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Abstract:

Purpose of the Study: This study examined the effect of budget allocation on Early Childhood Development Education (ECDE) service delivery in pre-primary schools in Marsabit County, Kenya. The research aimed to establish whether financial resource allocation significantly influences educational outcomes in resource-constrained arid and semi-arid regions.

Methodology: A positivist philosophy and quantitative descriptive research design were adopted, targeting 500 respondents including education officers, headteachers, and teachers. A sample of 222 was determined using Yamane's formula. Data were collected using structured questionnaires and analyzed through descriptive statistics, Pearson correlation, and multiple linear regression using SPSS version 28.

Findings: The study achieved a 93.2% response rate (n=207). Respondents agreed that budget allocation enhances service delivery (M=4.05), supports learning materials (M=4.03), and improves infrastructure (M=3.96). Correlation analysis revealed a strong positive relationship between budget allocation and ECDE service delivery ($r=0.641$, $p<0.01$). Regression results confirmed that budget allocation significantly predicts ECDE service delivery ($\beta=0.426$, $p<0.001$), explaining 18.2% of the variation. Teacher welfare recorded the lowest mean (M=3.92), indicating a priority area requiring additional investment. Inadequate funding for teacher remuneration and professional development undermines service quality and staff retention in marginalized ASAL regions.

Conclusion: The study concludes that adequate, timely, and well-managed budget allocation is essential for improving ECDE service delivery in Marsabit County. Strengthening budget planning, ensuring timely fund disbursement, investing in infrastructure and teacher welfare, and establishing robust monitoring systems are recommended to enhance ECDE outcomes in ASAL regions.

Keywords: *Budget Allocation, ECDE Service Delivery, Pre-Primary Education, Marsabit County, Public Finance Management*

1.0 INTRODUCTION

1.1 Background of the Study

Early Childhood Development Education (ECDE) constitutes a fundamental pillar in the education system of any nation. It provides the foundational learning experiences that shape children's cognitive, social, emotional, and physical development during their most formative years. Research consistently demonstrates that quality early childhood education yields significant long-term benefits, including improved academic performance, higher educational attainment, increased productivity, and reduced social inequalities (UNICEF, 2021; UNESCO, 2022). The critical role of ECDE in human capital development has led many countries to prioritize investment in early childhood education as a strategic approach to achieving sustainable development goals.

In Kenya, ECDE has gained considerable policy attention following the adoption of the 2010 Constitution, which devolved the function of early childhood education to county governments. Article 53 of the Constitution recognizes every child's right to education, while the Fourth Schedule assigns the responsibility for ECDE to county governments. This devolution was intended to bring decision-making and service delivery closer to local communities, enabling counties to design and implement ECDE programmes that respond to specific local needs and priorities (Muwonge et al., 2022). The Kenya Vision 2030 further emphasizes the importance of investing in early childhood education as a means of building a skilled and competitive workforce that can drive economic transformation.

Despite these constitutional and policy commitments, the implementation of ECDE programmes across Kenya's 47 counties has been characterized by significant disparities in access, quality, and outcomes. Marsabit County, located in the arid and semi-arid lands (ASAL) of northern Kenya, presents a particularly challenging context for ECDE service delivery. The county is characterized by vast geographical expanses, low population densities, pastoralist livelihoods, inadequate infrastructure, and limited access to basic services. These factors combine to create formidable barriers to the provision of quality early childhood education. Recent reports indicate that Marsabit County records one of the highest ECDE exclusion rates in Kenya, with 33.3 percent of children not accessing pre-primary education, compared to near-universal access in counties such as Kisumu (1.3 percent) and Nakuru (1.8 percent) (Zizi Afrique Foundation & Usawa Agenda, 2025). This stark regional disparity underscores the urgent need to understand and address the factors that constrain ECDE service delivery in marginalized regions.

Budget allocation emerges as a critical factor influencing the effectiveness of ECDE service delivery. Public Finance Management Theory posits that effective budgeting systems, timely fund disbursement, and robust expenditure control mechanisms are essential for achieving efficiency, accountability, and effectiveness in public service delivery (Allen et al., 2017; World Bank, 2022). In the context of ECDE, adequate budget allocation determines the availability of essential inputs such as classrooms, learning materials, qualified teachers, and support services that collectively shape the quality of early childhood education. When budgets are inadequate, delayed, or misallocated, the consequences manifest in poor learning environments, inadequate teaching resources, demotivated teachers, and ultimately, compromised learning outcomes for children.

