Resource Allocation Management in Zambia's Devolved Health System: A Comparative Study of Lusaka Province Before and After Devolution

Author1 **Susan Chabala** Author 2 **Stanley Nyirenda**

[1] *School of Public Health Administration, Department of Public Health, Texila American University, Guyana South America.*
[2]*Central Veterinary Research Institute, Balmoral, Lusaka, Zambia*

ABSTRACT

This study examined resource allocation management in Zambia's devolved health system before and after devolution in Lusaka Province. Conducted as a mixed-method cross-sectional study in four districts of Chilanga, Chongwe, Rufunsa, and Lusaka, between 2023 and 2024, the research combined quantitative analysis of funding data with qualitative insights from interviews with 367 facility staff. Quantitative data were sourced from government reports and Ministry of Finance records to assess funding disbursements for Management Support Services (MSS) and Primary Health Services (PHS). Paired t-tests using SPSS evaluated changes in funding pre- and post-devolution. Results showed a statistically significant increase in PHS funding in the rural districts of Chilanga, Chongwe, and Rufunsa. The paired t-test yielded a t-value of 11.13 (df = 2) with a one-sided p-value of 0.003988, indicating an average funding increase of approximately 52,435 units, with a 95% confidence interval confirming the increase was at least 38,678 units. MSS funding remained stable in these districts, while Lusaka District experienced funding variations attributed to constituency realignment, not devolution. The study concludes that devolution positively impacted primary health care funding by increasing program funds in rural districts. The uniform increase in PHS funding aligned with population needs, likely reducing regional disparities and improving equitable access to health services. These findings support the objective of devolution to enhance resource allocation and service delivery at the community level.

Article history:

Received 15 September 2025

Revised 30 September 2025

Accepted 17 October 2025

Available online 22 October 2025

****Corresponding author email:***
chabalas2001@yahoo.com

KEYWORDS: *Devolution, Resource Allocation, Primary Health Services (PHS), Devolved health system.*

Introduction

Zambia's aspiration is to have a fully decentralized governance system that endeavors to facilitate the participation of all citizens in the decision-making process to ensure improved service delivery and local development of its people. In 2002, Zambia adopted the first National Decentralization Policy that was launched in 2004 and further revised in 2013. The 2013 policy recognized the critical role of various players such as traditional leaders with a key role in national development and the districts that have a critical role in facilitating development and service delivery through encouraging and promoting citizen participation. This process is driven by elected Mayors and Council chairpersons (Decentralization Secretariat, 2023).

To pursuit the country's vision of decentralizing the governance systems, Zambia in 2015 signed the African Charter and Principle of Decentralization, Local Governance and Local Development. In 2016, decentralization was entered into the constitution of the country through the Amendment Act, No .2 of 2016. This process led the country to resolve to develop the governance systems. The new decentralized structure of governance had four levels namely, National, Provincial, District and Sub-district level (Decentralization Secretariat, 2023).

During the process of the 2013 policy implementation some key milestones were achieved such as the election of Mayors/Council chairpersons, the establishing of Ward Development Committees (WDCs), and the Constituency Development Fund Committee (CDFC) for strengthening citizen participation in local development. Other areas that were strengthened were establishing the role of traditional and community leaders through their participation in House of Chiefs in Councils and through the constituency development committees. By decentralizing some functions to the local Authorities this allows for service to be brought closer to the people (Decentralization Secretariat, 2023).

Since 2016, when decentralization was entered into the constitution of the country through the Amendment Act, no .2 of 2016, the implementation has been delayed hence the revised policy reform of 2023 to help accelerate the process.

Previous attempts to actualize the vision and aspiration have been negatively impacted by several factors and constraints in Legislative Framework, political economy, and weak capacity at various levels. To achieve this, the 2023 reforms have considered the many challenges that hindered the successful implementation of the devolution process. The focus of the policy is to transfer of rights, functions, and powers from the central government to the subnational level. Through the policy, the Government seeks to fully devolve exclusive functions of the Local Authority currently performed by central government to the local Authority with matching resources (Decentralization Secretariat, 2023).

The implication of this policy on Lusaka and other provinces in Zambia is that the Ministry of Health from district level to Health Posts, Ministry of Transport, Ministry of Agriculture and Ministry of Infrastructure and Housing will devolve and managed by the Local Authorities. The funding and matching resources will be moved to local Authority as well to decentralize the processes (Decentralization Secretariat, 2023).

The devolution of the health sector is essential for promoting citizen participation. It is against this background that this study sought to assess the management and allocation of resources within a devolved framework, both prior to and following the implementation of devolution in Lusaka Province. It seeks to understand the increase in resource allocation following devolution and how this impacts service delivery in long run.

