# The influence of budget allocation on project performance of health facilities funded by county governments in the North Rift, Kenya

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## Abstract

Health facility projects in North Rift, Kenya, frequently encounter delays, poor implementation, and inefficient resource use, despite a devolved funding system. This study examined how strategic participatory budgeting, specifically budget allocation, influences the project performance of health facilities funded by county governments in the North Rift region. Guided by Public Choice Theory, the study employed a mixed-methods design, analyzing data from 164 respondents selected from a population of 282 using Slovin's formula. Descriptive statistics, correlation, and regression analyses were used to present the results. The study revealed a strong positive correlation between budgetary allocation and project performance ($r = .884$; $p = .000$), indicating that financial resources directly enhance project outcomes. Budgetary allocation was also found to have a significant effect on project performance ($\beta = .209$; $p = .014$). The study recommended timely and equitable resource allocation to improve transparency and reduce mismanagement in health sector projects. These findings underscore the critical role of strategic financial planning in improving the delivery of development projects in Kenya's devolved health system.

**Keywords:** *Budget allocation, Participatory budgeting, Devolved funding, Project performance, Health facilities, North Rift Kenya*

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## 1.0 Introduction

Project performance, particularly in public health infrastructure, is a vital concern for governments worldwide. Essential performance criteria often include punctual completion, budget adherence, and adherence to quality standards. The United States allocates around 18% of its GDP to healthcare, and most health projects meet rigorous performance requirements. In contrast, countries such as India, despite substantial investments through projects like Ayushman Bharat, continue to face delays and budget overruns, reflecting ongoing challenges in achieving optimal project performance. Nations that emphasize effective, transparent budgeting and democratic methods typically achieve superior outcomes. Scandinavian nations prioritize community engagement in healthcare decision-making, resulting in superior project outcomes and equitable resource allocation.

Efficient budget allocation is a critical determinant of project performance in health facilities, particularly in low- and middle-income countries where resources are often limited. Proper financial planning and allocation ensure the timely procurement of essential equipment, staffing, and infrastructure needed for effective service delivery. Studies show that inadequate or misaligned budget allocations often lead to project delays, cost overruns, and compromised healthcare outcomes (Adjagba et al., 2024; Musiega et al., 2023). In contrast, well-structured budgeting frameworks aligned with project objectives enhance accountability, resource optimization, and timely project completion (Kariuki et al., 2022). Recent empirical evidence further underscores that transparent, participatory budgeting processes significantly improve project outcomes in public health institutions (Ahwera, 2021), highlighting the need for strategic fiscal governance in health sector project implementation. As health systems in developing contexts face increasing pressure to improve performance, the role of budget allocation becomes even more central to sustainable healthcare delivery.

The significance of budget allocation in driving project performance is widely recognized worldwide. In Germany, where healthcare spending exceeded €465 billion in 2021, health infrastructure projects benefit from predictable and transparent budgeting practices. In contrast, misaligned budgeting in some developing nations has been a barrier to project delivery. For example, in Brazil, disparities in health spending between urban and rural areas have led to incomplete projects in underserved regions. Across Africa, insufficient budgetary allocation and delayed disbursements are primary factors contributing to stalled health projects. In Nigeria, allocating less than 5% of its national budget to health projects has been linked to abandoned facilities and poor health outcomes.

Poor budgetary planning or insufficient funding can cause delays and unfinished projects, while well-structured financial management within Participatory Budgeting (PB) frameworks can enhance project success. Adequate and timely financial resources are essential for projects to function effectively. In Kenya, while the health budget increased to KES 121 billion in 2022, mismanagement and inequitable allocation across counties persist, affecting project timelines. Project performance trends in health facilities across Kenya show both progress and persistent challenges. County governments, especially in the North Rift, face significant disparities in resource allocation and governance capacity. For instance, while Uasin Gishu County has made commendable progress in completing health facilities, Turkana struggles with delays due to resource constraints and poor governance. National trends show increased investment in health projects, but issues such as delayed fund disbursement and weak stakeholder engagement persist.

