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Level 5 Public Hospitals**

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Abstract

Purpose: Kenya's devolved governance system has empowered counties to generate and manage their own-source revenue, with the aim of improving public service delivery, particularly in healthcare. Nonetheless, persistent gaps in service quality, availability and access in public hospitals underscore critical weaknesses. This raises fundamental questions about the role of county revenue governance in translating fiscal inputs into tangible health service delivery. Thus, the study aimed to investigate the influence of governance of county revenue on delivery of health care services in Kenya's level 5 public hospitals. As well as the moderating effect of leadership on the relationship between governance and service delivery.

Methodology: A descriptive cross-sectional approach utilizing quantitative data was employed to collect data from 252 healthcare personnel in 13 Level 5 public hospitals across 10 counties in Kenya. Data was collected from key county hospital staff members, including nurse practitioners, pharmacists, doctors, physical therapists, medical technologists, and administrators. Descriptive statistics and regression analyses were used to analyze the quantitative data.

Findings: The findings revealed that strengthening governance of county revenue leads to better service delivery with governance quality explaining nearly one third (28.1%) of the variation in service delivery outcomes when controlling for other factors. Furthermore, the results demonstrates that the relationship between governance and health service delivery is moderated by leadership orientation. The study concludes that while county revenue governance is a significant determinant of health service delivery, its effectiveness is moderated by the extent of public value leadership orientation. Therefore, the most impactful approach is not revenue generation alone, but its strategic governance through its core dimensions of fiscal autonomy, allocation efficiency, and predictability, which, when coupled with strong public value-oriented leadership (ethical stewardship, strategic direction, equitable advocacy), translates directly into measurable improvements in citizen satisfaction, access to public health services, and availability of critical healthcare services.

Unique Contribution to Theory, Practice and Policy: Given the cross-sectional design and reliance on healthcare personnel perspectives, future research should adopt longitudinal approaches, incorporate external stakeholder such as patients, county finance officers, and national regulators and extend the scope to lower-tier health facilities. This research contributes to the discourse on public financial management and health governance by proposing a context-specific framework that integrates governance quality and leadership to explain service delivery outcomes in devolved systems. Moving beyond isolated fiscal analysis, it offers an integrated governance-leadership contingency model, thereby enriching the literature on adaptive and accountable public service delivery. Practically, the study provides county leadership and health policymakers with an evidence-based blueprint focusing on strengthening revenue governance while cultivating leadership ultimately aiming to enhance service delivery.

Keywords: *County Revenue, Health Service Delivery, Devolution, Public Health Financing, Level 5 Hospitals, Kenya*

JEL Codes: *H71, I18, H77, I18, I11, O55*

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INTRODUCTION

Devolved governance system in Kenya, mandated by the 2010 Constitution, transferred key service delivery responsibilities from the national government to 47 county governments. Among the key devolved functions are agriculture, county health services, early childhood education, county transport, public amenities, and trade regulation. Hence, devolution fundamentally restructured the government's fiscal responsibility and public service delivery. In line with devolved responsibilities, county governments are mandated to generate and manage their own-source revenue (OSR), a financial autonomy posited as essential for effective local development and service provision (Bird & Slack, 2015). However, empirical evidence consistently shows that OSR collections in Kenya often fall short of targets, leaving counties heavily dependent on the national "Equitable Share." This dependency is a crucial contextual factor shaping fiscal capacity and service delivery outcomes. This model of governance decentralization suggests that by strengthening local revenue bases, counties enhance their capacity to deliver responsive public services (Bird & Slack, 2015; Sapkota, Koirala, & Parajuli, 2023).

Empirical evidence from other decentralising contexts underscores the potential and the contingencies of this model. For instance, reforms to increase hospital financial autonomy in Colombia were found to improve technical efficiency, suggesting that autonomy can drive better resource management (Sapkota, Koirala, & Parajuli, 2023). Similarly, in China, empirical findings demonstrate that greater provincial expenditure discretion improved equity, allowing for context-sensitive allocation of funds to underserved regions (Yang et al., 2022; Prinja, et al., 2020). Yet, these gains are only evident where governance institutions are strong. In environments with weak accountability, increased fiscal discretion risks worsening inequities and inefficiencies (Yang et al., 2022). This underscores a pivotal insight: governance does not mediate the relationship between autonomy and outcomes, but rather moderates it — determining the conditions under which fiscal autonomy yields positive or negative effects.