Statement of the problem

Zambia has made significant strides toward establishing a decentralized system of governance aimed at improving service delivery and promoting citizen participation in local development. The adoption of the National Decentralization Policy in 2004, its revision in 2013, and the constitutional entrenchment of devolution through the Amendment Act No. 2 of 2016 have laid a strong foundation for shifting responsibilities, functions, and decision-making powers from the central government to local authorities. The 2023 policy reforms further emphasize the need to match devolved functions with adequate resources to ensure effective implementation. The study aims to investigate whether these DHOs have been allocated sufficient financial, human, and logistical resources to effectively deliver on their expanded responsibilities of providing quality health care.

Specific Objective.

To investigate the resources allocation management in the devolved health system before and after the devolution.

Literature Review.

This chapter critically examines the existing theoretical and empirical literature on resource management and allocation within Zambia's devolved health system, with a specific focus on Lusaka Province before and after devolution. The review adopts a multi-level approach, analyzing studies conducted at the global, regional, and national levels. Additionally, the chapter explores the methodologies employed in previous research to identify existing knowledge gaps and inform the current study.

2.1.1 Global Perspective

Devolution has been widely adopted as a governance strategy to improve the efficiency and responsiveness of public service delivery, including in the health sector. Evidence from multiple contexts suggests that devolution can significantly influence health financing mechanisms, particularly at the primary health care level. A recent study by the World Bank Group (2023) on Indonesia provides valuable insight into how decentralization shapes health financing arrangements. The study found that devolution in Indonesia allowed local authorities increased autonomy over health budgets, enabling fund allocation to be tailored more closely to local needs. This local-level discretion enhanced responsiveness and flexibility in resource distribution. However, the study also highlights a critical downside: the decentralization process led to increased inequalities in health resource distribution across different districts and regions. Regions with better administrative capacity or stronger political influence were more likely to secure higher funding, thereby widening disparities in access to care (World Bank Group 2023).

Similarly, findings from the current study align with the Indonesian case, confirming that devolution has led to an increase in funding levels for primary health care in the study sites. These parallels suggest a broader global trend where decentralization fosters localized control over health financing, often improving alignment with local priorities but simultaneously posing challenges related to equity and uniformity in service provision. These findings underscore the importance of balancing local autonomy with mechanisms that ensure equitable distribution of resources across region a challenge common to many countries undergoing health system decentralization (World Bank Group 2023).

Shahzadi (2019) conducted a comparative study on the impact of devolution on health system development in Pakistan, examining both the pre- and post-devolution periods. The study utilized the World Health Organization's Health System Framework, which encompasses six key building blocks: service delivery, health workforce, health information systems, leadership and governance, access to essential medicines, and healthcare financing (Shahzadi, 2019).

In terms of healthcare financing, the study found that provinces faced significant challenges in utilizing their allocated health budgets. Delays in decision-making processes and protests by consultants over late payments hindered the timely implementation of health programs. The resulting inadequacy and inefficiency in public healthcare services led to a growing reliance on the private sector, which in turn increased the cost burden on individuals. This situation contributed to Pakistan being among the countries with the highest levels of out-of-pocket healthcare expenditures. Notably, the study observed a sharp decline in overall healthcare expenditure during the post-devolution period (Shahzadi, 2019; Sikalumbi, 2021).

Similarly, Zaidi et al. (2019) explored the structural and systemic changes required to support a sustainable devolution process in Pakistan's health sector. The study aimed to assess how sub-national governments leveraged their devolved powers for improved planning, budgeting, and reform implementation. It focused on three core objectives:

1. Assessing whether increased resources led to increased government spending on health;
2. Evaluating whether enhanced provincial policy authority improved health planning processes;
3. Reviewing the progress made in health system reform, including aspects of program ownership, capacity building, coordination, and leadership at the provincial level.

The findings revealed several shortcomings. The devolution process was implemented with limited consultation and planning with provincial and local authorities, resulting in an abrupt transfer of responsibilities and administrative burdens. Although there was an increase in government health expenditure (from 72% in 2009 to 82% in 2014), actual budget execution remained stagnant at 75%. Delays in fund disbursement led to strikes by doctors and community health workers, as well as shortages of medical supplies, particularly in vertical health programs. Furthermore, the study highlighted that many vertical programs struggled to integrate into the broader health system due to resistance from program managers and lack of coordination. The absence of effective federal oversight weakened the overall devolution transition, slowing down reforms and undermining progress in achieving program integration and service delivery improvement (Zaidi et al., 2019).

2.1.2 Regional Perspective

At the regional level, devolution has been promoted as a strategy to strengthen health systems by enhancing the allocation of resources to primary health care. In the Kenyan context, devolution aimed to increase resource flows to the county level, where health service delivery is closest to the population. However, evidence suggests that the implementation of devolution has encountered significant challenges.

