

## Impact of local government revenue on the quality of educational service delivery in Benadir region, Somalia



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### ABSTRACT

This study is concerned with assessing the influence of local government revenue on educational service delivery (ESD) quality. The objective was to investigate the multifaceted factors influencing ESD quality. The research examined the interplay between challenges in local government revenue (CLGR), the extent to which local government revenue affects (ELGR), and the effectiveness of local government revenue management (ELGRM) on ESD quality. Employing a descriptive, cross-sectional design, the study collected data through an online survey distributed to 234 teachers in higher public schools and the educational service department in Benadir region, Somalia, utilizing a non-random purposive sampling technique. The collected data were analyzed using R version 4.3.1 using Structural Equation Modeling (SEM) and SPSS 22.0. The findings of this study revealed significant negative relationships between CLGR and ESD quality, while ELGR and ELGRM have significant relationships with ESD quality. The null hypotheses (H1, H2, and H3) were rejected, as indicated by p-values of 0.002, 0.002, and 0.000, respectively, all below the threshold value of 0.05. Based on these results, the researchers suggest increasing funding for education, improving revenue management practices, promoting strategic investments in education, fostering collaboration and partnerships, continuously monitoring and evaluating progress, and prioritizing the equitable distribution of resources to enhance the quality of ESD. The findings will shape future ESD quality, requiring collaboration among all stakeholders to enhance learning opportunities and improve service delivery.

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### 1. Introduction

The context of the study is centered on the impact that the revenue of local governments has on the administration of educational services in the Benadir Region of Somalia. The money collected by local governments is an essential component in the process of providing educational services since it enables the provision of resources for the development of infrastructure, skilled teachers, and instructional materials (Guo-Brennan, 2020). On the other hand, the level of service continues to be inadequate despite the fact that the local administration in Benadir has committed to raising funds to provide educational services.

There are many obstacles that must be overcome to provide a quality education worldwide (Zickafoose et al., 2024) especially in Benadir. These obstacles include inadequate scholastic resources, inadequate infrastructure, and teachers who have not received adequate training (Molina-Garcia and Martinez-Ponce, 2020). These limitations can be linked to a number of factors, including financial restrictions, concerns over capacity, a legislative system that is in conflict with itself, and problems with service delivery. The objective of the researchers is to explore and gain an understanding of the impact that the revenue of the local government has on the provision of educational services in Benadir.

Hence, this study aims to examine the influence of challenges in local government revenue (CLGR), the extent to which local government revenue affects (ELGR), and the effectiveness of local government revenue management (ELGRM) on educational service delivery (ESD) quality in Benadir Region, Somalia.

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### 1.1. Problem statement

Mobilization of municipal taxes allows local authorities to execute their proposed budgets and job schedules. They use this revenue to co-finance capital projects, track all activities, and oversee the overall development of schools and health centers and the opening of public roads to ensure better standards to meet the required services.

Local government is a critical body from which people can better identify and coordinate their goals for coping with their problems (Ramalho et al., 2022). In contrast, disadvantaged people mainly interact with the local government to receive services and support. Since Somalia started decentralized local governance, local governments have changed significantly. Service delivery has improved but is still not satisfactory. Currently, local governments face many challenges, such as financial limitations, capacity issues, conflicting legal frameworks, and service delivery problems. Despite the Benadir local government's efforts to raise revenue for ESD, the level of ESD remains low.

This is evident through poor infrastructure and inadequate scholastic materials in primary schools in Benadir. Some schools still have untrained teachers, and qualified teachers are not motivated enough to effectively implement the curriculum (Ramalho et al., 2022). It's against this background that the

researchers would like to investigate the influence of local government revenue on the delivery of educational services in Benadir.

### 1.2. Study objectives

The objective of the study is to:

- To identify the CLGR on ESD at Benadir Region in Somalia.
- To determine the ELGR on ESD at Benadir Region in Somalia.
- To examine the ELGRM on ESD at Benadir Region in Somalia.

