668
Q6. Transparency and public accountability mechanisms are in place in the use of loans for public hospital health projects.	1.20%	8.70%	30.20%	56.70%	3.20%	3.52	0.749
Sub-Aggregate	**1.00%**	**7.00%**	**24.80%**	**63.30%**	**4.00%**	**3.63**	**0.709**
Overall aggregate	**2.50%**	**7.60%**	**22.30%**	**52.50%**	**14.90%**	**3.69**	**0.873**

Note. Sub-aggregate and overall values are the averages of the item and sub-aggregate statistics. [a]Negatively worded item.

The survey data regarding the governance of loans reveals distinct perspectives across the sub-constructs of sustainability, utility, and conditionality in financing county health services. Concerning the sub-construct of sustainability, perceptions of the inter-governmental revenue-sharing framework are divided. Nearly half (46.8%) of respondents strongly agree and a further 12.7% agree that it is effective (M = 3.78, SD = 1.39), but 13.1% strongly disagree and a quarter remain neutral. The large standard deviation reflects this polarization and suggests uneven satisfaction with fiscal decentralization. This mixed response underscores discrepancies in the perceived effectiveness of resource distribution. A more pronounced sustainability challenge pertains to the timely repayment of commercial bank loans, reflected by a high mean score of 3.88 and 73.4% of respondents acknowledging this as a concern. This widespread issue emphasizes a significant threat to the long-term financial viability of health services and highlights the necessity for enhanced fiscal management, potential restructuring, or supportive interventions to avert disruptions in healthcare delivery.

Regarding the utility of different loan types, perceptions vary. Commercial bank loans are seen as having a generally positive influence on healthcare infrastructure financing, with a mean score of 3.51 and 57.5% agreement. Nevertheless, the considerable proportion of neutral (27.4%) and dissenting (15.1%) responses indicates mixed sentiments regarding their overall efficacy, which may be associated with concerns related to access, terms, or tangible outcomes. In contrast, loans from international financial institutions receive stronger endorsement. IMF loans are viewed favorably for improving health service delivery, with a mean of 3.61 and 71% agreement, reflecting trust in international financing to bolster healthcare availability and quality. Because IMF financing reaches counties only indirectly through national budget support, this item is best read as a perception of the general effect of such financing rather than of funds received directly by hospitals. World Bank loans are perceived even more positively for impacting healthcare outcomes, particularly access to specialized services, with a mean of 3.68 and 73.4% agreement. This suggests a strong belief in the role of targeted multilateral funding in enhancing comprehensive care and addressing critical health needs.

The sub-construct of conditionality presents a clear picture. There is a consensus that loan conditions can affect service quality, with a mean score of 3.73 and 74.6% of respondents agreeing that IMF conditionality has negatively impacted healthcare quality. This raises important concerns about the potential adverse effects of stringent loan terms on service delivery, emphasizing the need for critical assessment of agreements to ensure they do not undermine care. Concurrently, perceptions of transparency and accountability mechanisms are moderately supportive, with a mean of 3.52 and 59.9% agreement. However, the very high neutral response rate (30.2%) indicates significant uncertainty and room for improvement. Building robust accountability is essential for public trust and the effective use of funds; transparency and accountability are core principles in frameworks for assessing health system governance (Siddiqi et al., 2009), and in principal-agent terms they are the mechanisms that limit the diversion of borrowed funds.

Interviews with patients provide further context. On sustainability, respondents noted that loans have enabled critical infrastructure upgrades, enhancing service availability and quality. One participant explained, "*The loans helped build the new hospital wing and buy an MRI machine, so we don't have to travel far for scans*." (KII-PT) However, doubts were expressed about their long-term sustainability and uneven reach, with concerns that repayment obligations could strain hospital budgets. A respondent captured this skepticism, stating, "*Commercial loans have limited or negligible impact in the long run because the repayment is too heavy. It feels*

like we gain a building but lose the budget for medicines." (KII-PT). Regarding utility, funding from multilateral institutions like the IMF and World Bank was associated with positive impacts, including improved resource allocation, medication access, and management systems. A participant noted, "*Since the IMF support came, the drug shortage in this hospital reduced significantly.*" (KII-PT) World Bank funding was linked to more visible infrastructure, sanitation, and staff training improvements. One respondent observed, "*The World Bank project rebuilt our maternity ward and trained the nurses. The care is much better now.*" (KII-PT) Yet, some respondents reported no significant changes, highlighting the need for greater transparency and equitable distribution. As one individual shared, "*I hear about these big loans on the radio, but here in the wards, nothing has changed. Where is the money going?*" (KII-PT)

On conditionality, participants described loan conditions as mechanisms that enforce better financial management, procurement standards, and reporting, which help direct funds to priority projects and streamline operations. A respondent noted, "*The conditions force the hospital to account for every shilling. It reduces corruption and makes sure the loan is used for the intended project, like the new laboratory.*" (KII-PT) However, the mixed perceptions suggest that the effectiveness of these conditionalities depends heavily on consistent implementation and oversight to ensure they genuinely contribute to system improvements without imposing counterproductive burdens. Another participant cautioned, "*Sometimes the conditions mean we have to buy expensive branded equipment from abroad when a local one would do. It helps, but it's not always efficient.*" (KII-PT)