Within Africa, the drive towards decentralised health system management is rooted in the New Public Management (NPM) reforms, primarily adopted from the 1990s by African Countries, which emphasises market principles and strengthening local governance (Barasa et al., 2022). Despite this policy shift, implementation remains uneven. For example, Musiega et al. (2023) found that fewer than 40% of primary healthcare facilities across African low- and middle-income countries retain and utilise own-source revenue, indicating that autonomy reforms are often incomplete. Further, literature reveals mixed findings on whether financial autonomy consistently improves performance, highlighting that outcomes are significantly shaped by contextual factors such as governance capacity, fiscal system maturity, and regulatory clarity (Kesale, Mahonge, & Muhanga, 2022; Martínez-Vázquez, Sanz-Arcega, & Tránchez-Martín, 2024).

The Kenyan experience following the 2010 devolution offers a pertinent case study of these dynamics. The country's governance reforms established a two-tier system, assigning counties the mandate to generate revenue from local sources to support devolved functions, including health service delivery (Kairu et al., 2021). This revenue is complemented by the national equitable share, conditional grants, and donor funding. The legal framework, particularly the Public Finance Management Act (PFMA) of 2012 and the 2010 Constitution, empowers counties to impose property rates, entertainment taxes, and service fees, aiming to create a stable fiscal foundation for

local development (GoK, 2012). In theory, this autonomy enables health facilities to respond to local needs, improve operational efficiency, and strengthen accountability (Barasa et al., 2022; Chen et al., 2021).

However, a significant gap persists between this theoretical empowerment and on-the-ground outcomes. Research indicates that the effectiveness of revenue mobilisation and management varies drastically across Kenya's 47 counties due to profound disparities in administrative capacity and governance practices (Wei, 2023). Mwongera and Muna (2023) found that fiscal decentralisation alone does not automatically translate to improved healthcare access or quality. Instead, performance is shaped by the design of intergovernmental transfers, the timeliness of funds, and the capacity for budget absorption. Furthermore, their study points to understudied informal governance influences, such as political patronage, which can distort resource allocation, suggesting that realised autonomy requires governance safeguards to yield positive health system gains. Consequently, while counties possess the legal authority to manage health finances, the stability and integrity of the fiscal foundation upon which this authority rests remain critical and variable determinants of their ultimate success in delivering equitable and efficient healthcare.

Statement of the Problem

Despite the substantial fiscal and administrative investment in Kenya's devolved health system, significant and persistent disparities in healthcare service delivery remain evident across counties, particularly within Level 5 public referral hospitals. While devolution was constitutionally designed to enhance local responsiveness and efficiency in health service provision, critical governance deficits at the county level have consistently constrained the effective translation of financial inputs into reliable, equitable, and high-quality health outcomes (Moses et al., 2021; Nyikuri et al., 2017). This disconnect is reflected in operational failures that directly undermine service delivery. For example, the 2024 Ministry of Health report on the State of Kenya's Health Market indicates that the Kenya Medical Supplies Authority (KEMSA), the primary supplier for public hospitals, achieves an average order fill rate of only 51–54% for essential medicines and medical supplies against a target of 90%. As a result, Level 5 hospitals experience stockouts for nearly half of their essential medical orders, directly disrupting clinical services and patient care. Yet, while existing studies document how much is spent within devolved health systems, there is limited empirical evidence on how the governance of county revenue collection and allocation processes specifically dictates these stockout levels at Level 5 hospitals. This gap underscores the need to move beyond expenditure volumes to interrogate the governance mechanisms shaping frontline service delivery outcomes.

Compounding this, county governments owed KEMSA over KES 3 billion for health products already delivered by the end of 2024. This debt severely restricts KEMSA's operational capacity, perpetuating a 49–50% supply gap for Level 5 hospitals. Moreover, the health system continues to be plagued by considerable resource waste, estimated between 20% and 50%, while persistently weak accountability measures undermine optimal healthcare delivery (Moses et al., 2021; Nyikuri et al., 2017; Cheeseman & Lynch, 2020). This suggests that the issue is not merely one of funding volume but of funding governance and leadership constraints. A particularly critical governance challenge lies in the management of Facility Improvement Funds (FIF), which are unique to Level 5 hospitals. Although FIF are intended to provide hospitals with direct financial autonomy to

reinvest locally generated revenues into service improvements, county treasuries frequently “capture” these funds, diverting them away from hospital priorities. This capture undermines the intended autonomy of Level 5 hospitals and directly contributes to service delivery failures, including persistent stockouts and resource gaps.

