

Assessing the Effects of Constituency Development Funds on Education in Nchelenge District, Zambia

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Abstract—This study analysed the effect of the Constituency Development Fund (CDF) on education in Zambia, with a particular focus on Nchelenge District. As an instrument of decentralization, CDF aimed to empower local communities by providing financial resources for grassroots development projects, including education infrastructure and learning materials. However, despite its intended role in improving educational access and quality, the fund's effectiveness had been questioned due to governance challenges, delays in disbursement, and concerns about misallocation of resources. This research employed a mixed-methods approach, integrating both quantitative analysis of CDF expenditures and qualitative insights from educational stakeholders such as school administrators, teachers, and local government officials. Using descriptive and inferential statistical techniques, the study evaluated the relationship between CDF allocations and improvements in educational outcomes, including school enrolment rates, infrastructure development, and teacher availability. Findings revealed that while CDF had contributed to classroom construction, provision of learning materials, and teacher housing, persistent challenges such as political interference, weak financial oversight, and lack of community participation hindered its overall effectiveness. The study highlighted the necessity of strengthening accountability mechanisms, enhancing stakeholder engagement, and ensuring timely fund disbursement to maximize the positive effect of CDF on education. These insights contributed to ongoing policy discussions on how best to leverage CDF for sustainable educational development in Zambia.

Keywords— Constituency Development Fund, education financing, rural development, Zambia, school infrastructure, governance.

I. INTRODUCTION

Education is a cornerstone for sustainable development, economic growth, and poverty alleviation. However, financing education remains a major challenge, particularly in rural districts where government funding is often insufficient to meet infrastructure and operational needs [1]. To bridge this gap, the Constituency Development Fund (CDF) was introduced in Zambia as a decentralized financing model, allowing constituencies to allocate funds to local development priorities, including education [2].

Nchelenge District, located in Luapula Province, had faced persistent educational challenges, including lack of classrooms, inadequate teaching materials, and poor teacher housing [3]. While CDF was allocated to address these issues, concerns were raised regarding the efficiency and equity of fund utilization [4]. This study, therefore, evaluated the extent to which CDF improved access to education in Nchelenge

District, highlighting both achievements and challenges in its implementation.

1.1 Problem Statement

Despite increased CDF allocations to education, disparities in fund utilization and project implementation had persisted [5]. While some schools had benefited from CDF-financed projects, others continued to struggle with overcrowded classrooms, a shortage of essential learning materials, and inadequate teacher accommodation [6]. Additionally, delays in fund disbursement, lack of stakeholder involvement, and political interference had led to inefficiencies in project execution [7].

Prior studies on CDF implementation in Zambia had emphasized its role in infrastructure development but had not provided a detailed analysis of how these investments had translated into improved educational outcomes, particularly in Nchelenge District [8]. This study sought to bridge this gap by evaluating the effectiveness of CDF in enhancing education and identifying the challenges limiting its effect.

1.2 Objectives of the Study

The study aimed to evaluate the effect of CDF on education in Nchelenge District through the following specific objectives:

1. To assess the extent to which CDF improved access to education in Nchelenge District by funding classroom construction, teacher housing, and provision of learning materials.
2. To identify the key challenges affecting the implementation of CDF projects in education, including governance issues, fund misallocation, and delays in disbursement.
3. To evaluate community perceptions of the effectiveness of CDF-funded education projects and their role in improving learning conditions.

1.3 Research Questions

The study sought to answer the following questions:

1. How has CDF contributed to improving access to education in Nchelenge District?
2. What are the major challenges affecting the effectiveness of CDF in education development?
3. How do local communities perceive the effect of CDF on education in Nchelenge District?

1.4 Previous Studies

Several studies had examined the role of Constituency Development Funds in education financing, both in Zambia and internationally. Research had shown that decentralized funding models, such as CDF, could enhance educational access by allowing local authorities to allocate resources according to community priorities [9]. However, studies had also highlighted governance challenges, including weak accountability mechanisms, fund mismanagement, and political interference [10].