A 2022 report by the Council of Governors indicated that only 60% of health projects were completed on time, emphasizing the need for improved governance and participatory mechanisms. In the North Rift, a 2020 survey revealed that only 35% of residents felt included in project decision-making processes, highlighting the need for enhanced engagement.

Budgetary allocation is crucial for securing resources for project implementation, particularly in the healthcare sector. Funding distribution directly influences health institutions' capacity to execute critical projects such as infrastructure development, medical supply procurement, and personnel management. Participatory budgeting can foster transparency and accountability by ensuring that budget allocations genuinely reflect community needs, especially in marginalized areas. A primary challenge for health facilities is under-allocation or delayed funding, which negatively affects project performance. Inefficiencies in allocation, compounded by political intervention, frequently cause delays in critical health infrastructure projects, severely affecting health outcomes and eroding public trust.

Despite significant public investment in the health sector, many health facility projects continue to face persistent challenges, including delays, substandard outputs, and budget overruns. These inefficiencies often stem from poor budget allocation practices, including inadequate funding, misprioritization, and a lack of stakeholder involvement in financial planning (Adjagba et al., 2024; Musiega et al., 2023). While devolved governments have increased fiscal autonomy at the local level, disparities in resource distribution and weak budget monitoring mechanisms continue to undermine project performance (Kariuki et al., 2022). There is therefore a need to empirically examine how budget allocation influences project performance in health facilities to inform effective planning and resource utilization. The study sought to determine the influence of budget allocation on project performance in health facilities funded by county governments in the North Rift of Kenya. This study contributes to the broader discussion on public sector efficiency and health infrastructure development, focusing on strategic budget allocation to identify critical factors influencing project outcomes. The findings aim to provide valuable insights for policymakers and practitioners in Kenya and beyond, helping to design interventions that enhance health facility project performance and improve service delivery for underserved communities.

*"Timely and adequate financial support, aligned with project needs, enhances efficiency, ensures resource availability, and enables timely completion of projects."*

***Theory and Hypothesis***

*Public Choice Theory (PCT)*

This theory is particularly relevant to understanding the dynamics of budget allocation and project performance in the public sector. Public Choice Theory, developed by economists such as James Buchanan and Gordon Tullock, applies economic concepts to political decision-making, treating government officials as self-interested individuals rather than solely public-serving entities. Its origins trace back to classical economic ideas that individuals act in their own self-interest, and Anthony Downs further introduced rational choice theory to political science in the 1950s. Buchanan's work on government conduct through an economic lens earned

him the Nobel Prize in Economic Sciences in 1986.

According to Public Choice Theory, government officials often prioritize their political interests unless held accountable to citizens or other stakeholders. Participatory budgeting, by allowing community members to directly influence budget allocations, ensures resources are directed to projects they value most, aligning public expenditure with community needs. This greater alignment ensures health programs receive sufficient funding and support, leading to higher project performance. Recent research has demonstrated that participatory budgeting increases transparency and accountability in public finance management, leading to more effective resource allocation and reducing the potential for corruption and misallocation of funds, which directly impacts the timely completion of health projects.

The theory also addresses information asymmetry, in which agents (those implementing projects) may possess more information about project progress than principals (county governments or funding organizations). Participatory budgeting helps bridge this gap by enabling residents to share local knowledge about the needs and conditions of healthcare facilities. When local knowledge informs budget choices, resources are allocated more efficiently, resulting in improved project planning and execution and enhanced performance. Public Choice Theory highlights the necessity of aligning government choices with public preferences. Without public oversight, political actors may favor policies that benefit them politically, potentially leading to wasteful budget allocations. Public engagement is thus crucial to linking budget allocations with actual community needs.

In participatory budgeting, robust accountability procedures are vital to prevent misallocation of resources. Public Choice Theory suggests that direct public involvement in budgeting increases the likelihood of funds being allocated to priority projects, thereby lowering the risk of inefficiencies. This theory is directly relevant to the study's focus on budget allocation as a factor influencing project performance. In a participatory budgeting environment, involving the public in decision-making can serve as a check on government actors, promoting more efficient and fair resource distribution. Studies have found that participatory budgeting, guided by Public Choice Theory, fosters openness and aligns budget allocations with community needs, thereby improving project performance in the health sector.