The existing academic and policy literature on Kenya’s post-devolution health system has provided valuable insights on constraints affecting healthcare delivery but remains limited in critical aspects. Prior research has predominantly concentrated on macro-level analyses of fiscal decentralisation, budget allocation trends, and technical or allocative efficiency (e.g., Kairu et al., 2021; Waduu et al., 2024). While these studies elucidate how much is spent and broad patterns of utilisation, they offer limited engagement with the governance processes through which county revenues are actually prioritised, managed, and operationalised at the county level. There is a pronounced empirical and theoretical gap concerning the specific mechanisms of county revenue governance, encompassing autonomy, allocation efficiency, and predictability, and their direct influence on frontline service delivery outcomes.

Furthermore, the potential moderating role of leadership within this governance framework is conspicuously underexplored. Leadership is integral to governance performance, as fiscal rules and systems depend on leadership capacity for interpretation, enforcement, and alignment with public value objectives (Andrews, Pritchett, & Woolcock, 2017; Hood, 2010). The role of county leadership, through ethical stewardship, strategic direction, and equitable advocacy, in moderating the relationship between sound fiscal governance and tangible health service improvements remains under-theorised and lacks empirical substantiation, especially within the context of Level 5 public hospitals.

Study Objective

- i. To examine the influence of governance of county revenue on the delivery of health services in level 5 public hospitals in Kenya
- ii. To establish the moderating influence of leadership on the relationship between governance of fiscal resources and delivery of health services in level 5 public hospitals in Kenya.

LITERATURE REVIEW

Theoretical Framework

This study is theoretically anchored in three complementary frameworks that together explain the relationship between governance of revenue, leadership, and health service delivery in Kenya's devolved health system.

First, Babcock's (2019) Theory of Healthcare Spending elucidates the fundamental proposition that mere increases in health spending do not automatically translate into improved service delivery. Rather, Babcock argues that effective resource utilization requires priority-based financial decisions supported by robust data measurement systems, strategic planning, and targeted investments in data infrastructure, skilled personnel, and physical resources. This theoretical perspective explains why Kenya's substantial post-devolution health budget increases have not yielded proportional service improvements at Level 5 hospitals. Without effective governance systems to ensure data-driven planning, monitoring, and evaluation, increased fiscal allocations

may result in inefficient utilization rather than enhanced outcomes. Furthermore, Babcock's framework establishes that leadership is integral to governance performance rather than external to it. While fiscal rules such as budgeting frameworks, expenditure controls, and audit systems provide necessary structural foundations, their effectiveness ultimately depends on leadership capacity to interpret rules, enforce accountability, manage discretion, and align institutional incentives with public value objectives (Andrews, Pritchett, & Woolcock, 2017; Hood, 2010). This insight bridges to the study's second theoretical foundation.

Second, Proactive Leadership Theory (Bateman & Crant, 1993) explains the behavioral mechanisms through which governance systems are effectively implemented. This theory posits that proactive individuals, characterized by initiative, opportunity-seeking, and persistence in driving change, are essential for transforming structural governance arrangements into operational realities. In the context of county health systems, proactive leadership manifests through ethical stewardship, strategic direction, and equitable advocacy, enabling leaders to challenge inefficiencies, mobilize resources effectively, and implement sustainable solutions rather than passively adapting to existing conditions (Crant, 2000). Importantly, in Kenya's devolved system, County Executives wield significant discretionary power over budgets. Proactive Leadership Theory provides a lens to understand how leaders use this discretion to bypass bureaucratic bottlenecks, such as Integrated Financial Management Information System (IFMIS) stalls, and ensure timely resource allocation. Thus, proactive leadership is not only about initiative but about strategically exercising discretion to overcome institutional rigidities and deliver services effectively.

Third, Principal-Agent Theory (Jensen & Meckling, 1976) is incorporated to explain accountability frictions within devolved governance. In this framework, the public (Principal) delegates authority to county leadership (Agent) to manage fiscal resources and deliver health services. However, agency problems arise when leaders pursue personal or political interests, such as patronage networks or resource capture, rather than public welfare. Weak monitoring mechanisms and information asymmetries exacerbate this misalignment, leading to inefficiencies, inequities, and service delivery failures. Applying Principal-Agent Theory clarifies why governance safeguards (audits, transparency rules, citizen oversight) are essential to align leadership incentives with public health objectives.