### 1.3. Hypotheses

The study hypotheses are:

- H1:** The CLGR significantly negatively impacts on ESD.
- H2:** The ELGR significantly impacts on ESD.
- H3:** The ELGRM significantly impacts on ESD.

The authors constructed the research model shown in Fig. 1, which illustrates the relationship between the independent variable (CLGR, ELGR, and ELGRM) and the dependent variable (ESD).

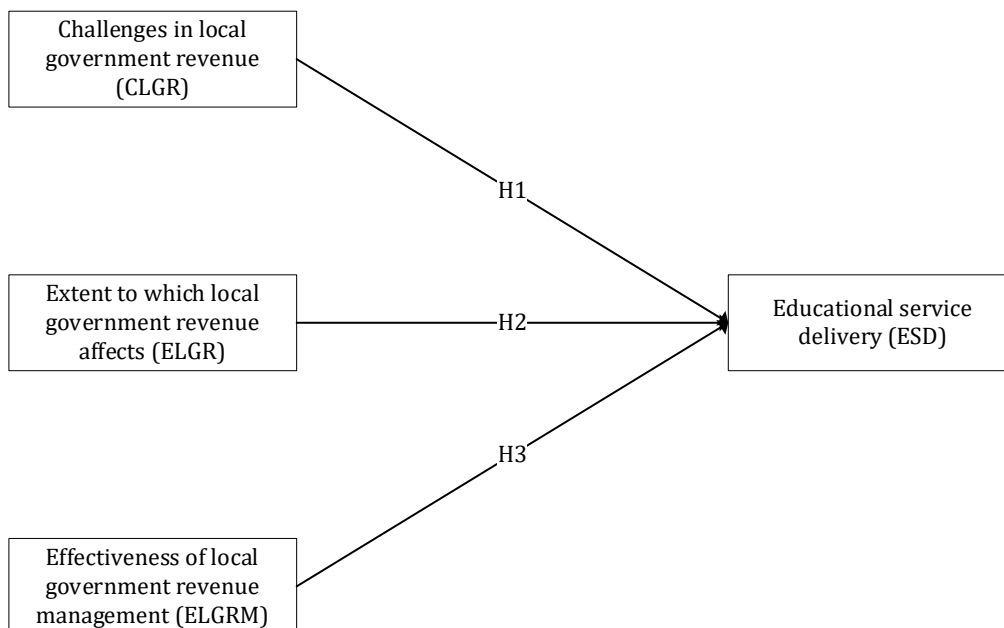


Fig. 1: Proposed research model

### 1.4. Significance of the Study

**Local governments:** This study will help local governments, especially in the Benadir Region, understand the income generated from providing education services.

**Academics:** The report will be useful to academics and researchers studying local income and educational services. Researchers can use the findings to examine how income affects the delivery of educational services to local governments.

## 2. Literature review

### 2.1. Importance of local government revenue in funding educational services

Local government revenue plays a crucial role in providing financial support for educational services. It empowers local authorities to allocate money, particularly for education, guaranteeing the provision of adequate facilities, highly skilled teachers, and educational materials (Cao et al.,

2023). Lack of sufficient cash might pose difficulties for educational institutions in fulfilling students' demands and creating an optimal learning environment. The allocation of local government money is essential for financing educational services. Local government units (SGUs) regard the funding of education to be one of their most crucial responsibilities.

Fiscal decentralization, a process aimed at empowering local governments, guarantees that local expenditures are allocated towards critical areas like healthcare and education, which are fundamental for fulfilling basic necessities (Cao et al., 2023). The management of education finances has difficulties, with corruption cases being notably widespread in the education sector. The distribution of money for education is crucial, as it affects who will benefit from educational services. Occasionally, a substantial amount of funds is allocated to indirect recipients, such as teachers and school administrators, rather than directly benefiting students and their parents. Although local government expenditure on education is crucial, there is insufficient data to indicate a direct link between increased spending and enhanced educational performance (Gao and Fan, 2023).