The challenge of budget allocation for ECDE in Marsabit County is compounded by several factors. First, county governments face competing demands for limited financial resources across multiple devolved functions, including health, agriculture, water, and infrastructure. Second, the ASAL context presents higher costs for service delivery due to long distances, poor road networks, and low population densities. Third, capacity constraints in financial management, budgeting, and expenditure tracking at the county level may impede effective allocation and utilization of ECDE funds. Fourth, political and administrative considerations sometimes influence budget decisions in ways that do not necessarily align with the actual needs of ECDE service delivery.

The relationship between budget allocation and ECDE service delivery has been examined in various contexts. Wanza and Muna (2023) investigated the effects of budgetary allocation on provision of pre-primary education in Machakos County, Kenya, and found that budgetary allocation had a positive and significant effect on the provision of pre-primary education. Similarly, Murungi (2025) studied the effect of devolution on ECDE service delivery in Kajiado County and found that increased county-level budget allocation improved infrastructure development, teacher recruitment, and learning material provision. However, these studies were conducted in relatively more resourced counties and may not fully capture the unique challenges facing ECDE in ASAL regions such as Marsabit County.

The current study addresses this gap by examining the effect of budget allocation on ECDE service delivery specifically in Marsabit County. By focusing on a resource-constrained ASAL county, the study provides insights into how budget allocation influences ECDE outcomes in contexts where financial resources are particularly scarce and service delivery challenges are most acute. The findings are expected to inform policy and practice regarding ECDE financing in marginalized regions, contributing to more equitable and effective early childhood education in Kenya.

1.2 Statement of the Problem

Early Childhood Development Education (ECDE) is widely recognized as a critical foundation for children's cognitive, social, and academic development. In Kenya, the devolution of ECDE functions to county governments was intended to improve access, quality, and efficiency of service delivery through enhanced planning and resource allocation. Despite these reforms, many counties, particularly those in Arid and Semi-Arid Lands (ASALs), continue to experience inadequate ECDE service delivery characterized by poor infrastructure, limited teaching and learning materials, inadequate teacher support, and low enrolment. Marsabit County remains one of the most affected counties, with 33.3% of children excluded from ECDE, representing one of the highest exclusion rates in Kenya (Zizi Afrique Foundation & Usawa Agenda, 2025). These challenges persist despite annual county budgetary allocations to the ECDE sector, raising concerns about whether the allocated financial resources are sufficient to support quality service delivery. Inadequate infrastructure, limited instructional materials, and poor teacher welfare continue to constrain the provision of quality early childhood education within the county.

Previous studies have established that adequate budget allocation improves educational outcomes by enhancing infrastructure, learning resources, teacher recruitment, and service quality (Wanza & Muna, 2023; Murungi, 2025; Muwonge et al., 2022). However, these studies were conducted in different contexts and provide limited evidence on the effect of budget allocation on ECDE service delivery in ASAL counties such as Marsabit, where geographical and socio-economic conditions present unique implementation challenges. Consequently, the effect of budget allocation on ECDE service delivery in pre-primary schools in Marsabit County remains insufficiently documented. This study therefore sought to examine how budget allocation influences ECDE service delivery in pre-primary schools in Marsabit County, Kenya, to provide empirical evidence for policy and resource allocation decisions.

1.3 Purpose of the Study

The purpose of the study was to determine the effect of budget allocation on ECDE service delivery in pre-primary schools in Marsabit County, Kenya.

1.4 Research Hypothesis

H_{01}: Budget allocation does not significantly influence ECDE service delivery in pre-primary schools in Marsabit County, Kenya.

2.0 LITERATURE REVIEW

2.1 Theoretical Framework

Public Finance Management (PFM) Theory

The Public Finance Management (PFM) Theory explains how governments plan, allocate, spend, and monitor public resources to achieve efficiency, accountability, and effectiveness in public service delivery. The theory emphasizes that strong budgeting systems, timely fund disbursement, and effective expenditure control mechanisms are essential for improving service delivery outcomes in public institutions (Allen et al., 2017; World Bank, 2022). PFM Theory is grounded in the recognition that public resources are scarce and must therefore be managed prudently to maximize their impact on societal welfare.

PFM Theory identifies several key principles that underpin effective public financial management. First, budgeting should be comprehensive, covering all revenues and expenditures to ensure transparency and accountability. Second, budget allocations should be aligned with policy priorities, ensuring that resources are directed toward areas of greatest need. Third, expenditure should be monitored and evaluated to assess whether resources have been used efficiently and effectively. Fourth, financial information should be accessible to stakeholders, enabling public oversight and participation in budget processes (Allen et al., 2017; OECD, 2021).