Together, these theoretical frameworks provide a comprehensive foundation for examining both the direct influence of county revenue governance on health service delivery and the moderating role of leadership in this relationship. Babcock's theory explains the structural need for effective governance, Proactive Leadership Theory highlights the discretionary and behavioral mechanisms through which leaders operationalize governance, and Principal-Agent Theory contextualizes the accountability challenges that shape whether governance and leadership translate into equitable health outcomes.

Conceptual Framework

The conceptual framework guiding this study posits a dynamic relationship between the governance of county revenue, leadership principles, and the delivery of health services in Kenya's Level 5 public hospitals. The independent variable, governance of county revenue, is conceptualized as a multi-dimensional construct comprising fiscal autonomy, allocation

efficiency, and predictability. Fiscal autonomy reflecting the county's practical capacity to generate and control its own-source revenue, thereby enabling locally-responsive financial decisions in health. Second is allocation efficiency, which denotes the strategic and equitable distribution of funds to priority health needs, while predictability refers to the stability of revenue flows, which is essential for consistent service planning and procurement.

This governance framework is hypothesized to directly influence the dependent variable, delivery of health services, which is measured through three outcome indicators. That is, citizen satisfaction, access to public health services, and the availability of critical medical services. The central proposition is that stronger revenue governance, manifested as greater autonomy, more efficient allocation, and more predictable funding will lead to measurable improvements in these service delivery outcomes.

Critically, the framework incorporates leadership principles as a moderating variable. This moderating role suggests that the strength of the relationship between revenue governance and service delivery are contingent upon the leadership orientation. Specifically, public value-oriented leadership with strong ethical stewardship, strategic direction and equitable advocacy is expected to amplify the positive effect of sound revenue governance on delivery of healthcare outcomes. Thus, the framework provides an integrated model for understanding how the interaction of revenue governance and leadership behaviors collectively determines healthcare delivery performance in a devolved government.

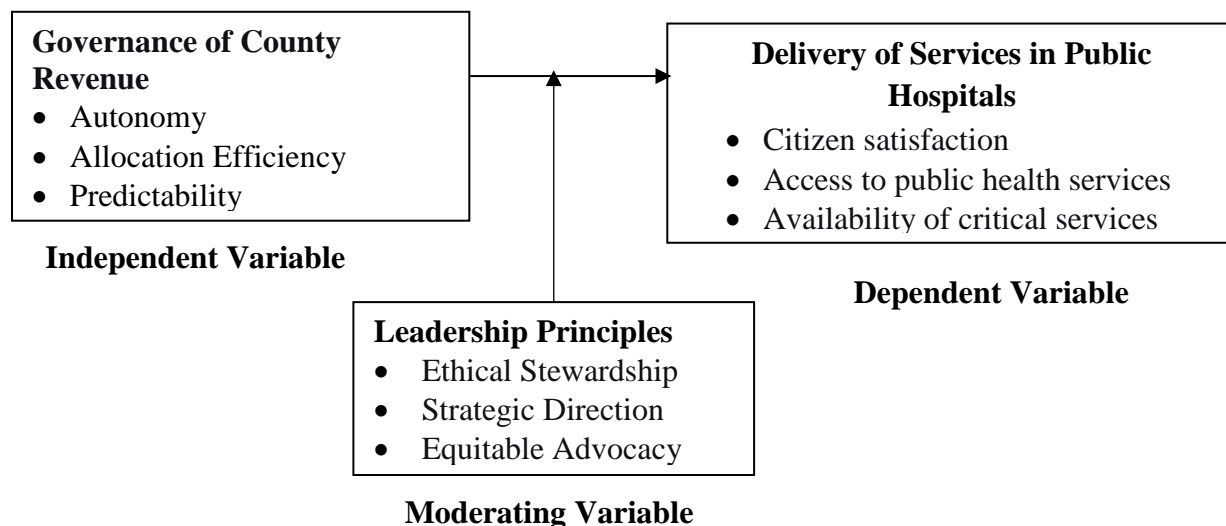


Figure: Conceptual Framework

METHODOLOGY

This study employed a descriptive cross-sectional research design. This is an optimal approach for generating a "snapshot" of a population or phenomenon at a single point in time. Its primary purpose is to describe what is happening (e.g., prevalence, patterns, associations) rather than to explain why (Johnson & Christensen, 2017). Quantitative data were collected through structured questionnaires administered to healthcare personnel, including physicians, nurse practitioners,

pharmacists, dietitians, physical therapists, and medical technologists, across 13 Level 5 public referral hospitals in 10 counties. A total of 372 questionnaires were distributed, and 252 were completed and returned, resulting in a response rate of 67.74%.