The revenue collected by the local government is an essential component in the process of funding educational services in the Benadir Region, Somalia. As a result of the struggle to finance local government, there has been a decrease in the delivery of fundamental services and salaries for municipal employees have been reduced (Farah, 2020). As a result of the lack of a government that is able to function, the United Nations Children's Fund (UNICEF) has taken the initiative to provide education support in Somalia, educating thousands of children and adults. Despite the absence of efficient official institutions, Islamic institutions, including non-governmental organizations (NGOs) and charitable organizations, have also played a key role in the provision of educational services. It is common for non-armed actors in Somalia to generate revenue in an informal manner, and residents actively finance local governance organizations and the provision of public goods (Farah, 2020). It is clear that the importance of government assistance for educational services is highlighted by the fact that the performance of micro, small, and medium-sized enterprises (MSMEs) in the remittance industry is influenced by government policy and education development (Metzler et al., 2021). Generally speaking, the cash generated by the local government, in conjunction with the assistance provided by international organizations and Islamic institutions, is essential for the funding of educational services in the Benadir Region, Somalia.

## 2.2. CLGR in Benadir region

The challenges faced by the local government in generating revenue in the Benadir Region can be

attributed to various factors. The irregularities in property tax payments are a major challenge since they lead to shortfalls in the tax base. The region has a significant prevalence of individuals residing in impoverished conditions and earning meager incomes, hence impeding their ability to fulfill their tax obligations (Abdullahi and Osman, 2023). The issue is worsened by the inadequate administration of the funds generated by property taxes. Another hindrance is the lack of independence in the decision-making process about expenses, together with insufficient development of skills in the different areas of local governance. Moreover, the indigenous character of the Benadir local government, combined with the actions of the prince, poses difficulties in terms of gathering financial resources (Abdullahi et al., 2023). The concerns highlighted underscore the need to improve tax collection tactics and enhance the administration of financial resources in the Benadir Region.

## 2.3. Impact of local government revenue on ESD

The revenue amassed by local governments significantly impacts the provision of educational services. The allocation of educational activities and financial responsibilities between the central government and local governments is crucial for the advancement of education (Gao and Fan, 2023). Conversely, the central government has the capacity to advance education by utilizing fiscal transfer payments. Local governments sometimes lack the motivation to allocate their own fiscal revenues towards investments in education. Multiple studies have shown that an increase in fiscal transfers leads to a corresponding increase in the duration of schooling for local residents (Gao and Fan, 2023). Conversely, if a specific limit is reached, the effect of local government spending on service delivery starts to have a negative effect, especially in districts that heavily rely on payments from other levels of government (Arends, 2020). To ensure long-term educational success, it is crucial to improve the incentive effect of the transfer payment system and allocate expenditure responsibilities accordingly (Yu and Ma, 2022).

The revenue generated by the municipal government in Benadir Region, Somalia, significantly impacts the provision of educational services. Due to the challenges in securing money for local governments, there has been a decline in the provision of essential services, such as education (Mohamed, 2017). A recent finding reveals that the Benadir local government in Somalia has a moderately favorable level of satisfaction in terms of service quality. However, there is a notable dissatisfaction in the areas of tangibility and empathy (Abdullahi and Osman, 2023). Amidst the conflict, UNICEF capitalized on changing opportunities to educate numerous children and adults in Somalia, assuming a key role in supporting education in the country (Farah, 2020). However, the

lack of a functioning administration and insufficient devolution of fiscal authority in Somalia impede the ability of local governments to promote self-financing alternatives and enhance service delivery, particularly in the field of education (Abdullahi and Osman, 2023). In order to enhance the provision of educational services, it is recommended that the local government of Benadir prioritize the satisfaction of inhabitants, strive to enhance the quality of service delivery, and enforce policies and programs that are specifically designed to meet the expectations of citizens (Farah, 2020).

## 2.4 ELGRM on ESD

Various factors influence the efficiency of local government revenue management on ESD. Research has shown that management techniques, such as regular school visits, providing incentives to schools and instructors, and conducting performance assessments of staff, have a crucial role in enhancing learning outcomes (Walker and Andrews, 2015). Furthermore, local governments' generating cash from internal sources has been proven to improve local responsibility, which is essential for attaining high-quality outcomes in public service delivery (Patil et al., 2020). Nevertheless, it is crucial to acknowledge that the execution and allocation of financial resources by local governments can also influence the provision of primary education services. Lack of sufficient financial resources might hinder the successful execution of developmental projects, resulting in subpar provision of primary education and healthcare services (Arends, 2020). Hence, it is crucial to implement efficient revenue management strategies and optimize the allocation of financial resources in order to enhance the delivery of educational services at the local government level.