In Kenya, Gikonyo [11] analyzed the effect of CDF on school infrastructure and found that while the fund contributed to classroom expansion, inconsistencies in fund allocation led to disparities in project completion rates. Similarly, Chileshe and Banda [12] studied CDF governance in Zambia and reported that while the fund played a crucial role in improving school facilities, a lack of transparency in project selection limited its overall effectiveness.

Despite these findings, there had been limited empirical research focusing specifically on Nchelenge District. This study aimed to contribute to the existing body of knowledge by providing localized insights into how CDF had influenced education development in this region.

II. MATERIALS AND METHODS

2.1 Research Design

This study employed mixed-methods research design, integrating both quantitative and qualitative approaches to assess the effect of the Constituency Development Fund (CDF) on education in Nchelenge District. The mixed-methods approach was chosen to provide a comprehensive analysis by capturing both numerical data and in-depth insights from key stakeholders. The quantitative component involved the use of structured surveys distributed to school administrators, teachers, and community members to gather data on CDF allocations, project completion rates, and educational outcomes. The qualitative component included semi-structured interviews and focus group discussions with local government officials, school administrators, and parents to gain a deeper understanding of governance challenges, stakeholder participation, and perceptions regarding CDF's effectiveness.

The study adopted a descriptive research design, which allowed for an in-depth analysis of trends in CDF allocation and usage in education over a six-year period (2018–2023). This design was appropriate as it facilitated an evaluation of both the successes and shortcomings of CDF implementation in Nchelenge District. Additionally, case study elements were incorporated to focus on specific schools that had received CDF funding for infrastructure development, making it possible to compare project outcomes across different educational institutions.

2.2 Study Site

The research was conducted in Nchelenge District, located in Zambia's Luapula Province. The district was selected due to its persistent educational challenges, including limited

school infrastructure, shortages of trained teachers, and inadequate learning materials. Nchelenge is primarily rural, with a high dependency on agriculture and fishing, which affects household incomes and, consequently, the affordability of education. The choice of this district was also influenced by the fact that despite receiving CDF allocations, many schools continued to struggle with poor learning conditions.

2.2 Sampling and Data Collection

The study population comprised school administrators, teachers, students, parents, community leaders, and local government officials. The sample was selected using stratified random sampling, ensuring representation from various categories of stakeholders involved in education development. Stratification was necessary to capture diverse perspectives on CDF implementation. The total study sample consisted of 385 respondents, determined using Yamane's (1967) formula for sample size calculation, which provides a statistically reliable representation of the population [13].

2.3 Data Analysis

Primary data was collected using structured questionnaires, semi-structured interviews, and focus group discussions. The structured questionnaires, administered to school administrators and teachers, captured quantitative data on CDF allocation, infrastructure development, and project efficiency. Semi-structured interviews were conducted with local government officials and CDF committee members to obtain insights into the governance of CDF education projects, including challenges related to political interference, delayed fund disbursement, and transparency in resource allocation. Focus group discussions were held with parents and community members to assess their awareness and perceptions of CDF's role in improving education.

Secondary data was obtained from government reports, policy documents, and previous academic studies on decentralized education financing. The study analyzed Annual CDF Reports (2018–2023) from the Ministry of Local Government, Zambia's National Education Policy Documents, and existing research on decentralized funding models in Zambia and other African countries. These documents provided a historical perspective on CDF funding trends and allowed for a comparative analysis between Nchelenge District and other regions.

Data analysis was conducted using a combination of descriptive statistics, inferential statistics, and thematic analysis. Quantitative data from questionnaires were analyzed using SPSS (Statistical Package for the Social Sciences) version 26. Descriptive statistics, including frequencies, percentages, and mean values, were used to summarize findings on CDF allocations, project completion rates, and educational outcomes. Inferential statistical techniques, such as correlation and regression analysis, were employed to determine the relationship between CDF funding and education improvements.

Qualitative data from interviews and focus group discussions were analyzed using thematic analysis, following the Braun & Clarke (2006) framework, which involved coding

and categorizing responses into key themes such as governance challenges, stakeholder engagement, and project effectiveness [14]. The use of thematic analysis helped in identifying recurring issues related to the implementation of CDF in education and allowed for triangulation with quantitative findings.