To ensure representativeness, healthcare personnel were selected using stratified random sampling, with strata defined by key hospital departments, including outpatient, maternity, inpatient, and administration. This approach ensured balanced representation across diverse functional units within the hospitals. Counties were purposively selected based on their health sector budget absorption performance, assessed using average recurrent and development expenditure data from 2015 to 2020.

FINDINGS AND DISCUSSION

Reliability and Validity Tests

Before analysis, the data was subjected to reliability and validity tests. The reliability analysis, assessed via Cronbach's alpha, indicated good internal consistency for all scales. The governance of county revenue scale demonstrated acceptable reliability ($\alpha = .721$, $k=7$), as did the leadership principles scale ($\alpha = .765$, $k=7$) and the delivery of services in public hospitals scale ($\alpha = .757$, $k=3$). All values exceeded the predetermined threshold of .70 (Lund, 2023).

Validity was established through multiple assessments. Content validity was confirmed via expert review. Convergent validity was evidenced by factor loadings above .50; Average Variance Extracted (AVE) values exceeding .50 (Governance of County Revenue AVE = .50; Leadership Principles AVE = .66; Delivery of Healthcare Services AVE=.711); and strong Composite Reliability (CR) scores (Governance of County Revenue CR = .89; Leadership Principles CR = .93; Delivery of Healthcare Services CR = .876). Discriminant validity, tested using the Fornell-Larcker criterion, was established, as the square root of each construct's AVE was greater than its correlation with any other construct.

Descriptive Statistics

The descriptive findings reveal critical insights into the status of governance of county revenue in level 5 public hospitals. The analysis of the governance of county revenue, was structured across three sub-constructs of revenue autonomy, revenue allocation efficiency, and predictability.

Table 1: Governance of County Revenue

Statement	SD (1)	D (2)	N (3)	A (4)	SA (5)	Mean	Std Dev
Revenue Autonomy							
Adequate autonomy to determine own revenue sources and amounts.	0.40%	7.50%	23.40%	50.00%	18.70%	3.79	0.846
Sufficient decision-making power over the use of locally collected revenues	1.60%	3.20%	7.90%	70.60%	16.70%	3.98	0.719
Effective prioritization and allocation of resources	0.80%	1.60%	7.50%	81.30%	8.70%	3.96	0.545
Sub-Aggregate	0.90%	4.10%	12.90%	67.30%	14.70%	3.91	0.707
Revenue Allocation Efficiency							
Adequate staffing	2.80%	22.60%	26.60%	43.70%	4.40%	3.24	0.945
Predictability of own source revenue	0.00%	1.60%	13.50%	79.40%	5.60%	3.89	0.493
Sub-Aggregate	1.40%	12.10%	20.10%	61.60%	5.00%	3.57	0.719
Predictability							
Limited Challenges in collecting local revenue	0.00%	0.80%	5.60%	88.90%	4.80%	3.98	0.367
The flow of national equitable share is stable	3.60%	29.40%	11.50%	52.00%	3.60%	3.23	1.026
Sub-Aggregate	1.80%	15.10%	8.60%	70.50%	4.20%	3.61	0.697
Overall Aggregate	2.20%	9.50%	13.70%	66.60%	8.70%	3.72	0.75

Based on the study results, the findings reveal that the governance of county revenue presents a landscape of strong revenue autonomy but one that is critically undermined by systemic constraints. Respondents indicated that county governments possess significant control and effective decision-making power over how locally collected revenues are prioritized and spent within the health sector, with strong mean scores for decision-making power ($M=3.98$) and resource prioritization ($M=3.96$). This indicates that the principle of fiscal devolution is operationally successful in granting counties discretionary authority, which is crucial for improving public service efficiency and accountability (Kairu et al., 2021). However, autonomy in determining their own revenue sources is perceived as more limited ($M=3.79$), reflecting an ongoing reliance on national transfers. This supports the argument by Bird and Slack (2015) that such autonomy is essential for counties to fund socio-economic development effectively.