The issue of how efficiently local governments manage their finances is a subject of considerable debate and enthusiasm. Bulgaria's municipal firms demonstrate the ability to achieve profitability while providing a wide range of public services (Mohamed, 2017). However, the specific municipal companies responsible for district heating, urban transportation, and the operation of municipal sports complexes are currently in a precarious financial situation and require measures to improve their financial standing (Akudugu, 2012). Local self-governments must develop and implement effective debt management strategies to guarantee the availability of financial resources during periods of crisis (Kumshe and Bukar, 2013). Local own revenue, also known as PAD, plays a crucial role in funding regular and development operations. Regional taxes serve as an effective means of generating money (Mohamed and Kiruthu, 2019). The management of regional finances in Devi et al. (2023), Indonesia, has exceptional success in achieving PAD based on the actual potential of the region (Madubun, 2023). Factors such as the implementation of financial accounting systems,

internal control systems, human resources competence, and organizational commitment directly influence the efficiency of financial administration in local governments (Kumshe and Bukar, 2013).

The efficiency of the revenue management of the municipal government in Benadir Region, Somalia, is a source of concern. Somalia is currently in the initial phase of decentralizing its financial governance, and it is facing challenges in allocating functional tasks between the federal government and state governments (Hussein, 2023). Conversely, the introduction of the Somali Financial Management Information System (SFMIS) has had a positive effect on the generation of domestic revenue. This has resulted in an upsurge in tax collection and has fostered trust among development partners (Zayed et al., 2022). Conversely, the challenge of securing funds for local governments has resulted in a reduction in the delivery of essential services and a decline in local government expenditures (Mohamed, 2022). Furthermore, it is worth noting that Somalia is distinguished by the widespread practice of informal income collection through informal taxation. In this system, residents directly contribute to local governing organizations and the provision of public goods (Hussein, 2023; Zayed et al., 2022). Local governments in the Benadir Region, Somalia, need to enhance their intergovernmental fiscal links, enhance their income collection methods, and implement measures for self-financing their operations (Zayed et al., 2022).

## 3. Methodology

### 3.1. Research design

A cross-sectional research design was used for this study. The analysis of correlations between variables at a particular moment in time is made possible by this design (Setiamurti et al., 2023). In order to investigate relationships between variables, cross-sectional designs are frequently employed in educational research. The study aimed to determine the CLGR, ELGR, and ELGRM on ESD at Benadir Region in Somalia.

### 3.2. Study population

The study population for this research consisted of individuals from four public schools and the educational service agency in the Benadir area of Somalia. The researchers intentionally selected a diverse group of teachers from higher public schools and the educational service department in the Benadir region, who possessed significant expertise regarding the impact of local government on ESD. The researcher used questionnaires as the primary data collection instrument. The choice of this instrument was guided by several factors, including the time available for conducting the research, the research questions, and the objectives of the study.



By utilizing questionnaires, the researcher aimed to efficiently gather the necessary data to address the research objectives within the given time frame. The data collection method involved distributing an online survey using Google Forms, which received a total of 234 responses. The survey comprised 25 questions in total, utilizing a five-point Likert scale ranging from "1" representing "strongly disagree" to "5" indicating "strongly agree."

### 3.3. Sampling procedure

The sampling approaches used in this study will be purposive sampling, non-probability sampling, and stratified sample random. Purposive sampling is a type of sampling in which the researcher selects participants for the study based on their ability to give relevant data.

Purposive sampling allows the researcher to pick who should be included in the sample. It is mostly used to collect concentrated information. Purposive sampling is used in this study since the data will be collected from a variety of individuals (Abdi et al., 2024). It was obtained from a certain group since they were able to supply the necessary and relevant data for the study. It also saves time and money.