Adjagba et al. (2024) conducted a study in Kenya revealing a disconnect between the planning and budgeting processes during the allocation of health resources under the devolved system. This misalignment often resulted in delays and limitations in budget allocations, undermining the intended improvements in service delivery. Furthermore, the study identified inadequate capacity for planning at the county level as a critical barrier to effective resource utilization. Political interference further compounded these issues, leading to inequities and inefficiencies in the distribution of health funds (Adjagba, *et al.*, 2024).

These findings highlight broader concerns in the region regarding the effectiveness of devolution in achieving equitable and efficient health financing. While the principle of decentralizing resources is widely supported, the Kenyan experience underscores the need for stronger institutional frameworks, capacity-building, and safeguards against politicization to ensure that devolution translates into real improvements in health outcomes (Adjagba, *et al.*, 2024).

Kairu et al. (2021) conducted a cross-sectional study to examine the financing of health facilities in Kenya within the context of the devolved health system. The research was carried out in five purposively selected counties, offering insights into the challenges and disparities in health financing at the sub-national level. The study revealed significant inconsistencies in the planning and budgeting processes across the counties. Health centres and hospitals followed non-standardized budgeting procedures, resulting in the development of budgets that were often described as "wish lists plans that did not align with the actual resources available. As a result, the budgets lacked credibility and failed to guide effective financial decision-making (Kairu et al.,2021; Hamilandu, 2025).

A major issue highlighted was the unpredictability in both the amount and timing of funds disbursed to health facilities. This uncertainty undermined service delivery, making it difficult for facilities to plan and operate efficiently. Moreover, the allocation of funds at the health centre level was heavily skewed toward personnel costs, with approximately 80% of the budget going toward salaries. This left only 20% for all other operational needs, which contributed to frequent stock-outs of essential medical commodities (Kairu et al.,2021).

Based on these findings, Kairu et al. (2021) recommended several key interventions:

- Standardizing budgeting and planning processes across counties to improve consistency and accountability;
- Reducing reliance on donor funding and user fees by transitioning toward more sustainable financing mechanisms;
- Strengthening public financial management (PFM) systems through targeted reforms; and
- Allocating resources based on actual health needs, rather than uniform or politically influenced formulas.

These findings emphasize the critical role of sound financial governance in ensuring the success of devolved health systems and improving service delivery at the local level (Kairu et al.,2021; Kayangula, 2025).

2.1.3 Local Perspective.

Mulumba Chishimba Nakamba's PhD thesis, *Decentralization and Health Service Governance in Zambia* (2021), provides a core insight into how Zambia's health sector has been devolved since 1992. Nakamba argues that proponents of decentralization posit that devolving governance brings government closer to communities, enabling more responsive service delivery at the local level. However, he also highlights critics' concerns: the success of decentralization depends heavily on domestic institutional structures, capacity, and implementation (Nakamba, 2023).

There is variation in how well devolved functions and resource allocation are implemented across provinces and districts, which reflects differences in institutional capacity, human resources, infrastructure, and clarity in roles of actors. Although some degree of decision-space is given to districts (in aspects such as internal allocation and governance), many critical controls remain centralized (notably over salaries, allowances, procurement thresholds). This limits how local actors can manage resources in practice (Nakamba, 2023).

Other Zambian literature supports or adds to Nakamba's findings, especially in the areas of resource management and allocation. One example is the National Decentralization Policy. It shows that decentralized governance structures, such as Ward Development Committees, are being put in place. However, real fiscal decentralization is still lacking. Local authorities do not yet have full control over financial systems, revenue collection, or the fair distribution of funds through equitable formulas. here are capacity gaps, unclear institutional roles, and procedural/administrative bottlenecks slowing full implementation according to Transparency International, Zambia (TIZ, 2023).

Research on local government also point out that local authorities rely heavily on government grants, have limited locally generated revenue, are often under-staffed, and face delays or inadequacies in disbursement of funds. Expenditures are sometimes dominated by fixed costs such as salaries/emoluments, leaving little flexibility for discretionary or local priority spending. (Mwansabombwe Town Council, 2023).

2.1.4 Global Perspective Gaps.

The reviewed literature underscores both the potential benefits and challenges of health sector devolution but reveals several global knowledge gaps. Key issues include the lack of detailed models for balancing local autonomy with national oversight, as highlighted by the World Bank (2023) and Zaidi et al. (2019), and the negative consequences of weak federal guidance in Pakistan's devolution. Shahzadi (2019) offers a more comprehensive analysis using the WHO Health System Framework, but such holistic approaches are rare. Most studies focus narrowly, often on financing, neglecting other health system components like governance, workforce, and access to medicines. Overall, there is a need for more integrated, comparative, and systems-based research to address gaps in

equity, implementation capacity, and long-term outcomes in global health sector devolution.