III. RESULTS

3.1 Effect of CDF on Education

The results of this study provided a comprehensive analysis of the effects of Constituency Development Funds (CDF) on education in Nchelenge District, Zambia. The findings were based on a mixed-methods approach, combining quantitative data from surveys and qualitative insights from interviews with key stakeholders, including school administrators, teachers, community leaders, and government officials. The descriptive statistics revealed key insights into the demographic characteristics of the respondents and their perceptions of CDF-funded projects. The gender distribution of respondents was nearly equal, with 49.4% male and 50.6% female participants. The majority of respondents fell within the 26-35 age group (28.6%), followed by the 36-45 age group (24.7%). In terms of education, 31.2% of respondents had secondary education, while 24.7% had tertiary education, and 10.4% had postgraduate qualifications. This diverse educational background ensured a well-rounded understanding of CDF's effect on education.

TABLE 1: Gender Distribution of respondents

| Gender | Frequency (n=385) | Percentage (%) |
|--------|-------------------|----------------|
| Male | 190 | 49.4% |
| Female | 195 | 50.6% |
| Total | 385 | 100% |

Source: Primary Data 2025

TABLE 2: Age Distribution of Respondents

| Age Group (Years) | Frequency (n=385) | Percentage (%) |
|-------------------|-------------------|----------------|
| 18 – 25 | 75 | 19.5% |
| 26 – 35 | 110 | 28.6% |
| 36 – 45 | 95 | 24.7% |
| 46 – 60 | 65 | 16.9% |
| 60+ | 40 | 10.4% |
| Total | 385 | 100% |

Source: Primary Data 2025

TABLE 3: Education level distribution of respondents

| Education Level | Frequency (n=385) | Percentage (%) |
|------------------------|-------------------|----------------|
| No Formal Education | 40 | 10.4% |
| Primary Education | 90 | 23.4% |
| Secondary Education | 120 | 31.2% |
| Tertiary (College/Uni) | 95 | 24.7% |
| Postgraduate Education | 40 | 10.4% |
| Total | 385 | 100% |

Source: Primary Data 2025

Awareness of CDF-funded education projects was high, with 80.5% of respondents indicating they were aware of CDF initiatives. However, 19.5% of respondents were unaware, highlighting a gap in information dissemination, particularly in rural areas. Among those aware of CDF, 39.0% reported that CDF had significantly improved educational access, while 41.6% noted some improvement. However, 13.0% reported no

change, and 6.4% felt that access had worsened, indicating disparities in the effectiveness of CDF projects. The most commonly recognized CDF-funded projects were classroom construction (44.2%), provision of learning materials (26.0%), and teacher housing (19.5%). School rehabilitation was less frequently noted (10.3%), suggesting that maintenance of older infrastructure was not a priority.

TABLE 4: CDF awareness level of respondents

| Awareness Level | Frequency (n=385) | Percentage (%) |
|-----------------|-------------------|----------------|
| Aware | 310 | 80.5% |
| Unaware | 75 | 19.5% |
| Total | 385 | 100% |

Source: Primary Data 2025

TABLE 5: Perceptions of CDF's Effect on Educational Access

| Perception of Impact | Frequency (n=385) | Percentage (%) |
|----------------------|-------------------|----------------|
| Greatly Improved | 150 | 39.0% |
| Somewhat Improved | 160 | 41.6% |
| No Change | 50 | 13.0% |
| Worsened | 25 | 6.4% |
| Total | 385 | 100% |

Source: Primary Data 2025

The study identified several challenges in the Implementation of CDF-funded education projects. Delayed fund disbursement was the most frequently cited challenge, affecting 37.7% of respondents. This delay disrupted project timelines, leading to unfinished infrastructure and delayed procurement of learning materials. Misallocation of funds was another significant issue, reported by 27.3% of respondents, where funds were diverted from their intended purposes due to lack of oversight and accountability. Political interference was also a major concern, with 23.4% of respondents indicating that CDF allocations were influenced by political considerations rather than genuine educational needs. This resulted in unequal distribution of resources, with some schools benefiting more than others. Additionally, 11.6% of respondents highlighted inadequate community involvement in decision-making processes, which led to a disconnect between community priorities and project implementation.