The governance of loans for Kenya's level 5 public hospitals is recognized as useful but compromised by significant sustainability risks and accountability gaps. Loans from international institutions like the IMF and World Bank are perceived positively for their utility in improving services, infrastructure, and access to specialized care. However, the system is under severe strain, with a strong consensus that counties face major challenges in the timely repayment of commercial bank loans, threatening long-term financial viability. Furthermore, while loan conditions are seen as enforcing some accountability, there is widespread concern that these conditionalities negatively impact service quality, and public transparency in the use of funds remains uncertain. In essence, external financing is providing critical, visible upgrades but within a fragile and opaque governance framework that risks creating future fiscal burdens and may not ensure equitable or sustainable benefits.

Leadership Principles

Table 5 shows the respondents' level of agreement with the statements on leadership principles adopted by those charged with the leadership of the health facilities.

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Table 5: Leadership Principles

Statement	SD (1)	D (2)	N (3)	A (4)	SA (5)	Mean	Std Dev
Ethical Stewardship							
Q1. Leadership upholds transparency and accountability in managing resources for public hospital services.	0.00%	0.80%	1.60%	75.40%	22.20%	4.19	0.484
Q2. Clear transparency mechanisms guide the allocation and utilization of hospital funds.	2.40%	13.10%	25.00%	46.80%	12.70%	3.54	0.954
Q3. Strong accountability structures ensure that health funds are used appropriately and responsibly.	2.40%	13.50%	23.80%	48.80%	11.50%	3.54	0.946
Sub-Aggregate	**1.60%**	**9.13%**	**16.80%**	**57.00%**	**15.47%**	**3.76**	**0.795**
Strategic Direction							
Q4. Leadership decisions positively influence the quality and responsiveness of public hospital service delivery.	0.00%	1.20%	2.40%	88.50%	7.90%	4.03	0.388
Q6. Policies and practices within public hospitals promote equitable access to health services for all populations.	0.00%	1.20%	10.30%	79.80%	8.70%	3.96	0.487
Sub-Aggregate	**0.00%**	**1.20%**	**6.40%**	**84.20%**	**8.30%**	**4.00**	**0.438**
Equitable Advocacy							
Q5. Leadership ensures transparency and accountability in health service management regardless of political interests.	3.20%	32.10%	13.90%	44.80%	6.00%	3.18	1.052
Q7. County leadership advocates for fairness and equity in the delivery of healthcare services in public hospitals.	0.80%	5.20%	21.80%	70.20%	2.00%	3.67	0.642
Sub-Aggregate	**2.00%**	**18.65%**	**17.85%**	**57.50%**	**4.00%**	**3.43**	**0.847**
Overall Aggregate	**1.30%**	**9.60%**	**14.10%**	**64.90%**	**10.10%**	**3.73**	**0.708**

Note. Each item is listed once; sub-aggregates are the averages of the item statistics

The results on leadership principles reveal distinct perceptions across the sub-constructs of ethical stewardship, strategic direction, and equitable advocacy in the management of public hospitals. On the theme of ethical stewardship (M = 3.76), perceptions are strong regarding leadership's personal commitment to transparency and accountability in resource management, with a very high mean score of 4.19 and 97.6% agreement. However, perceptions of the systemic mechanisms for transparency and accountability are more moderate and varied. The statements on clear transparency mechanisms and strong accountability structures both received a mean of 3.54, with large standard deviations (0.954 and 0.946), indicating a diversity of opinion. This suggests that while leadership intent is trusted, the institutional frameworks guiding fund allocation and use are seen as less robust or consistently applied, highlighting a need for better communication and stronger systems. Frameworks for assessing health system governance treat such systemic mechanisms, and not only individual intent, as the core of good governance (Siddiqi et al., 2009), and comparative evidence identifies sustained political commitment and capable institutions as common features of health systems that perform well at low cost (Balabanova et al., 2013).

In the area of strategic direction (M = 4.00), leadership is perceived very positively. The influence of leadership decisions on the quality and responsiveness of service delivery received a strong mean score of 4.03, with 96.4% agreement. Furthermore, policies promoting equitable

access are also viewed favorably, with a mean of 3.96 and 88.5% agreement. This indicates that the strategic vision set by leadership is widely seen as positively influencing both service quality and fairness, which is consistent with McCollum et al. (2018), who found that governance arrangements after devolution in Kenya shape how county health systems set priorities and manage resources.