2.1.5 Regional Perspective Gaps:

At the regional level, particularly in Kenya, devolution was intended to improve primary health care by directing more resources to local health systems. However, studies by Adjagba et al. (2024), Abudetse et al. (2025) and Kairu et al. (2021) reveal significant gaps in implementation. Key issues include poor alignment between planning and budgeting, weak county-level capacity, political interference, and inconsistent financial processes across counties. Health budgets often lack credibility, are dominated by personnel costs, and are undermined by unpredictable funding disbursements. These challenges limit the effectiveness and equity of health service delivery. The findings point to critical gaps in institutional capacity, financial governance, and standardized planning processes. Strengthening public financial management, reducing donor dependence, and adopting needs-based resource allocation are essential to realize the goals of health sector devolution.

2.1.5 Local Perspective Gaps:

Literature on Zambia's health sector decentralization reveals persistent gaps at the local level that undermine the effectiveness of devolved governance. While decentralization aims to bring decision-making closer to communities, studies (Nakamba, 2023; TIZ, 2023; Mwansabombwe Town Council, 2023) highlight limited decision space due to continued central control over key functions like salaries and procurement. Implementation varies widely across districts due to disparities in institutional capacity, human resources, and infrastructure.

Despite the establishment of decentralized structures, real fiscal decentralization remains weak. Local authorities lack full control over financial systems, face delays in fund disbursement, and depend heavily on central grants with limited locally generated revenue. Expenditures are largely tied to fixed costs, restricting local responsiveness. Additional barriers include unclear institutional roles, administrative bottlenecks, and under-resourced local governments. These gaps collectively hinder local service delivery and the intended benefits of decentralization.

Methodology

3.1 Mixed method research design.

This study employed mixed-methods research design, combining both qualitative and quantitative approaches. For the qualitative component, purposive sampling a type of non-probability sampling was used. In this approach, the researcher relied on their judgment to select participants with relevant knowledge and experience. Participants were drawn from key institutions involved in the devolution process, including District Health Offices and their associated facilities such as hospitals, health centers, and health posts across four districts. Within each institution, staff members were selected based on a clearly defined interview guide. Only those authorized by their institutional heads and deemed knowledgeable on the subject matter participated in the study. The quantitative component involved a review of government financial documents. Specifically, it focused on analyzing funding disbursements from official government expenditure reports and the 2023–2024 Yellow Books.

3.1.1 Description of the Site

The study was conducted in four districts of Lusaka Province, namely: Lusaka, Chilanga, Rufunsa, and Chongwe. There are three types of councils in Lusaka Province: a city council, a municipal council, and four town councils. Lusaka City Council and Chongwe were purposively selected to ensure representation of this type of council. Chilanga and Rufunsa districts were randomly selected from among the four town councils to provide representatives for town councils. The two selected councils are similar in size and characteristics, with each having one constituency.

3.1.2 Lusaka City Council. The administration of Lusaka City Council is divided into two parts: the political wing, headed by the Mayor, and the administrative wing, led by the Town Clerk. The City Council has eight directors overseeing eight departments, namely: Human Resources and Administration, Legal Services, Engineering, City Planning, Public Health, Housing and Social Services, Finance, and Valuation and Real Estate Management. The Local Authority comprises thirty-three (33) wards across seven constituencies. In each constituency, one political leader is elected by popular vote to serve as a Member of Parliament (MP), representing the community in the National Assembly. Additionally, two local chiefs (Lusaka City Council, 2024).

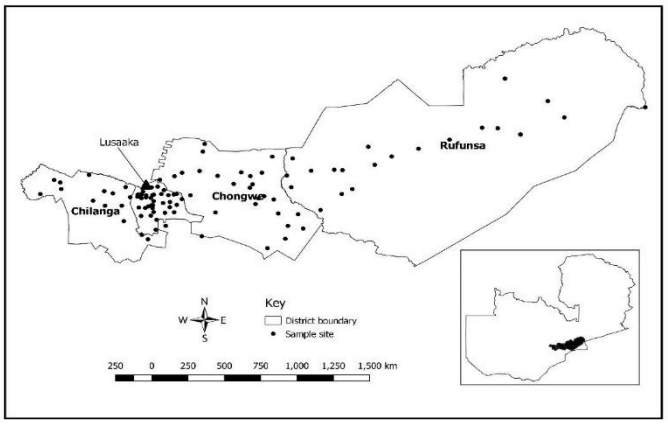
3.1.3 Chongwe Municipal Council: The institution is governed by the Town Clerk. The Municipal Council has four (4) directors overseeing four departments, namely: Human Resources, Legal Services, Planning, and Finance. The Local Authority comprises eleven (11) wards across four constituencies. In each constituency, one political leader is elected by popular vote to serve as a Member of Parliament (MP), representing the community in the National Assembly (Chongwe Municipal Council, 2024).