### 3.4. Data analysis and procedure

This study used R version 4.3.1 for analysis (Hair et al., 2019). The technique of partial least squares structural equation modeling (PLS-SEM) was opted to examine the quantitative data. PLS-SEM is used in corporate and social sciences research to handle sample size and non-normal facts efficiently, and it is an emergent information analysis tool (Hair et al., 2014). This method is more suitable when the study seeks to test current theories and involve complicated structural models (Abdullahi et al., 2023). PLS-SEM includes dual examination: Measurement model description and structural model examination. The measurement model ensures that the constructs have acceptable indicator loading, convergent validity, composite reliability, and discriminant validity. These constructs are then used in the structural model. Assessing the structural model involves evaluating path coefficients and their significance. Additionally, recent empirical research in the field of knowledge management has used the PLS-SEM tool for data analysis (Sahibzada et al., 2023).

### 3.5. Demographics of respondents

In Table 1, The majority of respondents were male, at 71.4% of the total, while 28.6% were female. This indicates a higher likelihood of male participation in the study compared to female participation. The participants were categorized into two age brackets. 68.0% of respondents were between 22 and 27 years old, while the remaining 32.0% were 28 years old or older. This suggests that

a considerable number of the participants were quite young. Fieldwork involved questioning the respondents about their association with either public schools or the local government. 92.3% of responders were connected to public schools, while 7.7% were linked to the local government. The study primarily concentrated on persons engaged in public school education rather than those working directly in the local government.

**Table 1:** Demographics of respondents

Variable	Response category	Frequency	Percent (%)
Gender	Female	67	28.6
	Male	167	71.4
Age	22 - 27 years	159	68.0
	28 +years	75	32.0
Fieldwork	Public school	216	92.3
	Local government	18	7.7

## 4. Results

### 4.1. Measurement model assessment

The initial assessment of the measurement model was conducted to verify the reliability and validity of the construct, as stated by Hair et al. (2014). A total of 20 components were primarily engaged in the process. During the examination of the measurement model, two items were eliminated since all other factor loadings exceeded the recommended threshold of 0.600 (Hair et al., 2017). Hence, all inquiries were included in the ultimate measurement procedure (Table 2). The constructs' Average Variance Extracted (AVE) and composite reliability values are either equal to or exceed 0.50 and 0.70, respectively. Thus, the convergence validity and reliability have been verified. Moreover, Table 3 displays the outcomes of the discriminant validity analysis utilizing the Fornell and Larcker (1981) method.

**Table 2:** Factor loadings, reliability, and convergent validity

Items	Loadings	Alpha	AVE	CR
CLGR1	0.747			
CLGR2	0.808			
CLGR3	0.718	0.796	0.549	0.859
CLGR4	0.730			
CLGR5	0.698			
ELGR2	0.797			
ELGR3	0.836			
ELGR4	0.770	0.822	0.651	0.882
ELGR5	0.823			
ELGRM1	0.804			
ELGRM2	0.775			
ELGRM3	0.732	0.758	0.578	0.845
ELGRM4	0.822			
ESD1	0.747			
ESD 2	0.834			
ESD 3	0.867	0.857	0.638	0.898
ESD 4	0.808			
ESD 5	0.730			

**Table 3:** Fornell-Larcker criterion

	CLGR	ELGR	ELGRM	ESD
CLGR	0.741			
ELGR	0.630	0.807		
ELGRM	0.668	0.697	0.760	
ESD	0.658	0.654	0.702	0.799

### 4.2. Structural model

In this research, a variant of the multiple linear regression model known as Partial Least Squares (PLS) regression was used. Hair et al. (2017) recommend evaluating the structural model using the standard beta, R-squared, and t-values via a bootstrapping approach with a resample of 10,000 to examine the structural model. The outcomes of this study's evaluation of each of these matrices and parameters are displayed in Table 4 and Fig. 2. The coefficient of determination ( $R^2$ ) quantifies the proportion of variance in the dependent variable that can be explained by the independent variable.