In resource-constrained areas such as Turkana and Uasin Gishu in the North Rift, Public Choice Theory supports the notion that participatory budgeting can mitigate the self-interest of decision-makers. By aligning budget allocations with local health needs, participatory budgeting, grounded in PCT, is expected to increase the efficiency and success rate of health programs. Therefore, Public Choice Theory provides a crucial lens for understanding how stakeholders' self-interests and institutional frameworks affect resource allocation, often leading to inefficiencies or misalignments that impede project performance. This study uses PCT to investigate how participatory budgeting can reduce these issues in North Rift counties, ensuring that allocated funds are used directly to complete health projects, thereby emphasizing the necessity of participatory decision-making and responsibility for achieving long-term project objectives. Overall, PCT helps explain how decision-making dynamics influence budget allocation and other critical factors in health projects, shedding light on their impact on project performance in the North Rift region.

***Literature Review***

Budgetary allocation is a critical determinant of project performance in healthcare systems worldwide. A systematic review by Homauni et al. (2023) assessed various budgeting methods in healthcare, including capital, global, and performance-based budgeting, and highlighted that the chosen approach should align with the country's specific healthcare infrastructure and organizational context. This is particularly pertinent for Kenya, where effective budgeting can significantly improve healthcare outcomes in resource-limited regions such as the North Rift.

The World Bank (2021) examined global trends in health system budget execution, identifying discrepancies between planned and executed budgets as a common cause of inefficiency and underperformance. The report emphasized aligning budgeting processes with the actual needs and capacities of healthcare providers, underscoring the need for in-depth research on the dynamics between budgeting and healthcare outcomes, especially in countries facing resource limitations. This underscores the need for effective budget execution strategies in Kenya to ensure that allocated funds translate into tangible improvements in healthcare delivery.

Yang et al. (2021) examined how global budgeting affects healthcare resource allocation efficiency in Taiwan, finding that it significantly enhanced efficiency by controlling expenditures and emphasizing cost-effectiveness. However, the long-term effects on healthcare quality and patient outcomes remained unclear, suggesting a need for further research. These insights are relevant to Kenya's healthcare system, particularly in regions like the North Rift with resource constraints. Similarly, Mhlanga and Ndlovu (2021) conducted a systematic review of diverse budgeting practices in healthcare systems globally, noting challenges in aligning budgeting with performance outcomes and highlighting the importance of transparent and accountable financial management. Despite valuable insights, their study noted a lack of empirical evidence on the practical effectiveness of different budgeting methods, emphasizing the need for context-specific studies, such as those focused on Kenya's North Rift region, to understand how local factors influence budgeting effectiveness.

In Sub-Saharan Africa, Campbell et al. (2018) found that participatory budgeting significantly improved budgetary allocation efficiency in the health sector, leading to better project performance, especially in counties with policy frameworks that promote community involvement. They concluded that applying participatory budgeting principles strengthens health infrastructure by addressing community-specific needs and recommended more stringent strategies to direct budget allocations toward critical healthcare areas. Mwangangi (2022) reinforced this in Kenya, showing that counties using participatory budgeting achieved higher health project performance rates because resources were more targeted to urgent healthcare needs. His cross-sectional survey of 47 Kenyan counties emphasized that equitable budget allocation through participatory budgeting is essential for enhancing project performance in healthcare.

Ochieng and Adhiambo (2023) examined community-driven budget allocation in East African local governments and found that health projects influenced by such allocations reported higher performance and greater community satisfaction. By contrast, projects with centralized budgeting and limited community engagement faced challenges, including underfunding and delays. Their qualitative study, which included two Kenyan counties, found that community-driven budget allocation significantly enhances the efficiency and success of healthcare

projects and proposed frameworks for meaningful citizen engagement in budgetary decisions. Nyaga and Mwangi (2022) found that budget transparency and accountability practices were significantly correlated with higher project performance rates in low-income Kenyan counties, and that participatory budgeting exhibited greater accountability, leading to improved resource utilization and timely project completion. Kimani and Mutinda (2020) concluded that counties with decentralized, participatory budget distribution had superior project performance rates in the health sector, while inefficient centralized systems led to misallocation and delays.