3.1.4 Chilanga Town Council. The institution is governed by the Council Secretary. The Town Council has four (4) directors overseeing five departments, namely: Human Resources, Legal Services, Planning, Finance, and Works. The Local Authority comprises twelve (12) wards within one constituency. One political leader is elected by popular vote to serve as a Member

of Parliament (MP), representing the community in the National Assembly, along with local chieftains (Chilanga Town Council, 2024).

3.1.5 Rufunsa Town Council: The structure of Rufunsa district is like Chilanga town council. The district has one (1) constituency and seven (7) wards (Rufunsa Town Council,2024).

Table 1 –Site map for Lusaka Province site



3.1.6 Sample size determination and sampling.

Sample size.

In this study we used this formula for the sample size calculation (Charan & Biswas, 2013)

where:

$$\text{Sample size} = \frac{Z_{1-\alpha/2}{}^2 p(1-p)}{d^2}$$

n = required sample size, **Z1-α/2** = Is standard normal variate, which is 95% (at 5% type 1 error **(P<0.05)** is 1.96), **P** = expected proportion = 0.5, where proportion from previous studies is not available, **(1-P)** = the alternate proportion, or probability of having no disease/condition; and **d** = absolute or marginal error or desired precision (5%), which is 0.05. Therefore

Sample size (n) = 1.962 (0.5) (1 - 0.5)/ $(0.05)^2$
n = 3.842*0.5*0.5/ 0.0025
n = 0.9605/0.0025
n = 384.16
Therefore, the minimum sample size was 385.

Table 2: List of Lusaka Province site

District	Level 1	Health Centre	Health post	Mini hospital	Total
Chilanga		7 (4)	20 (14)	4 (3)	31 (21)
Chongwe	1 (1)	20 (14)	18 (12)	1 (1)	40 (28)
Lusaka	7 (4)	46 (31)	36 (24)	2 (1)	91 (60)
Rufunsa	1 (1)	9 (6)	20 (14)	0 (0)	30 (21)
Total	**9 (6)**	**82 (63)**	**94 (64)**	**7 (5)**	**192 (130)**

In brackets is the number of Institutions to be sampled in 4 selected districts of Lusaka Province.

Therefore, there will be 423/130= 3 individuals per institution during period of March to June 2024.

The formula to calculate the sample size (health centers) using Slovin's formula is:
n = N / (1 + N(e)2)
Where:
n = Sample size
N = Population size
e = Margin of error
The number of Health Centers to be visited will be calculated using **(**STATOLOGY, 2024)
n = N / (1 + Ne2)
192/1 + 192(0.005)2
= 192/1+192(0,0025)
=192/1+0.48

192/1.48=**130 Institutions**

In the absence of prior information regarding the population proportion, a value of p = 0.5 was used in the sample size calculation. This conservative estimate maximizes the variance, ensuring an adequate sample size regardless of the true underlying proportion. A 5 percent margin of error was applied to ensure that the minimum sample size of 385 would still be met between March and June 2024, even if some respondents faced challenges in providing responses.

3.1.7 Sampling frame.

We collected data for this study from 385 respondents using a structured questionnaire across four study sites: Chilanga, Chongwe, Lusaka, and Rufunsa districts. The participants included individuals from the District Health Offices including hospitals, health centers, and health posts (385) (Sikalumbi, 2025).

3.1.8 Data Collection and analysis.

We collected Qualitative information using a standardized interview guide developed based on the five pillars of the United Nations Development Program (UNDP). framework for assessing devolution (2015). The guide included open-ended questions that allowed respondents to confirm on increase or decrease in funding level in postal devolution process. The qualitative data was analysed using NVivo (QSR International), while the quantitative data from government reports and Yellow Books for 2023 -2024 was analysed using the Statistical Package for the Social Sciences (SPSS) software (Sikalumbi, 2023).

4.Findings

The Government of Zambia primarily funds the health institutions at district level (level One Hospitals, Health Centres and Health Posts) through two mechanisms. The Management Support Services (MSS) to support administrative cost and Primary Health Service (PHS) on a month basis to support health care program delivery. A total of 171 out 174 (98%) of the respondent from Chilanga, Chongwe and Rufunsa indicated that the MSS had remained the same in 2023 the pre-devolution period and 2024 the post devolution period. The respondent in Lusaka District indicated that some facilities had funding levels that remained the same, others had reduced funding and others had some increment. The responses in Lusaka district of same, reduction and increase in funding for the MSS is due to the realignment of the constituencies from the initial 6 to 7 with additional of Lusaka Central. This resulted in changes in population of some catchment areas and number of health centres or posts per constituency. This finding from participants interviewed confirms with actual disbursement figures from Lusaka Province as indicated in the government reports. Below is table for actual disbarments.