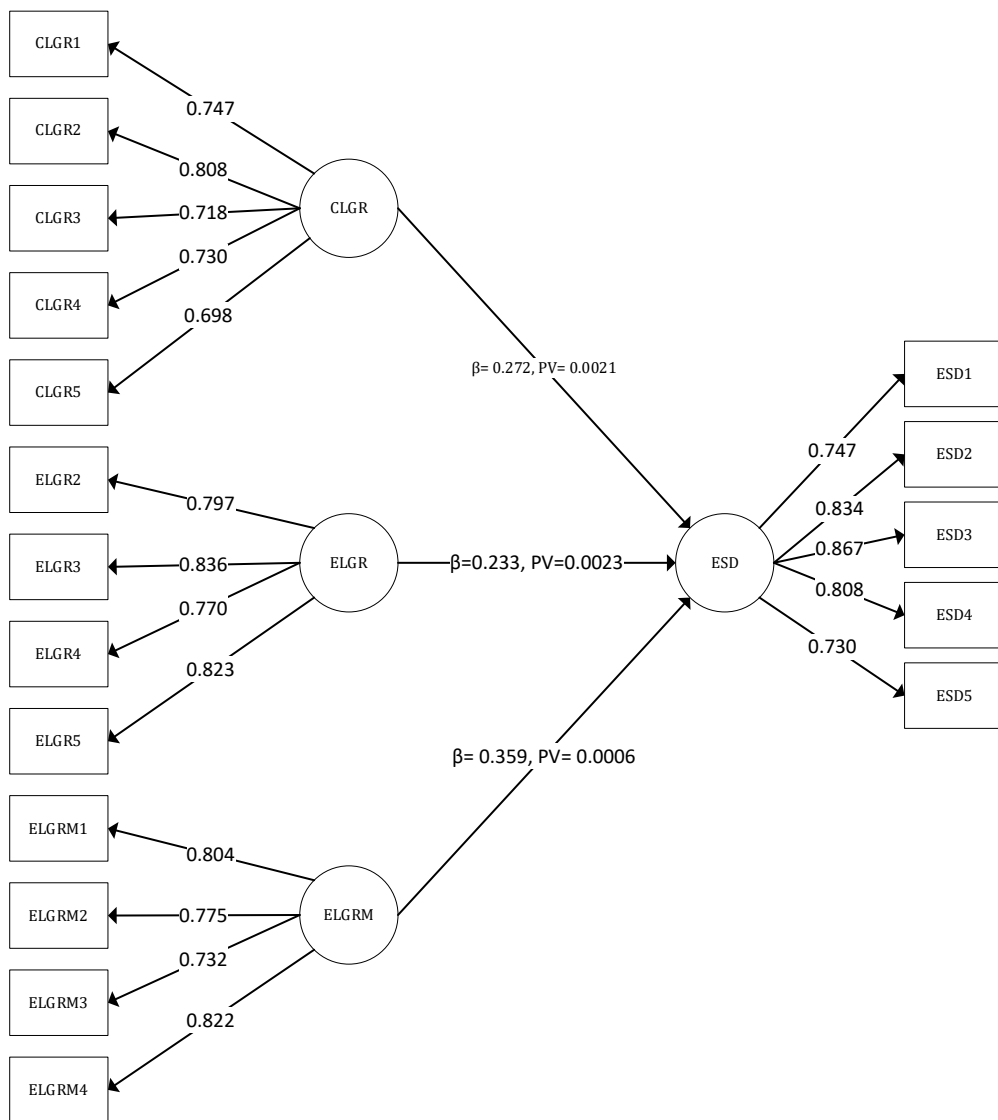
$R^2$  values are 0.583 for ESD. The findings of the study were as follows: CLGR has an estimated coefficient of -0.272, a t-statistic of 3.871, and a p-value of 0.0021. A negative correlation exists between the challenges faced by local governments in generating revenue and the provision of educational services.

ELGR has an estimated coefficient of 0.233, a t-statistic of 3.499, and a p-value of 0.0023, indicating a positive relationship between ELGR and ESD.