Nevertheless, this autonomy is rendered fragile by severe challenges in resource allocation efficiency. The allocation process fails to reliably translate into adequate operational staffing ($M=3.24$), highlighting a disconnect between financial processes and operational outcomes. This finding underscores the necessity for more effective governance practices, corroborating the emphasis by Fjeldstad and Heggstad (2012) on the critical role of accountability in the allocation of resources for good governance. Moreover, the overall revenue predictability of the funding environment is constrained. While the predictability of counties' own-source revenue is viewed favourably for supporting service delivery ($M=3.89$), there is overwhelming consensus that the flow of the national equitable share funds is not seen as reliably stable ($M=3.23$, $SD=1.026$). This dual unpredictability from both problematic local revenue collection ($M=3.98$ for limited

challenges) and unstable national transfers creates a volatile funding environment that hinders long-term planning and consistent service delivery. This aligns with KIPPRA's (2023) recommendation that diversifying revenue and strengthening collection mechanisms are critical to enhancing fiscal efficiency. Ultimately, this systemic instability poses a major risk to consistent health service delivery, supporting the position of WHO (2019) that links quality service delivery to reliable funding.

The analysis of the leadership principles was structured across three sub-constructs of ethical stewardships, strategic direction and equitable advocacy. The results reveal that in the domain of ethical stewardship, leadership is perceived to strongly uphold a personal commitment to transparency and accountability in managing resources ($M=4.19$), which aligns with the assertion that good governance is essential for development and rights protection (World Bank, 1998). However, perceptions of the systemic mechanisms for ensuring this are more moderate and varied, as shown by the lower and more dispersed scores for clear transparency mechanisms ($M=3.54$, $SD=0.954$) and strong accountability structures ($M=3.54$, $SD=0.946$). This suggests a gap between leadership intent and institutionalized frameworks, highlighting the need for stronger, more consistently applied systems as emphasized by Balabanova et al. (2013) and Siddiqi et al. (2009).

The sub-construct of strategic direction received the most positive evaluation. There was overwhelming consensus that leadership decisions positively influence service quality and responsiveness ($M=4.03$) and that hospital policies promote equitable access ($M=3.96$). These high scores indicate that the strategic vision set by leadership is widely seen as positively influencing service outcomes, supporting the argument that strong political stewardship enhances the efficiency and equity of health system financing (McCollum et al., 2018).

Table 2: Leadership Principles

Statement	SD (1)	D (2)	N (3)	A (4)	SA (5)	Mean	Std Dev
Ethical Stewardship							
Leadership upholds transparency and accountability	0.00%	0.80%	1.60%	75.40%	22.20%	4.19	0.484
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
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
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	1.40%	8.20%	18.10%	60.30%	12.10%	3.74	0.757
Strategic Direction							
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							
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
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
Sub-Aggregate	1.60%	16.70%	8.20%	66.70%	7.00%	3.61	0.72
Overall Aggregate	1.30%	9.60%	14.10%	64.90%	10.10%	3.73	0.708

The findings for equitable advocacy, however, reveal a critical tension. While the positive influence of leadership decisions on service quality is reiterated ($M=4.03$), there is significant skepticism regarding leadership's ability to ensure transparency and accountability free from political interests, which received the lowest mean score in the analysis ($M=3.18$, $SD=1.052$). This polarization points to a vulnerability where political influence is perceived to undermine fiduciary responsibilities, echoing equity concerns raised by Falk et al. (1993) and Gichinga (2007) that such interference can erode trust and create disparities. In summary, while leadership is seen as strategically effective and ethically committed in principle, its perceived effectiveness in equitable advocacy is critically constrained by doubts over its insulation from political interference, indicating that strategic gains may be eroded by compromised governance.

On delivery of health care services, this study assessed service delivery in three perspectives of citizen satisfaction, access to health facilities and availability of critical health services within Kenya's level 5 public hospitals.

Table 3: Delivery of Health Services

Statement	Yes	No	Mean	Std Deviation
<i>Citizen Satisfaction:</i> 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
<i>Access to public health services:</i> 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
<i>Availability critical services:</i> Does the availability of essential medical equipment and supplies sufficient for diagnostic and treatment purposes?	55.6%	44.4%	2.11	0.996

The results indicate overwhelmingly positive perceptions of service delivery. A large majority of respondents (87.3%) reported satisfaction. This aligns with Chumba's (2019) assertion that public hospitals prioritizing high-quality, low-cost service provision can successfully attract clients and generate revenue, suggesting the existing fiscal approach is meeting core expectations for many. However, perceptions of access to healthcare services were markedly less favorable with only 57.1% agreeing that there is access. This mixed sentiment underscores Abe Monisola's (2014) point that effective service delivery hinges not just on accessibility but also on quality and affordability, indicating these elements may be inconsistently realized within the current system. Similarly, only 55.6% viewed availability of critical healthcare services as sufficient. This is consistent with Liwanag's (2019) findings on fiscal decentralization, where impacts vary significantly across different subpopulations.