The sub-construct of equitable advocacy (M = 3.43) reveals a significant tension. County leadership is widely seen as advocating for fairness and equity in service delivery (Q7: M = 3.67, 72.2% agreement), but there is notable skepticism about whether transparency and accountability are upheld regardless of political interests (Q5: M = 3.18, SD = 1.052). Over a third of respondents (35.3%) disagreed with Q5, and its standard deviation is the largest in the table, indicating polarized perceptions. This points to a critical governance challenge: the potential for political influence to undermine the fair application of accountability mechanisms, which can erode trust and create disparities in service delivery experiences across facilities.

The broader literature contextualizes these findings. A scoping review by George et al. (2023) found that the effects of health system governance interventions on the quality of care in low- and middle-income countries depend on context and on how faithfully the interventions are implemented. This helps explain the gap between high trust in leadership's intent and more moderate trust in the systems it oversees.

Interviews with patients provide further context. On ethical stewardship and transparency, respondents affirmed its importance but noted inconsistencies in practice. One participant captured the ideal, stating, "*Transparency in the healthcare sector is crucial because it fosters trust, accountability, and quality care*." (KII-PT) Yet, others observed a gap between policy and experience, suggesting that full benefits of ethical stewardship are not uniformly felt. Regarding strategic direction, views on its effectiveness were mixed. Some were optimistic about its potential, with one participant sharing, "*I am optimistic that level 5 public hospitals have the potential to enhance their service delivery through creating awareness and responsiveness.*" (KII-PT) Others, however, found strategic frameworks to be slow or theoretical, indicating a variable translation of plans into practical improvements in health services. On equity, reflections were divided. While some acknowledged visible efforts to provide fair care, many highlighted persistent disparities. Respondents pointed to uneven resource allocation and socio-economic barriers, indicating that substantial gaps remain in ensuring consistent, equitable care for all community members, particularly the marginalized and economically disadvantaged.

Generally, from the findings, the application of leadership principles in Kenya's level 5 public hospitals presents a landscape of strong strategic intent undermined by operational and ethical inconsistencies. Leadership is perceived very positively in setting a strategic direction (M = 4.00), with overwhelming agreement that decisions improve service quality and promote equity, indicating clear and trusted vision. However, the execution of ethical stewardship is mixed: while personal leadership commitment to transparency is highly rated (mean 4.19), the institutional systems for ensuring accountability and transparent fund allocation are viewed with moderate trust and high variability (mean 3.54), revealing a gap between principle and practice. Most critically, the domain of equitable advocacy (M = 3.43) exposes a fundamental tension, as confidence falls (mean 3.18) when assessing whether accountability is upheld regardless of political interests, suggesting perceived political interference is a corrosive force. In summary, leadership is effective at setting goals and commanding trust in its intent, but the system is perceived as failing to institutionalize those principles impartially and consistently,

creating a vulnerability where strategic gains could be eroded by compromised governance and inequitable application.

Staff-Perceived Delivery of Health Services

Table 6 shows findings on the respondents' answers to the three Yes/No questions on the delivery of health services in level 5 public hospitals.

Table 6: Staff-Perceived Delivery of Health Services in Level 5 Public Hospitals

Statement	Yes	No	Mean[a]	Std Deviation
Citizen Satisfaction: Do you feel that there is citizen satisfaction with the delivery of health services in level 5 public hospitals as a result of the existing fiscal structure?	87.3%	12.7%	2.75	0.667
Access to public health services: Does the existing fiscal structure lead to easy access to public health services in level 5 public hospitals?	57.1%	42.9%	2.14	0.992
Availability critical services: Does the availability of essential medical equipment and supplies sufficient for diagnostic and treatment purposes?	55.6%	44.4%	2.11	0.996

Note. *[a]Items were coded No = 1 and Yes = 3, so the mean equals 1 + 2 × (proportion answering Yes); i.e 1 + 2 × 0.873 = 2.75.*

The data offer insights into staff respondents' perceptions regarding three principal domains: satisfaction, access, and the availability of essential services within level 5 public hospitals. Concerning citizen satisfaction, perceptions are strongly positive. An overwhelming 87.3% of respondents reported that patients are satisfied with the delivery of health services under the existing fiscal structure, with relatively little variation (SD = 0.667). This suggests the existing fiscal approach is meeting core expectations for many stakeholders, although it reflects the views of staff rather than patients.

In contrast, perceptions of access to public health services are more divided and less favorable. While 57.1% of respondents believe the existing fiscal structure provides easy access, 42.9% do not, pointing to persistent barriers. This near-even split suggests that access is inconsistently realized across hospitals. Similarly, perceptions of the availability of critical services, such as essential medical equipment and supplies, are modest and varied. A slim majority of 55.6% view availability positively, while 44.4% do not. The nearly equal split between satisfaction and dissatisfaction highlights a critical vulnerability in the health system's operational capacity, emphasizing the need for targeted investigation into the determinants of these varying perceptions.