ELGRM demonstrates an estimated coefficient of 0.359, a t-statistic of 5.416, and a p-value of 0.0006. There is a positive relationship between the ELGRM and ESD.

**Table 4:** Structural model-hypothesis testing

No.	Path relationship	Original estimate	T statistic	PV	Decision	$R^2$
1	CLGR -> ESD	-0.272	3.871	0.0021	Supported	0.583
2	ELGR -> ESD	0.233	3.499	0.0023	Supported	
3	LGRM -> ESD	0.359	5.416	0.0006	Supported	



**Fig. 2:** Structural model

### 5. Discussion

The aim of this study was to determine the primary elements that influence the ESD by the local government of the Benadir Region in Somalia. As

mentioned, the presented hypotheses were examined using Structural Equation Modeling (SEM) analysis. As depicted in Fig. 2, the results of this study confirmed and demonstrated the significance of three hypotheses in Table 4: CLGR (H1), ELGR

(H2), and ELGRM (H3). The findings confirmed all hypotheses.

According to the statistical calculation summarized in [Table 4](#), employing CLGR (Understanding the unique challenges faced by local governments in Somalia, such as issues related to governance, security, infrastructure, and resource allocation) significantly negatively affects ESD. The T-statistics value of 3.871 and the P-values value of 0.002 indicate that the significance level is less than 0.05. This indicates that the first hypothesis (H1) is accepted, implying that when local government revenue faces challenges, it may result in reduced investments in education, leading to lower-quality educational services. This can manifest in various ways, such as outdated teaching materials, overcrowded classrooms, inadequate facilities, or a lack of extracurricular activities. Ultimately, students may receive subpar education, hindering their academic performance and future opportunities ([Smith et al., 2017](#)).

A direct correlation exists between the impacts of local government funding on ESD. The findings indicate that when there is a substantial correlation between local government revenue and education, it exerts a beneficial effect on the quality of educational service provision. This suggests that when local governments dedicate a significant proportion of their resources to education, it can result in enhanced educational services and outcomes. Impact on ESD quality: the correlation between ELGR and ESD suggests that when local government revenue has a substantial influence on education, it facilitates investments in areas such as teacher professional development, curriculum enhancement, infrastructure upgrades, and the provision of essential educational resources. This can lead to improved pedagogical practices, higher academic achievements, and an overall elevation in the standard of educational services offered to pupils.

Hypothesis 3 (H3): A direct correlation exists between the efficiency of managing local government revenue (ELGRM) and the provision of ESD. The findings indicate that proficient management of money by local governments has a favorable influence on the quality of educational service provision. Effective management encompasses the proficient distribution of cash, transparent financial processes, and strategic planning to guarantee the optimal usage of existing resources.

Impact on ESD quality: The direct correlation between Effective Local Government income Management (ELGRM) and ESD suggests that efficient management of income by local governments can result in enhanced delivery of educational services. Efficient management can lead to improved financial planning, prompt allocation of funds, and focused investments in education. It facilitates the allocation of sufficient resources, enhanced infrastructure, highly skilled educators, and new educational initiatives, all of which

contribute to the enhancement of the educational quality delivered to pupils.

## 6. Conclusions

The purpose of the present study was to investigate the effect of CLGR, ELGR, and ELGRM on ESD.

The results indicated that the CLGR, ELGR, and ELGRM are essential predictors of attitudes regarding the influence of ESD ([Olebara et al., 2021](#)). The results are consistent with prior research indicating that these three dimensions are the most important predictors of ESD. Consequently, the relational model generated and supported by PLS analysis is amenable to further investigation utilizing other constructs. The research is conducted exclusively at Benadir Region higher education, limiting our findings' generalizability. Different regions may yield different results, so further research in diverse settings is warranted to validate the robustness of our conclusions. Additionally, our study focused on a specific set of factors and other variables or contextual elements that may influence ESD. Future research should consider a broader range of factors and settings ([Cao et al., 2023](#)).