Province	District	MSS 2023	PHS 2023	Total 2023	MSS 2024	PHS 2024	Total 2024
		MSS 2023	PHS 2023	Total 2023	MSS 2024	PHS 2024	Total 2024
Lusaka	Chilanga	413,127.07	1,928,366.20	2,341,493.26	413,127.07	1,980,590.57	2,393,717.63
Lusaka	Chongwe	581,032.94	2,435,431.75	3,016,464.69	581,032.94	2,496,129.55	3,077,162.48
Lusaka	Kafue	471,480.57	1,978,074.15	2,449,554.72	471,480.57	2,021,129.17	2,492,609.74
Lusaka	Luangwa	201,920.45	1,223,360.30	1,425,280.75	201,920.45	1,253,803.52	1,455,723.97
Lusaka	Lusaka District Health Office	4,084,338.38	0	4,084,338.38	4,084,338.38	0	4,084,338.38
Lusaka	Lusaka Central Sub District	-		1,124,862.09		1,143,659.34	1,143,659.34
Lusaka	Lusaka - Munali Sub District	-	3,482,740.49	2,568,058.95		2,610,973.04	2,610,973.04
Lusaka	Lusaka -Mandevu Sub District	-	3,339,122.33	3,809,819.45		3,873,484.24	3,873,484.24
Lusaka	Lusaka -Matero Sub District	-	3,231,408.70	2,611,154.65		2,654,788.90	2,654,788.90
Lusaka	Lusaka -Kanyama Sub District	-	1,867,036.14	4,283,521.90		4,355,102.59	4,355,102.59
	Lusaka -Chawama Sub District		2,980,076.92	1,697,592.62		1,725,960.59	1,725,960.59
Lusaka	Lusaka - Kabwata Sub District	-	3,051,886.00	1,857,260.92		1,888,297.07	1,888,297.07
Lusaka	Rufunsa	394,541.47	1,643,192.10	2,037,733.57	394,541.47	1,687,574.10	2,082,115.56
LUSAKA TOTAL		**6,146,440.87**	**27,160,695.09**	**33,307,135.95**	**6,146,440.87**	**27,691,492.67**	**33,837,933.53**

Source: GRZ/MOF Yellow Book 2023-2024

From the table above, the PHS funding had increased in all the districts. Below is the statistical analysis for increase using SPSS software package for analysis.

Table 4: Table 1: Paired t-Test Results for Selected Districts

Statistics	Value
t-statistic	11.13
Degrees of Freedom (df)	2
p-value (one-sided)	0.003988
Mean Difference (2024 – 2023)	52,434.72
95% Confidence Interval	[38,678.26, ∞)

The above information shows paired t-test for Chongwe, Chilanga, and Rufunsa district, comparing the 2024 PHS funding totals to those of 2023 shows a statistically significant increase. The test yielded a t-statistic of 11.13 with 2 degrees of freedom and a one-sided p-value of 0.003988 ($p<.05$). The estimated mean difference of 52,434.72 indicates that, on average, these districts experienced an increase of approximately 52,435 funding units from 2023 to 2024. Moreover, the one-sided 95% confidence interval, starting at 38,678.26 and extending to infinity, implies that the true mean increase is at least 38,678.26 units. Overall, these results provide strong evidence that PHS funding in Chongwe, Chilanga, and Rufunsa significantly increased between 2023 and 2024

5. Discussion

The research analyses the management and allocation of financial resources in the four selected sites of Chilanga, Chongwe, Rufunsa, and Lusaka**,** within Lusaka Province under Zambia's devolved health system. It compares funding levels before and after devolution in **2**023 and 2024**,** respectively. The Government of Zambia channels funding to district-level health institutions through Management Support Services (MSS) and Primary Health Services (PHS**)** mechanisms. The study found that in Chilanga, Chongwe, and Rufunsa, MSS funding

remained unchanged between 2023 and 2024, suggesting a stable allocation pattern. However, Lusaka District showed more variation, with some health facilities experiencing the same, reduced, or increased funding levels. This inconsistency is largely attributed to the realignment of constituencies from six to seven, including the creation of Lusaka Central which influenced both population distribution and the number of level-one hospitals, health centre's, or posts per constituency or clinic catchment area. These findings are corroborated by actual disbursement records from Lusaka Province, indicating that the changes in MSS funding were more a result of constituency realignment than devolution itself (Sikalumbi, 2021).