The findings present a paradox of high aggregate satisfaction coexisting with moderate access of healthcare services and availability of critical healthcare services. 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 strong positive rating for overall service delivery suggests institutional trust and endorsement of the system's foundational intent. However, the pronounced splits in perception regarding access and availability reveals systemic vulnerabilities in operational execution and equity. This pattern implies that the current high satisfaction may be contingent and unsustainable

without targeted policy intervention to address the identified disparities in infrastructure, supply chain logistics, and inclusive service design.

Inferential Analysis

Correlation Results

To test the relationships between the study variables, a simple linear regression analysis was conducted. Pearson correlation analysis was conducted to examine the bivariate relationships among all study variables. Governance of revenue and leadership principles exhibited statistically significant correlations with delivery of services. The correlation matrix also confirms that multicollinearity is not a concern between governance of revenue and leadership principles, as the correlations between the two is not excessively high (<0.8)

Table 4: Correlation Matrix

	Delivery of Services	Governance of Revenue	Leadership Principles
Delivery of Services	1		
Governance of Revenue	.761**	1	
Leadership Principles	.921**	.242**	1

Regression

The results of the regression indicated that governance of county revenue explained a significant proportion of variance in delivery of health services. That is, 27.2% (Adjusted $R^2 = .272$) of the variance in delivery of health services was predicted by governance of county revenue ($F(1, 250) = 7.975$, $p < .001$). To contextualize the practical significance of this relationship, the effect size was calculated using Cohen's $f^2 = \frac{(R^2)}{(1-R^2)}$. The value of f^2 was 0.39, which indicates a medium-to-large effect size according to conventional benchmarks (Cohen, 1988), suggesting that the observed effect of quality of governance of county revenue, while statistically significant, explained a substantial and meaningful proportion of variance in the delivery of health services.

Table 5: Model Summary (County Revenue Versus Service Delivery)

Source	SS	Df	MS	Number of obs	251
Model	4.452	1	4.452	F (1, 250)	7.975
Residual	139.548	250	0.558	Prob > F	.005 ^b
Total	144	251		R-squared	0.281
				Adj R-squared	0.272
				Std. Error of the Estimate	0.74712
				Cohen's f^2	0.39
Service Delivery	Coef.	Std. Err.	Beta	T	P> t
Constant	0.823	0.537		1.533	0.126
Governance of County Revenue	0.405	0.143	0.176	2.824	0.005

Moderation Effect of Leadership Principles

A moderated regression analysis was conducted to test whether the relationship between governance of county revenue and delivery of health care services is moderated by leadership principles. The predictor variables (leadership principles and governance of county revenue) were

mean-centered prior to analysis to reduce multicollinearity. The overall model was significant, $F(3,248)=7.46$, $p<.001$, explaining 6.6% of the variance. There was a significant main effect of leadership principles ($b=0.15$, $p=.009$). More importantly, the interaction between governance of county revenue and leadership was significant ($b=0.38$, $p=.028$; $R^2\text{-change} = .017$, $p=.028$), indicating that the relationship between revenue governance and service delivery depends on the level of leadership.

Simple slope analysis revealed that at low levels of leadership (1 SD below the mean), the effect of revenue governance on service delivery was non-significant ($b=0.04$, $p=.725$). At mean levels of leadership, the effect was positive but non-significant ($b=0.11$, $p=.175$). However, at high levels of leadership (1 SD above the mean), the effect was positive and significant ($b=0.27$, $p=.004$). This pattern indicates that effective governance of county revenue is positively associated with the delivery of health services only when it is coupled with strong leadership principles. Leadership acts as a facilitator, strengthening the link between fiscal governance and service outcomes.