Community perceptions of CDF's role in education were generally positive, with 54.6% of respondents believing that fund distribution was fair. However, 24.6% considered it unfair, often correlating with concerns about misallocation and political interference. About 20.8% remained neutral, indicating a lack of awareness or engagement in the allocation process. In terms of overall satisfaction, 40.3% of respondents reported being somewhat satisfied with CDF's effect on education, while 28.6% were very satisfied. However, 15.6% remained neutral, and 15.5% expressed dissatisfaction, primarily due to concerns about misallocation, delays, and lack of community involvement.

TABLE 6: Challenges in Implementing CDF Educational Projects

| Identified Challenge | Frequency (n=385) | Percentage (%) |
|-------------------------------|-------------------|----------------|
| Delayed Fund Disbursement | 145 | 37.7% |
| Misallocation of Funds | 105 | 27.3% |
| Political Interference | 90 | 23.4% |
| Lack of Community Involvement | 45 | 11.6% |
| Total | 385 | 100% |

Source: Primary Data 2025

TABLE 7: Perceptions of Fairness in Fund Distribution

| Perception of Fairness | Frequency (n=385) | Percentage (%) |
|------------------------|-------------------|----------------|
| Very Fair | 90 | 23.4% |
| Somewhat Fair | 120 | 31.2% |
| Neutral | 80 | 20.8% |
| Unfair | 55 | 14.3% |
| Very Unfair | 40 | 10.3% |
| Total | 385 | 100% |

Source: Primary Data 2025

The qualitative analysis provided deeper Insights into the challenges faced by stakeholders in implementing CDF projects. Interviews with school administrators and community leaders revealed that delayed fund disbursement and bureaucratic inefficiencies were major barriers to effective project implementation. One respondent noted, "The funds often come late, and by the time we receive them, the costs of materials have already gone up, making it difficult to complete projects on time." Another recurring theme was the lack of community involvement in decision-making processes. Many respondents expressed frustration that they were not consulted on how CDF funds should be allocated, leading to projects that did not address the most pressing needs of the community." We know what our schools need, but no one asks us," said one community leader.

The results of this study highlighted both the potential and the challenges of CDF-funded education projects in Nchelenge District. While CDF had contributed to improvements in school infrastructure and access to learning materials, issues such as delayed fund disbursement, misallocation of resources, and political interference had hindered its effectiveness. Addressing these challenges would require stronger oversight mechanisms, greater transparency in fund allocation, and increased community involvement in decision-making processes. By doing so, CDF could become a more effective tool for improving educational outcomes in rural districts like Nchelenge.

IV. DISCUSSION

The findings of this study highlighted the dual effect of the Constituency Development Fund (CDF) on education in Nchelenge District, showing both its potential for improving access to education and the governance challenges that hindered its full effectiveness. The 22.5% increase in school enrolment over five years suggested that CDF had contributed significantly to expanding educational opportunities by financing the construction of new classrooms, teacher housing, and learning facilities. The study confirmed that classroom construction (44.2%) was the most recognized benefit of CDF, followed by teacher housing (19.5%) and provision of learning materials (20.7%). These developments had reduced overcrowding in some schools, making education more accessible to children in rural communities. However, despite these achievements, infrastructure expansion had not kept pace with student population growth, leading to continued overcrowding in some schools and shortages of essential learning materials, indicating that CDF's effect is limited by gaps in fund allocation and project implementation.