To enhance ESD, we consider the results and deductions derived from the examination of the impact of local government revenue on the provision of educational services. We propose the following suggestions:

Allocate additional resources to education: Acknowledging the detrimental effects of constraints in CLGR on the provision of ESD, it is imperative to prioritize and enhance financing for education. Governments ought to devote a substantial proportion of their revenue towards education in order to tackle resource constraints, enhance infrastructure, and furnish essential educational resources ([Setiamurti et al., 2023](#)).

Improve revenue management practices: Efficiently managing revenue at the local government level is crucial for maximizing resource allocation in the field of education. Governments ought to prioritize enhancing financial planning, implementing transparent financial processes, and establishing accountability systems to guarantee the efficient and effective utilization of funds for the delivery of educational services. This entails the systematic monitoring and evaluation of revenue management techniques.

Encourage strategic investments in education: The impact of local government money on education, as measured by ELGR, positively influences the quality of ESD. It is imperative for policymakers to prioritize education when allocating budgets and carefully consider strategic expenditures in areas such as teacher training, curriculum development, technology integration, and infrastructure improvements. These investments have the potential to augment the overall caliber of education and enhance student achievements.

Promote collaboration and partnerships: The cooperation of local governments, educational institutions, and community stakeholders is essential for enhancing the delivery of educational services. Governments should collaborate with key stakeholders to utilize resources, exchange best practices, and implement innovative ways in education. This collaboration has the potential to result in improved educational services and more favorable outcomes for students. Continuous monitoring and evaluation are crucial for establishing procedures to assess the influence of local government revenue on the delivery of educational services. Periodic evaluations of the caliber of educational services, academic achievement of students, and efficient use of resources can offer policymakers significant insights. Utilizing data allows for decision-making based on facts and promotes continuous enhancements in the delivery of educational services.

Emphasize the fair allocation of resources: In order to provide equal opportunities for quality education, it is crucial to emphasize the equitable distribution of resources. Governments should prioritize the requirements of marginalized communities and distribute resources accordingly, with the goal of diminishing educational inequalities and fostering inclusiveness in the provision of educational services.

### 6.1. Recommendations

Diversify revenue sources: To solve the difficulties of local government revenue, it is critical to look into and diversify revenue sources beyond traditional techniques. This can include securing external funding through collaborations with international organizations, soliciting private investment, and encouraging entrepreneurship and local economic growth. By diversifying their revenue streams, local governments can boost their financial capacity to spend on education. Local governments should focus on building activities to improve their revenue management procedures. This can include teaching government personnel about financial planning, budgeting, and transparent financial processes. Furthermore, implementing strong accountability systems and regular monitoring and assessment methods may ensure that funds are allocated efficiently and effectively. Policymakers should emphasize strategic educational investments by devoting adequate resources to areas such as teacher training, curriculum development, technology integration, and infrastructure improvements. These initiatives should be evidence-based and tailored to meet the region's specific needs. By focusing on these areas, the entire quality of education can be improved, resulting in higher academic achievements for students.

Promote collaboration and partnerships: Local governments, educational institutions, and community stakeholders must work together to improve ESD. Governments should actively interact

with stakeholders to share best practices, resources, and creative educational approaches. This collaboration can result in better coordination, resource utilization, and the adoption of successful ways to improve ESD.

Equitable resource allocation: To enable equal access to quality education, resources must be distributed fairly and equitably. Governments should prioritize the needs of marginalized communities and devote resources accordingly. This can help to address educational inequities and promote inclusive ESD.

Continuous monitoring and evaluation: Developing strong monitoring and evaluation methods is critical for determining the influence of local government money on ESD. Regular evaluations should be undertaken to assess educational service quality, student academic achievement, and resource efficiency. Data-driven decision-making enables policymakers to identify areas for improvement and make informed policy changes to improve ESD.

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### Compliance with ethical standards

#### Ethical considerations

This study was conducted following ethical guidelines and standards for research involving human participants. Informed consent was obtained from all participants prior to their involvement in the study. Participants were assured of their anonymity, and all data collected were kept confidential and used solely for the purposes of this research. The study was approved by the Ethics Committee of SIMAD University, and all procedures performed were in accordance with the ethical standards of the institution.

#### Conflict of interest

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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