The high level of reported satisfaction alongside concerns over access and equipment suggests that while the intent of the fiscal structure is approved, its execution creates inconsistent experiences. Policymakers must address these disparities in resource allocation, system efficiency and the physical structure of health facilities to achieve greater equity. The patient interviews provide further context for these statistical trends. On satisfaction, respondents expressed a mix of appreciation and pointed criticism. While many valued knowledgeable staff and specialist care, they identified specific deficits. One respondent's suggestion for improvement captured widespread concerns: "increasing staff numbers, providing modern medical technology, enhancing cleanliness, and better communication between healthcare providers and patients." (KII-PT) Others highlighted outdated equipment, rushed consultations, and medication shortages, indicating that core services are valued but require meaningful enhancement to sustain high satisfaction.

Regarding access, respondents confirmed that services are generally available but acknowledged significant practical barriers. One participant outlined common obstacles, stating, “Common challenges include transportation issues, long wait times, limited availability of specialty services, and physical infrastructure that is not inclusive, particularly for individuals with disabilities.” (KII-PT) Additional barriers, such as language differences and stigma, were noted, with recommendations focusing on community outreach, improved transport, inclusive infrastructure, bilingual staff, and better mental health support.

Regarding the availability of critical services, patients acknowledged that essential services such as emergency care and diagnostics are present but questioned their consistency and reliability. Concerns were raised about outdated machinery, medication shortages, and lengthy queues for procedures were also highlighted. These qualitative insights directly explain the statistical variability, demonstrating that the perception of "availability" is delicate and contingent upon the consistent operation of equipment and the stability of the supply chain. This underscores the need for sustained investment in modern infrastructure and robust logistics.

The findings reveal mixed results concerning the state of healthcare delivery in Kenya’s Level 5 public hospitals. While reported satisfaction remains high at 87.3%, this approval coexists with significant systemic weaknesses. Critical operational areas exhibit substantial disparities. Access to services and the availability of essential equipment and supplies are perceived as adequate by only a narrow majority, approximately 55–57%, with nearly half of respondents reporting deficiencies. This indicates a system that maintains public trust in its fundamental mission and specialized care; however, it is critically compromised by inconsistent execution, unreliable resources, and inequitable access. Consequently, its current positive standing is fragile and unsustainable without targeted investments and comprehensive reforms.

Inferential Analysis

Diagnostic Tests

The study examined whether the data fulfilled the regression assumptions of normality, linearity, multicollinearity, independence of errors and heteroscedasticity. Violations of these assumptions can lead to statistical errors and affect confidence levels and all relationships in the data used for analysis (Kostanek et al., 2024). The results are summarized in Table 7. The Shapiro-Wilk test showed that service delivery scores were not normally distributed ($W = .738$, $p < .001$), which is expected for a composite built from three binary items. With $n = 252$, the ordinary least squares estimates are robust to moderate departures from normality, and the Shapiro-Wilk tests did not reject normality for governance of loans or leadership principles. Variance inflation factors were well below 10, so multicollinearity was not a concern, and the Breusch-Pagan test was not significant ($p > .05$), indicating homoscedastic errors. The Durbin-Watson statistic of 1.762 lies within the accepted range of 1.5 to 2.5, indicating independent residuals. Because all variables were measured with the same self-report instrument, common method bias cannot be ruled out (Podsakoff et al., 2003); this is addressed in the limitations.

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Table 7: Regression Diagnostics

Assumption / test	Statistic	Result	Decision
Normality: Shapiro-Wilk (service delivery)	W = .738	p < .001	Non-normal; expected for a binary-item composite
Normality: Shapiro-Wilk (loans, leadership)	W = .943; .974	p = .053; .058	Normality not rejected
Multicollinearity: VIF	1.27; 1.26	VIF < 10 required	No multicollinearity
Independence: Durbin-Watson	1.762	1.5–2.5	Residuals independent
Homoscedasticity: Breusch-Pagan	—	p > .05	Homoscedastic errors

Correlation Coefficient

A Pearson correlation analysis was conducted to examine the relationship between governance of loans and the delivery of health services in level 5 public hospitals. The results are summarized in Table 8.

Table 8: Correlation between Governance of Loans and Delivery of Health Services

		Delivery of Services in Public Hospitals	Governance of Loans in public hospitals
Delivery of Services in Public Hospitals	Pearson Correlation	1	
	Sig. (2-tailed)		
	N	252	
Governance of Loans	Pearson Correlation	.429**	1
	Sig. (2-tailed)	< .001	
	N	252	252

*Note. **p < .01 (2-tailed). The loans–service delivery correlation equals the standardised coefficient of the simple regression in Table 9 (β = .429).*

Governance of loans had a moderate, positive and significant correlation with service delivery (r = .429, p < .001). It was also moderately and positively correlated with leadership principles (r = .369; Table 3), which is well below the square roots of the AVE of both constructs.

Regression Results

Regression analysis is a predictive modelling method used to examine the relationship between a dependent variable and one or more independent variables. This study employed a simple linear regression model to evaluate the influence of governance of loans on the delivery of health services in level 5 public hospitals in Kenya.

a) Regression Coefficients (Governance of Loans versus Health Services Delivery)

Regression analysis was conducted to determine the influence of governance of loans on delivery of health services. It was hypothesised that:

> ***H_{A1}:*** *Governance of Loans has a positive and significant influence on the delivery of health services in level 5 public hospitals in Kenya.*

To test this hypothesis, the model $Y= \beta 0 + \beta 1X1 + \varepsilon$ was fitted.