The rationale behind Zambia's devolution policy is t**o** minimize administrative overheads and increase programmatic funding so that services reach communities more effectively at the local level. This aligns with Nakamba's (2021**)** assertion that decentralization, in theory, brings governance closer to the people, thereby making service delivery more responsive and context-specific. However, the observed variations especially in Lusaka highlight Nakamba's caution that the success of decentralization is contingent on institutional capacity, governance structures, and the implementation process**.** His analysis suggests that unless these systemic factors are adequately addressed, decentralization may not automatically lead to equitable or efficient outcomes (Nakamba, 2023). The increase in PHS funding levels in 2024, as revealed through SPSS-based statistical analysis (see Table 4), provides some evidence of positive change in the post-devolution period, but also underscores the complexity of achieving uniform improvements across diverse districts.

For the PHS funding levels the paired t-test for Chongwe, Chilanga, and Rufunsa district, comparing the 2024 PHS funding totals to those of 2023 showed a statistically significant increase. The test yielded a t-statistic of 11.13 with 2 degrees of freedom and a one-sided p-value of 0.003988 ($p<.05$). The estimated mean difference of 52,434.72 indicates that, on average, these districts experienced an increase of approximately 52,435 funding units from 2023 to 2024. Moreover, the one-sided 95% confidence interval (CI), starting at 38,678.26 and extending to infinity, implies that the true mean increase is at least 38,678.26 units. Overall, these results provide strong evidence that PHS funding in Chongwe, Chilanga, and Rufunsa significantly increased between 2023 and 2024 as result of devolution that led to increase in program funds at primary health care level.

The findings of the study indicated that the rural districts of Chilanga, Chongwe, and Rufunsa experienced similar increments in terms of service delivery units. A uniform increase across these districts, aligned with population size, is a positive development, as it can help reduce inter-regional inequalities among rural populations. This principle also applies to urban areas, where equitable resource allocation contributes to maintaining consistent service standards. However, variations may still arise due to differences in local leadership capacity. These findings resonate with Nakamba's (2021**)** observations on decentralization in Zambia's health sector. He argues that bringing governance closer to communities through decentralization can enhance responsiveness and ensure that services are tailored to local needs. Nonetheless, Nakamba cautions that the effectiveness of this approach is heavily dependent on institutional capacity and the strength of local implementation mechanisms, which can differ significantly across districts (Nakamba, 2023).

6.Conclusion

This study demonstrates that Zambia's devolution policy has had a positive impact on the allocation of financial resources at the primary health care level, particularly in the rural districts of Chilanga, Chongwe, and Rufunsa. While Management Support Services (MSS) funding remained stable across these districts, a statistically significant increase in Primary Health Services (PHS) funding was observed between 2023 and 2024. This increase reflects improved resource distribution aligned with population needs, supporting the core objective of devolution to redirect funds from administrative costs toward frontline services.

In contrast, variations in MSS funding in Lusaka District were linked to constituency realignment rather than devolution itself. Despite these structural changes, the overall pattern suggests that devolution has begun to address disparities in funding between urban and rural areas by promoting more equitable resource allocation.

The findings further underscore that uniform increases in PHS funding, aligned to district population sizes, can help reduce regional inequalities and improve access to health services. However, sustaining these gains may depend on local leadership and capacity to manage resources effectively. Overall, the study affirms the role of devolution in enhancing health system efficiency and responsiveness at the community level. The study contributes to the broader discourse on health system efficiency and responsiveness by showing how financial decentralization can direct more resources to frontline services, aligning with the principles of Universal Health Coverage and people-cantered care.

6.1 Areas of Future Research

1. Conduct comparative case studies of high- and low-performing districts to examine how variations in governance structures, institutional capacity, and decision-making practices affect the management and allocation of resources under decentralization.
2. Undertake participatory research to explore citizen engagement and local accountability mechanisms in resource planning and budgeting processes at the ward and district levels, with a focus on how public

involvement influences transparency and prioritization of resource allocation.

3. Implement impact evaluations to assess how decentralized governance affects the efficiency, equity, and responsiveness of resource allocation in the health sector particularly in terms of improved service delivery outcomes and financial autonomy at the local level.

7.Ethical Consideration

Ethical clearance for this study was granted by the University of Zambia Research Ethics Committee (UNZAREC). Following this approval, permission to conduct the research was obtained from the National Health Research Authority (NHRA), under membership reference number NHRA(NHTAR-R-1128/13/09/2022).

8. Acknowledgements

I would like to express my deepest gratitude to Almighty God for granting me the opportunity to pursue this program and for providing the resources, time, and strength that made this study possible.

I also extend my heartfelt appreciation to my friends and colleagues for their support and encouragement throughout the course of this study.