Table 6: Moderating Effect of Leadership Principles

Outcome: Delivery of Health Services							
	R	R-sq	MSE	F	df1	df2	p
Model 1	0.258	0.066	0.136	7.455	3	248.	.000
	coeff	se	t	p	LLCI	ULCI	
constant	1.323	.024	54.783	.000	1.276	1.371	
Leadership Principles	.147	.056	2.642	.009	.257	.037	
Governance of County Revenue	.112	.082	1.360	.175	.275	.050	
int_1	.377	.171	2.206	.028	.040	.713	
Test (s) for unconditional interaction		R2-change	F	df1	df2	p	
int_1 : Governance of Revenue x Leadership		.017	4.867	1	248	.028	
Conditional Effect of X on Y at values of the moderator							
Mod	Effect	se	t	p	LLCI	ULCI	
Low: -0.413	.043	.113	.352	.725	.199	.285	
Mean: .000	.112	.082	1.360	.175	.050	.275	
High: 0.413	.268	.092	2.913	.004	.087	.448	

In summary, leadership principles significantly moderated the relationship between governance of county revenue and the delivery of health services. The governance of revenue was a significant positive predictor of health service delivery only when public value orientated leadership was high, supporting a synergistic effect where good governance and public value orientated leadership are both necessary for improved outcomes.

Conclusion

This study demonstrates that the governance of county revenue is a significant and positive determinant of health service delivery in Kenya's Level 5 public hospitals. That is, revenue governance comprising fiscal autonomy, allocation efficiency, and predictability, explains a substantial portion (28.1%) of the variation in service delivery outcomes. However, the relationship is not automatic or unconditional. While counties exhibit strong revenue autonomy and decision-making power over local funds, these gains are undermined by systemic weaknesses in allocation efficiency (e.g., inadequate staffing) and unpredictable revenue flows, particularly

from national transfers. This creates a fiscal environment that hinders consistent planning and service delivery.

Further the study reveals that leadership orientation acts as a key moderating variable. The positive impact of sound revenue governance on service delivery is only fully realized when coupled with strong public value orientated leadership exemplified by ethical stewardship, strategic direction, and equitable advocacy. In the absence of public value orientated leadership, even well-structured fiscal systems fail to translate into improved health outcomes. Thus, the research advances an integrated governance–leadership contingency model, arguing that devolution’s success in healthcare depends not merely on decentralizing funds, but on synergistically strengthening both fiscal governance and leadership orientation at the county level.

Recommendations

Based on the study's findings, the following evidence-based recommendations are proposed.

Management Recommendations (For County & Hospital Administrators)

The study recommends that the counties;

- Enhance Allocation Efficiency by directly linking budget allocations to frontline operational gaps, specifically prioritizing adequate staffing and the procurement of essential medical supplies to address the identified disconnect between financial processes and service outcomes.
- Strengthen Internal Controls by implementing robust transparency and accountability mechanisms, such as public expenditure tracking systems and regular internal audits, to ensure resources are used as intended and bridge the gap between leadership's ethical commitment and perceived systemic weaknesses.
- Invest in Leadership Development by designing and delivering capacity-building programs focused on developing proactive leadership competencies in ethical stewardship, strategic direction, and equitable advocacy, as these principles are critical for translating sound governance into improved service delivery.
- Adopting Technology-Enabled Systems for revenue collection, budget monitoring, and supply chain management to improve the efficiency, predictability, and oversight of local revenue flows and their utilization.

Policy Recommendations (For County & National Policymakers)

The study further recommends that the counties;

- Ensuring predictable fiscal transfers by formulating and enforcing policies that guarantee the timely and stable disbursement of national transfers (e.g., the Equitable Share) to counties to mitigate the funding volatility that hinders consistent health service planning and delivery.
- Mandate robust fiscal governance frameworks by developing and legislating clear standards for transparency, equitable allocation, and accountability in county health financial management, moving from principles to enforceable requirements.

- Aligning county and national health priorities by creating policy frameworks and conditional grant structures that ensure county revenue generation and health budgets are coherent with and advance national health sector goals and strategies.

Future Studies Recommendations

- Adopt longitudinal research designs: The study used a cross-sectional approach, offering a single “snapshot” in time. Future research should track changes in governance quality, leadership practices, and health service delivery over time to better understand causality and the long-term effects of reforms.
- Incorporate broader stakeholder perspectives: The study relied only on the views of healthcare personnel within hospitals. Future research should include patients, county finance officers, and national regulators to capture a more complete picture of governance, financing, and service delivery challenges.
- Extend research to lower-tier health facilities: This study focused only on Level 5 referral hospitals. Future studies should examine whether similar governance and leadership dynamics affect service delivery in primary healthcare facilities (e.g., dispensaries and health centers), where most Kenyans access care.

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