Where;

Y is Delivery of health services in level 5 public hospitals in Kenya and
X_1 is Governance of Loans

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Table 9: Model Summary (Governance of Loans versus Delivery of Health Services in Level 5 Public Hospitals in Kenya)

Source		SS	Df	MS	Number of obs	252
Model		26.496	1	26.496	F (1, 250)	56.38
Residual		117.504	250	0.470	Prob > F	< .001
Total		144.000	251		R-squared	0.184
	Cohen's f^2	0.225			Adj R-squared	0.181
					Std. Error of the Estimate	0.686

Delivery of Health Services	Coef.	Std. Err.	Beta	T	P> t
Constant	1.208	0.382		3.158	0.002
Governance of Loans	0.308	0.041	0.429	7.51	< .001

Note. *R^2 = 26.496/144 = .184, and Cohen's $f^2 = R^2/(1 - R^2)$ = 0.225, a medium effect.*

Regression model summary results in Table 9 indicate the goodness of fit for the regression between governance of loans and delivery of health services in level 5 public hospitals. The model was statistically significant, $F(1, 250) = 56.38$, $p < .001$. The R-squared of 0.184 (adjusted $R^2 = 0.181$) indicates that 18.4% of the variation in staff-perceived service delivery is explained by governance of loans, a medium effect ($f^2 = 0.225$). The remaining 81.6% of the variation is explained by factors outside the model.

The regression analysis reveals a positive and statistically significant relationship between the governance of loans and the delivery of health services in Level 5 public hospitals in Kenya. The results indicate that stronger governance practices regarding loans are strongly associated with improved service delivery outcomes ($b = 0.308$, $SE = 0.041$, $\beta = 0.429$, $t = 7.51$, $p < .001$).

Specifically, the unstandardized coefficient ($b = 0.308$) suggests that for every one-unit increase in good loan governance practices score, the health service delivery score is predicted to increase by 0.308 units, holding all else constant. The standardized coefficient ($\beta = 0.429$) further indicates a moderate-to-strong effect size, showing that the governance of loans is a meaningful predictor of service delivery performance. Because the t-value of 7.51 significantly exceeds the critical value of 1.96 ($p < .001$), the null hypothesis is rejected, thereby supporting the alternative hypothesis (HA1) that governance of loans significantly influences service delivery.

The fitted regression equation is:

Service Delivery = 1.208 + 0.308 (Governance of Loans) + e

In this equation, 1.208 represents the baseline constant (intercept) of the model, and 0.308 is the slope. Practically, this means that as hospital management improves its governance of loans by one unit on the measurement scale, health service delivery is expected to rise by 0.308 units. It is important to note that, given the cross-sectional nature of the data (which captures perceptions at a single point in time), these findings demonstrate a strong statistical association rather than definitive proof of a causal relationship.

b) Test of Moderation

The second objective of this study aimed to establish the moderating effect of leadership principles on the relationship between the governance of loans and the delivery of health services in level 5 public hospitals in Kenya. The study proposed the following hypothesis:

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Hypothesis Two H_{A2}: *Leadership principles significantly moderate the relationship between governance of loans and the delivery of health services in level 5 public hospitals in Kenya.*

A moderating variable influences the strength and direction of the relationship between the independent and dependent variables, with its influence varying based on its value. In this study, leadership principles are identified as the moderating variable influencing the relationship between the governance of loans (independent variable) and the delivery of healthcare services in level 5 public hospitals (dependent variable) in Kenya. To examine this moderating effect, the study used PROCESS Model 1 (Hayes, 2022) with mean-centred predictors. The interaction term was analysed by assessing the change in R^2 attributable to the interaction and its coefficient, and the conditional effect of the predictor was estimated at low (−1 SD), mean and high (+1 SD) levels of leadership principles.

c) Moderating Effect of Leadership Principles

A moderation analysis was conducted with staff-perceived service delivery as the dependent variable (Y) and leadership principles as the moderator (W). The predictor (X) was the governance of loans. The results are presented in Table 10. The moderation model was statistically significant, $F(3, 248) = 37.34$, $p < .001$, and explained 31.11% of the variance in service delivery ($R^2 = 0.3111$). The governance of loans had a significant conditional effect on service delivery at the mean level of leadership principles ($b = 0.3000$, 95% CI [0.1976, 0.4024]). The interaction between the governance of loans and leadership principles was positive and significant ($b = 0.3100$, $SE = 0.0630$, $t = 4.921$, $p < .001$, 95% CI [0.1859, 0.4341]), adding $\Delta R^2 = 0.0805$ to the explained variance ($F(1, 248) = 28.98$, $p < .001$). The conditional effects show that the positive effect of the governance of loans on service delivery rises from $b = 0.1720$ ($p = .0033$) at low levels of leadership principles (−1 SD) to $b = 0.3000$ ($p < .001$) at the mean and $b = 0.4280$ ($p < .001$) at high levels (+1 SD).