Internationally, Silva et al. (2023) conducted surveys and focus groups in Brazil, finding that participatory frameworks improved project performance by aligning financial resources with community goals and recommending formalizing participatory budgeting approaches to bolster accountability and reduce resource waste. In the United Kingdom, White and Taylor (2021) found that delayed budget releases disrupted timelines and escalated project costs in NHS infrastructure projects, suggesting predictive budgeting practices and enhanced financial planning. Kumar and Patel (2020) focused on rural healthcare facilities in India, finding that projects with designated budget allocations were more likely to be completed on schedule, emphasizing linking disbursements to milestones and conducting regular financial assessments. Johnson and Carter (2022) highlighted that flexible budget allocation mechanisms in Australia allowed projects to adapt to economic fluctuations, resulting in improved performance outcomes, and recommended incorporating contingency reserves.

In Nigeria, Adebisi et al. (2020) examined health budgetary allocation and expenditure in the context of Universal Health Coverage (UHC), revealing a significant shortfall in funding from 2014 to 2020 relative to the Abuja Declaration target, which hindered UHC goals. This underscores the crucial role of adequate and efficient health budget allocation for UHC, particularly in Kenya's North Rift. Kaira and Kajoba (2025) examined Constituency Development Fund (CDF) allocations in Zambia, finding that inadequate and delayed funding led to incomplete healthcare projects and proposing timely financial disclosures and improved oversight. Finally, Musiega et al. (2022) explored how budget execution processes affect the efficiency of county health systems in Kenya, identifying issues such as poor budget credibility, delays in cash disbursements, and inefficient procurement practices that undermined service delivery. They recommended improving financial processes, directly applicable to enhancing health facilities funded by county governments in Kenya's North Rift.

***Hypothesis***

*$H_{01}$ – Budget allocation has no significant influence on the project performance in health facilities funded by the county government in North Rift, Kenya.*

## 2.0 Materials and Methods

This study was grounded in the philosophy of Positivism, which advocates the use of scientific methods and the study of observable, measurable facts to understand social reality. Positivist scholars believe that reality is objective and can be accurately described using quantitative data, enabling the development of generalizable laws and theories. This approach was well suited to examining the influence of participatory budgeting on health project performance, as it facilitated the objective measurement of variables such as budgetary allocation, community engagement, leadership support, and accountability mechanisms. The study's focus on the relationship between independent and dependent variables made Positivism well suited, as it involved

gathering numerical data for statistical analysis to identify trends and correlations. Data on budget allocation and project performance were quantified, enabling an objective evaluation of how budgetary changes affected project outcomes.

The study used a descriptive survey design, effective for obtaining detailed, accurate information about individuals, organizations, and phenomena at a specific point in time. This design enables systematic exploration of relationships between variables and the collection of both quantitative and qualitative data for comprehensive analysis. The two counties chosen for the study, Turkana and Uasin Gishu, presented contrasting health system contexts: Turkana, a marginalized region with significant challenges to healthcare access, and Uasin Gishu, a relatively developed county with stronger health infrastructure. This contrast provided an opportunity to examine how participatory budgeting operated in both disadvantaged and better-developed settings, enhancing the generalizability of findings across varied contexts.

The target population for this research included county government officials directly involved in participatory budgeting or health project implementation, community leaders participating in public budgeting discussions, and adult residents of Turkana or Uasin Gishu counties who had engaged with or benefited from local health projects. It also encompassed project managers overseeing county-funded health facility projects and policymakers involved in health-related budgeting. Non-relevant officials, leaders, residents, or project managers were excluded to maintain focus. The total target population was 282, distributed across various categories.

Different sampling techniques were used for various groups to ensure accurate representation and data reliability. Census sampling was used for community leaders (20), project managers (10), and policymakers (20) because of their small populations, ensuring every relevant perspective was captured. For county government officials (32) and residents (200), stratified random sampling was adopted, stratified by county and then by function to account for differences in roles and responsibilities. Proportionate sampling was also used for residents to ensure balanced representation across sub-counties or wards, with Turkana and Uasin Gishu each contributing 50%. Slovin's formula was used to determine the overall sample size, resulting in approximately 164 respondents for the study.