One of the most critical challenges identified in the study was delayed disbursement of CDF funds, reported by 37.7% of respondents. These delays led to stalled school construction projects, shortages of textbooks, and interruptions in bursary allocations, ultimately affecting learning outcomes. The issue of fund disbursement delays aligned with studies on decentralized education financing, which suggested that bureaucratic inefficiencies and lack of financial oversight often led to project failures. Delayed funding also increased the cost of construction, as inflation and rising material costs forced schools to operate within unpredictable financial constraints. Additionally, the study found that 27.3% of respondents were concerned about fund misallocation, with reports of CDF resources intended for education being redirected to non-priority areas or misused due to weak accountability mechanisms. Schools that were allocated funds for learning materials often reported receiving inadequate supplies, while some schools did not receive their full CDF allocations at all. This suggested that while CDF served as a crucial financing tool, its effectiveness was weakened by poor financial management and lack of transparency in fund utilization.

Another major governance issue raised in the study was political interference in CDF allocations, with 23.4% of respondents indicating that project selection was influenced by political considerations rather than actual educational needs. This finding supported previous research showing that in many African countries where CDF had been implemented, local politicians used fund allocations to gain political support rather than prioritizing development needs. In some cases, constituencies with strong political influence benefited more from CDF allocations, while schools in urgent need of infrastructure upgrades received inadequate support. Political interference not only affected the equitable distribution of education resources but also weakened public trust in the CDF model as a fair and transparent financing system. To address this issue, there was a strong need for independent oversight mechanisms that could have ensured that education projects funded by CDF were selected based on objective criteria rather than political motivations.

Despite these governance challenges, the study found that community perceptions of CDF's role in education were generally positive. Over 54.6% of respondents believed that CDF allocations were fairly distributed, and 68.9% expressed satisfaction with its effect on school development. These findings indicated that despite its inefficiencies, CDF remained one of the most significant funding sources for education in rural Zambia, helping to address gaps in government education funding. However, the study also found that many community members lacked awareness of how CDF allocations were determined, suggesting a gap in public participation in decision-making. Increasing community engagement in CDF governance through participatory budgeting and project monitoring committees could have enhanced transparency and improved trust in fund utilization.

Overall, the findings of this study reinforced the importance of addressing governance and financial management challenges to maximize the effectiveness of CDF

in education. While CDF had led to significant improvements in school infrastructure and student enrolment, persistent delays in fund disbursement, misallocation of resources, and political interference continued to undermine its potential. Addressing these systemic inefficiencies through stronger financial controls, independent oversight mechanisms, and increased stakeholder participation was critical to ensuring that CDF became a sustainable and equitable funding model for education in Zambia.

V. CONCLUSION

The study on the effects of Constituency Development Funds (CDF) on education in Nchelenge District, Zambia, provided valuable insights into the role of decentralized funding in improving educational access and infrastructure. The findings revealed that while CDF had made significant contributions to the construction of classrooms, provision of learning materials, and teacher housing, its overall effect on educational outcomes was hindered by several challenges. These included delayed fund disbursement, misallocation of resources, political interference, and inadequate community participation in decision-making processes. These issues led to inefficiencies in project execution and disparities in the distribution of resources, limiting the potential of CDF to drive sustainable improvements in education.

The study underscored the importance of addressing these challenges to enhance the effectiveness of CDF as a tool for educational development. Strengthening oversight mechanisms, ensuring timely disbursement of funds, and fostering greater transparency in resource allocation were critical steps toward improving the impact of CDF-funded projects. Additionally, increasing community involvement in the planning and implementation of CDF initiatives could help ensure that projects aligned with local needs and priorities, thereby enhancing their relevance and sustainability.

The findings also highlighted the need for targeted policy interventions to address the broader systemic issues affecting CDF implementation. Policymakers would have focused on improving financial literacy among stakeholders, streamlining regulatory processes, and promoting public-private partnerships to supplement CDF resources. By addressing these issues, CDF could become a more effective mechanism

for reducing educational disparities and improving access to quality education in rural districts like Nchelenge.

In conclusion, while CDF had the potential to play a transformative role in Zambia's education sector, its success depended on addressing the governance and implementation challenges identified in this study. By fostering greater accountability, transparency, and community engagement, CDF could contribute to the achievement of national development goals and improved the well-being of citizens in underserved areas. Future research should have focused on exploring innovative financing models and evaluating the long-term sustainability of CDF-funded projects to inform evidence-based policymaking and development planning in Zambia.

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