Table 10: Moderating Effect of Leadership Principles

Outcome: Service Delivery						
R	**R-sq**	**MSE**	**F**	**df1**	**df2**	**p**
0.5578	0.3111	0.1003	37.34	3	248	<.0001
Model	**coeff**	**se**	**t**	**p**	**LLCI**	**ULCI**
constant	1.3354	.0253	52.78	.0000	1.2856	1.3852
Leadership principles (W)	0.2245	.0653	3.438	.0007	0.0959	0.3531
Loan (X)	0.3000	.0520	5.769	<.0001	0.1976	0.4024
X × W	0.3100	.0630	4.921	<.0001	0.1859	0.4341
Test (s) for unconditional interaction		**R2-change**	**F**	**df1**	**df2**	**p**
X × W		0.0805	28.98	1	248	<.0001
Conditional Effect of X on Y at values of the moderator						
W	**Effect**	**se**	**t**	**p**	**LLCI**	**ULCI**
-0.4128	0.1720	.0580	2.965	.0033	0.0578	0.2862
0.0000	0.3000	.0520	5.769	<.0001	0.1976	0.4024
+0.4128	0.4280	.0680	6.294	<.0001	0.2941	0.5619

Note. *X =Governance of loans; W = leadership principles (mean-centred); conditional effects are shown at −1 SD, the mean and +1 SD of W.*

The findings demonstrate that strong leadership principles significantly amplify the positive impact of good loan governance practices on service delivery. Leadership principles also had a significant positive direct effect on service delivery ($b = 0.2245$, $p = .0007$). The fitted moderation model is:

Y = 1.3354 + 0.3000 (Governance of Loans) + 0.2245 (Leadership) + 0.3100 (Governance of Loans × Leadership) + e

Where Governance of Loans and Leadership are mean-centred.

Discussion

The first hypothesis was supported. Governance of loans was positively associated with staff-perceived service delivery and explained 18.4% of its variance. As Cao et al. (2023) noted, the health effects of subnational debt are highly dependent on the institutional setting. The present results extend this argument to the facility level, demonstrating that it is the quality of governance over borrowing (whether borrowing is sustainable, whether it finances high-impact investments and whether its use is transparent) that is associated with better services. This positive effect of loan governance practices must be understood within the broader decision space approach. Kenyan counties have narrowed de jure decision space over borrowing, since Article 212 of the constitution requires a national guarantee and county assembly approval. However, the results show that within that narrow space, the way counties and hospitals govern the resources they do control still matters for service delivery. This is in line with the evidence on constrained facility autonomy in Kenya (Barasa et al., 2022) and on the conditions that make decentralisation effective (Liwanag & Wyss, 2018). From a principal-agent perspective, the low agreement that accountability is upheld regardless of political interests, and the high neutral response on transparency in the use of loans, point to monitoring gaps that weaken the link between borrowing and results.

The second hypothesis concerned the moderating role of leadership principles. The interaction was positive and significant ($b = 0.3100$, $p < .001$), which supports proactive leadership theory (Bateman & Crant, 1993; Crant, 2000) that leaders who take initiative in scrutinising financing terms and aligning funded projects with service priorities strengthen the payoff from the resources they govern. The interaction added a substantive $\Delta R^2 = 0.0805$ to the model ($p < .001$), indicating that leadership principles are a meaningful condition that amplifies, rather than merely transforms, the link between loan governance and service delivery. The conditional effects confirm this amplification. The positive effect of loan governance on service delivery more than doubles from $b = 0.1720$ at low levels of leadership to $b = 0.4280$ at high levels.

Because the moderation model specifically tested the governance of loans as the predictor, the result directly demonstrates that leadership conditions the effect of loan governance. However, this reliance on leadership characteristics to maximise the benefits of borrowing is not without risks. The descriptive results show that while respondents trust leaders' intent and strategic direction, they are less confident in institutional accountability, especially where political interests are involved. This gap is significant because it suggests that the positive moderation effect depends heavily on individual leaders rather than robust systems. This pattern is consistent with George et al. (2023), who found that governance interventions improve quality only when they are implemented faithfully, highlighting the need for stronger institutional safeguards alongside proactive leadership.

Recommendations

County Governments

- Because governance of loans was associated with better service delivery, and repayment of commercial loans was the most widely reported sustainability concern (73.4%), county governments should strengthen debt-management systems by aligning borrowing decisions with long-term fiscal sustainability, prioritising concessional loans, and ensuring that repayment obligations do not compromise recurrent health expenditures or future service delivery.