The primary data collection tool was a 5-point Likert-scale questionnaire covering all variables under investigation, including demographic questions and research items aligned with the study objectives. Questionnaires were used to gather quantitative data to assess relationships between variables such as budget allocation and project performance, enabling systematic data collection and statistical analysis. Ethical considerations were paramount, ensuring that participants were fully informed about the study's objectives, methods, potential risks, and benefits before obtaining their consent. Participants' personal information was protected, and data were stored securely for research purposes only. Research authorization was obtained from Kenya Methodist University, the National Commission for Science, Technology, and Innovation (NACOSTI), and the County Secretaries of Turkana and Uasin Gishu. Questionnaires were distributed via postal mail, physical delivery, and email, with sufficient time allowed for completion to encourage a high response rate.

## 3.0 Results and Discussions

The data analysis for this study used both descriptive and inferential statistical techniques in SPSS version 25. Descriptive statistics, including frequencies, percentages, means, medians, standard

deviations, and ranges, summarized the data's general characteristics, providing insights into variables such as budgetary allocation. Inferential statistics tested the study's hypotheses and examined relationships between variables. Pearson's correlation analysis assessed the strength and direction of relationships, while multiple linear regression analysis evaluated the predictive power of independent variables on project performance. Hierarchical regression was conducted in three steps: a base model with independent variables, a moderation model including institutional governance, and an interaction model testing the moderation effect. Prior to regression, diagnostic tests (normality, multicollinearity, homoscedasticity, linearity) were conducted to ensure the data met model assumptions and to validate the reliability of the predictive model.

***Descriptive Analysis of Budget Allocation Variable and Project Performance***

The descriptive statistics show that a majority of respondents agreed or strongly agreed with positive statements about budget allocation and project performance in health facilities. Notably, 74.1% affirmed timely disbursement of funds (Mean = 4.07), and over 68% supported the equitable distribution of resources (Mean = 3.95). Transparency in budgeting and stakeholder consultation also received high approval, with means above 3.9. However, perceptions of the sufficiency of financial allocation were comparatively lower, with only 64.5% in agreement and a mean of 3.80. Overall, responses indicate generally favorable views of budget processes, though the adequacy of funding remains a concern.

**Table 1**

*Descriptive Statistics on Budget Allocation and Project Performance in Health Facilities*

| Statement | SD F(%) | D F(%) | N F(%) | A F(%) | SA F(%) | Mean | Std Dev. |
|---|---|---|---|---|---|---|---|
| Funds are disbursed to health facility projects promptly. | 3 (2.2%) | 6 (4.4%) | 26 (19.3%) | 44 (32.6%) | 56 (41.5%) | 4.07 | 0.99 |
| Resources are distributed equitably across different health facility sectors. | 4 (3.0%) | 4 (3.0%) | 34 (25.2%) | 46 (34.1%) | 47 (34.8%) | 3.95 | 0.99 |
| The budgeting process ensures transparency in the allocation of funds. | 4 (3.0%) | 5 (3.7%) | 34 (25.2%) | 43 (31.9%) | 49 (36.3%) | 3.95 | 1.02 |
| Budgetary allocation priorities align with health facility needs. | 4 (3.0%) | 7 (5.2%) | 33 (24.4%) | 39 (28.9%) | 52 (38.5%) | 3.95 | 1.05 |
| Stakeholders are consulted during the budget allocation process. | 4 (3.0%) | 8 (5.9%) | 25 (18.5%) | 51 (37.8%) | 47 (34.8%) | 3.96 | 1.02 |
| Financial allocation to health facilities is sufficient for completing the project. | 8 (5.9%) | 4 (3.0%) | 36 (26.7%) | 46 (34.1%) | 41 (30.4%) | 3.80 | 1.09 |

***Hypothesis Testing***

*Correlation Between Budgetary Allocation and Project Performance*

The table presents the Pearson correlation analysis results for budgetary allocation and project performance, aiming to establish the strength and direction of the relationship between the two variables. There is a very strong, statistically significant positive correlation (r = 0.884, p = .000) between budgetary allocation and project performance in county-funded health facilities. This suggests that better financial planning and timely disbursement are linked to improved project outcomes. The findings underscore the importance of aligning budgetary provisions with project needs and timelines. Consistent with Kimani and Mutinda (2022), the study underscores that transparent, inclusive, and strategic budgeting enhances the effectiveness of public health infrastructure delivery under devolved governance.