Finally, I sincerely thank all the individuals and institutions who participated in this research. Your valuable insights, contributions, and willingness to be part of this study were instrumental to its success

References

Abudetse, R. K., Sikalumbi, D. A., & Simbeye, J. (2025). Leadership Styles and Open Innovation in Higher Education: A Theoretical Review of Employee Absorptive Capacity and Performance in Colleges of Education in Ghana. Journal of Education and Practice, 9(5), 15–30. https://doi.org/10.47941/jep.3072.

Adjagba, A.O., Oguta, J.O., Akoth, C., Wambiya, E.O.A., Nonvignon, J. and Jackson, D., 2024. Financing immunisation in Kenya: examining bottlenecks in health sector planning and budgeting at the decentralized level. *Cost Effectiveness and Resource Allocation*, 22, p.76. https://doi.org/10.1186/s12962-024-00581-w

Charan, J. and Biswas, T., 2013. How to calculate sample size in for the different study design in medical research? *Indian Journal of Psychological Medicine*, pp.121–126.

Chilanga Town Council, 2024. *Chilanga Town Council*. [online] Available at: https://www.chongwecouncil.gov.zm/?page_id=187 [Accessed 22 Feb. 2025].

Chomba, M.B., 2021. *Challenges and opportunities in service provision for Mwansabombwe Town Council, Zambia*. Lusaka: The University of Zambia.

Chongwe Municipal Council, 2024. *Chongwe Municipal Council*. [online] Available at: https://www.chongwecouncil.gov.zm/ [Accessed 25 Feb. 2025].

Decentralisation Secretariat, 2023. *Decentralisation Implementation Plan 2023–2027*. Lusaka.

Hamilandu, K., & Sikalumbi, D. A. (2025). Influence of Social Networks on In-Service Teachers' Intentions to Start Businesses in Chongwe District of Zambia. Journal of Entrepreneurship and Project Management, 10(3), 52–65. https://doi.org/10.47941/jepm.3078.

Kairu, A., Orangi, S., Mbuthia, B., Ondera, J., Ravishankar, N. and Barasa, E., 2021. Examining health facility financing in Kenya in the context of devolution. *BMC Health Services Research*.

Lusaka City Council, 2024. *Lusaka City Council*. [online] Available at: https://www.lcc.gov.zm/full-width/ [Accessed 22 Feb. 2025].

Nakamba, M.C., 2023. *White Rose eThesis Online*. [online] 20 Nov. Available at: https://etheses.whiterose.ac.uk/29445/

Rufunsa Town Council, 2024. *Rufunsa Town Council*. [online] Available at: https://www.facebook.com/photo/?fbid=221689016820388&set=a.221688976820392 [Accessed 22 Feb. 2025].

Shahzadi, I., 2019. *Impact of Devolution on Health System Development*. Islamabad – Pakistan: Pakistan Institute of Development Economics.

Sikalumbi Arona Dewin (2022). The entrepreneurial cooperative, an economic measure to alleviate poverty in developing countries, Printgraphix Zambia, Lusaka.

Sikalumbi Arona Dewin (2023). Success in research, the researcher's companion, Printgraphix Zambia, Lusaka.

Sikalumbi Arona Dewin, Surya Prabhu, Muchemwa Victor (2021) Influence of the Registration Process and Requirements on Cooperative Performance in Zambia. Texila International

Journal of Academic Research, ISSN: 2520-3088, DOI: 10.21522/TIJAR.2014.08.03.Art005

Sikalumbi Arona Dewin, Victor Muchemwa (2021) Critical Literature Review on Agriculture Co-Operatives in Developing Countries: A Poverty Mitigation Perspective, Texila International Journal of Management, ISSN: 2520-310X DOI: 10.21522/TIJMG.2015.07.02.Art014 Statology, 2024. *Slovin's Formula*. [online] Available at: https://www.statology.org/slovins-formula [Accessed 20 Sep. 2024].

Transparency International Zambia, 2023. *Analysis of the status of implementation of the 2023 Decentralisation Policy in Zambia: Pilot survey of selected districts*. Lusaka: TIZ.

UNDP, 2015. *From reform to transformation: UNDP's support to public sector reforms in Kenya: Lessons learnt for devolution*. Nairobi: UNDP.

Vincent Kayangula, Dewin Arona Sikalumbi (2025) An Investigation of Factors Influencing the Growth of Financial Literacy Among Small Scale Traders in The Central Business District of Lusaka. International Journal of Innovative Technologies in Social Science. 3(47). Doi: 10.31435/ijitss.3(47).2025.3497.

World Bank Group, 2023. *How decentralisation shaped health care financing in Indonesia*. Washington, D.C.: World Bank Group.

Zaidi, S.A., Bigeli, M., Langlois, E.V., Riaz, A., Orr, D.W., Idrees, N. and Bump, J.B., 2019. Health systems changes after decentralisation: progress, challenges and dynamics in Pakistan. *BMJ Global Health*.