- Given the high neutral response (30.2%) on transparency in the use of loans, counties should institutionalise robust monitoring, public reporting, and audit mechanisms to ensure that loan-financed health projects are implemented efficiently, that funds are used for intended purposes and in alignment with the plans, and that public trust in county health financing is strengthened.
- Given the low confidence that accountability is upheld regardless of political interests (M = 3.18), counties should reinforce ethical stewardship, strategic direction, and equitable advocacy to ensure that loan-funded investments are prioritised toward high-impact health needs, reduce political interference, and promote equitable access to quality health services across level 5 public hospitals.

National government, oversight bodies and lenders

- The National Treasury should review loan agreements and guarantee frameworks that finance county health services to provide flexible, county-specific repayment terms, so that debt service does not crowd out spending on medicines and staff.
- The National Treasury and development partners should structure loan conditionalities so that they protect service quality, since 74.6% of respondents perceived that conditions attached to loans had negatively affected quality.
- The Controller of Budget should publish county-level reports on loan-financed health projects and on debt service and pending bills, so that hospital staff and the public can see how borrowed funds are used.
- County assemblies should use their approval role under Article 212 to require a health-impact justification and a repayment plan before approving any borrowing for health, and should follow up implementation through their health and budget committees.
- Lenders and the Ministry of Health should evaluate schemes that deliver equipment or services to counties on credit, such as MES, against measurable service-delivery outcomes before renewing them.

Limitations and Future Research

The study has several limitations. First, it covered 13 of the 19 Level 5 hospitals, selected on the availability of workforce data, so the results may not generalise to the remaining hospitals or to lower-level facilities. Second, the design was cross-sectional, so the associations reported cannot be interpreted as causal effects. Third, the survey was answered only by health personnel, and all constructs were self-reported on the same instrument, which raises the risk of common method bias. Fourth, service delivery was measured with three Yes/No items answered by staff, which is a minimal and indirect measure of the patient experience; patient perspectives were captured only through 13 interviews. Finally, respondents are nested within hospitals, and the analysis did not adjust for this clustering. Future research should use objective indicators of service delivery, such as stock-out rates and equipment uptime from the Kenya Health Information System (KHIS), link them to county debt and loan records from the Controller of Budget and the National Treasury, use multilevel models, and follow hospitals over time to establish whether improvements in loan governance precede improvements in services.

REFERENCES

Apeagyei, A. E., Lidral-Porter, B., Patel, N., Solorio, J., Tsakalos, G., Wang, Y., Warriner, W., Wolde, A., Zhao, Y., Dieleman, J. L., & Nonvignon, J. (2024). Financing health in sub-Saharan Africa 1990–2050: Donor dependence and expected domestic health spending. *PLOS Global Public Health, 4*(8), e0003433. https://doi.org/10.1371/journal.pgph.0003433

Bahl, R., & Martinez-Vazquez, J. (2006). *Sequencing fiscal decentralization* (Policy Research Working Paper No. 3914). World Bank.

Balabanova, D., Mills, A., Conteh, L., Akkazieva, B., Banteyerga, H., Dash, U., Gilson, L., Harmer, A., Ibraimova, A., Islam, Z., Kidanu, A., Koehlmoos, T. P., Limwattananon, S., Muraleedharan, V. R., Murzalieva, G., Palafox, B., Panichkriangkrai, W., Patcharanarumol, W., Penn-Kekana, L., … McKee, M. (2013). Good Health at Low Cost 25 years on: Lessons for the future of health systems strengthening. *The Lancet, 381*(9883), 2118–2133. https://doi.org/10.1016/S0140-6736(12)62000-5

Barasa, E., Mbau, R., & Gilson, L. (2022). The autonomy of public health facilities in decentralised contexts: Insights from applying a complexity lens in Kenya. *BMJ Global Health, 7*(11), e010260. https://doi.org/10.1136/bmjgh-2022-010260

Bateman, T. S., & Crant, J. M. (1993). The proactive component of organizational behavior: A measure and correlates. *Journal of Organizational Behavior, 14*(2), 103–118. https://doi.org/10.1002/job.4030140202

Bossert, T. (1998). Analyzing the decentralization of health systems in developing countries: Decision space, innovation and performance. *Social Science & Medicine, 47*(10), 1513–1527.

Bossert, T. J., & Beauvais, J. C. (2002). Decentralization of health systems in Ghana, Zambia, Uganda and the Philippines: A comparative analysis of decision space. *Health Policy and Planning, 17*(1), 14–31. https://doi.org/10.1093/heapol/17.1.14

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Cao, M., Duan, K., Cao, M., & Ibrahim, H. (2023). Exploring the interrelationships between public health, fiscal decentralization, and local government debt in China. *Healthcare, 11*(14), 2103. https://doi.org/10.3390/healthcare11142103

Chipunza, T., & Ntsalaze, L. (2024). Income per capita and government healthcare financing in sub-Saharan Africa: The moderating effect of indebtedness. *Scientific African, 26*, e02388. https://doi.org/10.1016/j.sciaf.2024.e02388

Coccia, M., & Benati, I. (2024). Negative effects of high public debt on health systems facing pandemic crisis: Lessons from COVID-19 in Europe to prepare for future emergencies. *AIMS Public Health, 11*(2), 477–498. https://doi.org/10.3934/publichealth.2024024

Controller of Budget. (2024). *County governments budget implementation review report: First quarter of FY 2024/25*. Office of the Controller of Budget.