**Table 2**

*Correlation Between Budgetary Allocation and Project Performance*

| | | Budgetary Allocation | Project Performance |
|---|---|---|---|
| Budgetary Allocation | Pearson Correlation | 1 | .884 |
| | Sig. (2-tailed) | | .000 |
| | N | 135 | 135 |
| Project Performance | Pearson Correlation | .884 | 1 |
| | Sig. (2-tailed) | .000 | |
| | N | 135 | 135 |

*Regression analysis*

Regression analysis was conducted to assess the influence of budget allocation on project performance in county-funded health facilities in North Rift, Kenya. The regression analysis in Table 3 indicates that budget allocation has a positive and statistically significant influence on project performance in these facilities. The unstandardized coefficient (B = 0.222) suggests that for every unit increase in budget allocation, project performance improves by 0.222 units. The relationship is significant at the 0.01 level (p = .006), confirming its reliability. The standardized beta value (β = 0.233) further shows a moderate effect size, highlighting budget allocation as a key predictor of project success (Kariuki et al., 2022).

The regression model

$$\mathbf{Y=\beta_0+\beta_1X_1+\epsilon}$$

Substituting the figures:

$$\mathbf{Y = 0.147\ 0.222X_1 + \epsilon}$$

**Table 3**

*Regression Coefficients – Step 1*

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | .147 | .137 | | 1.071 | .286 |
| | Budgetary Allocation | .222 | .079 | .233 | 2.792 | .006 |

Given the consistent statistical significance ($p < 0.05$) in correlation and regression analyses, the null hypothesis (H01) that budget allocation has no significant influence on project performance in health facilities funded by the county government in North Rift Kenya is rejected. This suggests that budgetary allocation has a significant positive influence on project performance.

***Summary of findings***

The study's findings consistently highlight the central role of budgetary allocation in shaping the performance of health facility projects in the North Rift, Kenya. A majority of respondents agreed that timely disbursement and equitable distribution of resources significantly influence project success. Transparency in the budgeting process and alignment of budget priorities with health facility needs were also identified as crucial contributors to improved outcomes. These results suggest that systematic financial planning and timely fund releases increase the likelihood of projects being completed within scope, budget, and schedule, reinforcing the importance of strategic financial planning and targeted resource allocation in participatory budgeting. Budgetary allocation exhibited a strong positive correlation with project performance ($r = .884$; $p = .000$) and a significant positive effect ($\beta = .209$; $p = .014$), indicating that increased financial support directly enhances project performance.

## 4.0 Conclusion

Based on the study's findings, it can be concluded that budgetary allocation plays a fundamental role in determining the performance of county-funded health facility projects in the North Rift, Kenya. Timely and adequate financial support, aligned with project needs, enhances efficiency, ensures resource availability, and enables timely completion of projects. The study established a strong positive correlation between budget allocation and project performance. Key determinants of successful project delivery included timely fund disbursement, equitable resource distribution, and alignment of budgeting with project needs. The overarching conclusion is that proper budgeting practices—especially those that are transparent, needs-based, and inclusive—significantly enhance project efficiency and effectiveness. Therefore, strategic financial planning is essential for improving the performance of county-funded health projects in the region.

## 5.0 Recommendations

The study found that budgetary allocation significantly influences project performance ($\beta = .209$; $p = .014$). It is recommended that counties prioritize timely disbursements and ensure that budget allocations align with the specific needs of health facilities. This includes adopting transparent budgeting processes and eliminating delays in the release of funds to facilitate smooth project implementation.

***Suggestions for Further Studies***

Because budgetary allocation was found to significantly influence project performance ($\beta = .209$; $p = .014$), future studies could examine how political dynamics influence resource distribution and whether this affects the equity and efficiency of health projects

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