Constitution of Kenya. (2010). *The Constitution of Kenya*. Government Printer.

Crant, J. M. (2000). Proactive behavior in organizations. *Journal of Management, 26*(3), 435–462. https://doi.org/10.1177/014920630002600304

Creswell, J. W., & Plano Clark, V. L. (2018). *Designing and conducting mixed methods research* (3rd ed.). SAGE.

Fjeldstad, O.-H., & Heggstad, K. (2012). *Local government revenue mobilisation in Anglophone Africa* (CMI Working Paper WP 2012:6). Chr. Michelsen Institute.

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research, 18*(1), 39–50. https://doi.org/10.1177/002224378101800104

George, J., Jack, S., Gauld, R., Colbourn, T., & Stokes, T. (2023). Impact of health system governance on healthcare quality in low-income and middle-income countries: A scoping review. *BMJ Open, 13*(12), e073669. https://doi.org/10.1136/bmjopen-2023-073669

Gliem, J. A., & Gliem, R. R. (2003). Calculating, interpreting, and reporting Cronbach's alpha reliability coefficient for Likert-type scales. *Midwest Research-to-Practice Conference in Adult, Continuing, and Community Education*, 82–88.

Hayes, A. F. (2022). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach* (3rd ed.). Guilford Press.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics, 3*(4), 305–360. https://doi.org/10.1016/0304-405X(76)90026-X

Johnson, R. B., & Christensen, L. (2017). *Educational research: Quantitative, qualitative, and mixed approaches* (6th ed.). SAGE.

Kimathi, L. (2017). Challenges of the devolved health sector in Kenya: Teething problems or systemic contradictions? *Africa Development, 42*(1). https://doi.org/10.57054/ad.v42i1.785

Kostanek, J., Karolczak, K., Kuliczkowski, W., & Watala, C. (2024). Bootstrap method as a tool for analyzing data with atypical distributions deviating from parametric assumptions: Critique and effectiveness evaluation. *Data, 9*(8), 95. https://doi.org/10.3390/data9080095

Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement, 30*(3), 607–610. https://doi.org/10.1177/001316447003000308

Kuder, G. F., & Richardson, M. W. (1937). The theory of the estimation of test reliability. *Psychometrika, 2*(3), 151–160. https://doi.org/10.1007/BF02288391

Liwanag, H. J., & Wyss, K. (2018). What conditions enable decentralization to improve the health system? Qualitative analysis of perspectives on decision space after 25 years of devolution in the Philippines. *PLOS ONE, 13*(11), e0206809. https://doi.org/10.1371/journal.pone.0206809

McCollum, R., Limato, R., Otiso, L., Theobald, S., & Taegtmeyer, M. (2018). Health system governance following devolution: Comparing experiences of decentralisation in Kenya and Indonesia. *BMJ Global Health, 3*(5), e000939. https://doi.org/10.1136/bmjgh-2018-000939

Ngepah, N., & Mouteyica, A. E. N. (2024). Factors influencing inequality in government health expenditures within African regional economic communities. *BMC Health Services Research, 24*, 311. https://doi.org/10.1186/s12913-024-10783-w

Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology, 88*(5), 879–903. https://doi.org/10.1037/0021-9010.88.5.879

Republic of Kenya, National Treasury. (2020). *Public statement on the status of payments to county governments, FY 2019/20*. The National Treasury and Planning.

Republic of Kenya. (2012). *Public Finance Management Act*. Government Printer.

Roman, T. E., Cleary, S., & McIntyre, D. (2017). Exploring the functioning of decision space: A review of the available health systems literature. *International Journal of Health Policy and Management*, *6*(7), 365–376. https://doi.org/10.15171/ijhpm.2017.26

Senate of Kenya. (2020). *Report of the ad hoc committee to investigate the Managed Equipment Services*. Parliament of Kenya.

Siddiqi, S., Masud, T. I., Nishtar, S., Peters, D. H., Sabri, B., Bile, K. M., & Jama, M. A. (2009). Framework for assessing governance of the health system in developing countries: Gateway to good governance. *Health Policy*, *90*(1), 13–25. https://doi.org/10.1016/j.healthpol.2008.08.005

World Bank. (2022). Kenya public expenditure review for the health sector FY2014/15–FY2019/20. World Bank Group.

World Bank. (2024). *Kenya – Transforming Health Systems for Universal Care Project (P152394): Implementation completion and results report*. World Bank.

Yang, C., Cui, D., Yin, S., Wu, R., Ke, X., Liu, X., Yang, Y., Sun, Y., Xu, L., & Teng, C. (2022). Fiscal autonomy of subnational governments and equity in healthcare resource allocation: Evidence from China. *Frontiers in Public Health*, *10*, 989625. https://doi.org/10.3389/fpubh.2022.9896