In the context of ECDE, PFM Theory provides a useful framework for understanding how budget allocation influences service delivery. Effective financial management ensures that resources are efficiently directed toward key inputs such as infrastructure development, provision of instructional materials, and recruitment of teachers, all of which contribute to improved access, quality, and equity in early childhood education. When budgeting systems are weak, funds may be delayed, misallocated, or inadequately monitored, undermining the effectiveness of ECDE service delivery (World Bank, 2022).

PFM Theory is particularly relevant to this study because ECDE services in Kenya are financed through county governments under the devolved system of governance. Efficient public financial management ensures that ECDE funds are allocated and utilized in priority areas such as construction of classrooms, provision of learning materials, and teacher support programmes. In contrast, weak financial systems may lead to delays in fund disbursement, misallocation of resources, and inequitable distribution of services, especially in marginalized regions such as Marsabit County. These challenges ultimately undermine the effectiveness of ECDE service delivery and limit educational outcomes (OECD, 2021; Allen et al., 2017).

Empirical studies further support the application of PFM Theory in education financing and service delivery. The World Bank (2022) notes that countries with strong public financial management systems tend to achieve better education outcomes due to improved transparency, accountability, and efficient utilization of public resources. Similarly, OECD (2021) emphasizes that effective budgeting and expenditure tracking systems enhance the efficiency of early childhood education programmes by ensuring that resources are aligned with policy priorities and are used for intended purposes. These findings demonstrate that financial governance plays a critical role in determining the effectiveness of public education service delivery.

Despite its strengths, PFM Theory has been criticized for overemphasizing technical and procedural aspects of financial management while underplaying the influence of political, institutional, and administrative factors in resource allocation decisions (Allen et al., 2017; Schick, 2018). It also assumes rational and efficient financial systems, which may not always reflect the realities of devolved governance structures in developing countries. Nevertheless, the theory remains highly relevant to this study as it provides a strong conceptual framework for understanding how ECDE expenditure practices including budget allocation, fund disbursement, financial accountability, and expenditure monitoring and evaluation affect service delivery outcomes in pre-primary schools in Marsabit County, Kenya.

2.2 Empirical Review

2.2.1 Budget Allocation and ECDE Service Delivery

Sello (2026) examined the cost of care and the effects of payment delays on Early Childhood Development practitioners in South Africa. The study was anchored on the Human Capital Theory, which emphasizes investment in personnel as a driver of service quality. Using a mixed-methods design and a sample of 180 ECDE practitioners, the study found that delayed and inadequate budget allocations significantly reduced staff motivation, service consistency, and quality of care delivery. The study concluded that unstable funding structures weaken ECDE service delivery systems. However, the study focused on practitioner welfare rather than broader county-level budget allocation mechanisms. It also did not examine how specific expenditure components such as infrastructure and learning materials influence service delivery outcomes. This creates a gap that the current study addresses by focusing on ECDE budget allocation and its multidimensional impact on service delivery in pre-primary schools in Marsabit County, Kenya.

Matsiko et al. (2026) investigated integrated ECDE financing models in Rwanda using a Systems Theory framework, which emphasizes the interdependence of financial inputs and service delivery outcomes. The study adopted a mixed-methods approach with a sample of 240 respondents drawn from ECDE centres in urban and cross-border market settings. Findings revealed that integrated and well-coordinated budget allocation systems significantly improved enrollment rates, learning environment quality, and teacher retention. The study concluded that coordinated financing enhances ECDE efficiency and sustainability. However, the study was limited to integrated ECDE centres in commercial settings, leaving out rural and ASAL regions with severe resource constraints. The current study addresses this gap by focusing on Marsabit County, a resource-constrained arid region where budget allocation dynamics differ significantly.

Ramadani (2026) examined strategic financial management in Islamic ECDE institutions using Resource Allocation Theory, which argues that optimal distribution of scarce resources enhances institutional performance. The study employed a descriptive survey design involving 150 ECDE institutions and found that efficient allocation of funds toward infrastructure development and enrollment support significantly increased student intake and facility expansion. The study concluded that financial planning and targeted allocation improve ECDE growth and sustainability. However, the study was limited to faith-based institutions, which operate under structured financial governance systems that differ from public county ECDE systems. The current study differs by focusing on public ECDE institutions where budget allocation is often influenced by political, administrative, and bureaucratic processes.

Sulungai (2026) explored the alignment between ECDE curriculum financing and labour market outcomes in Kenya using Human Capital Development Theory, which links investment in education to productivity and employability outcomes. The study used a sample of 200 ECDE trainees and trainers across selected universities in Kenya and found that inadequate budget allocation to training institutions negatively affected curriculum delivery, practical training, and graduate employability. The study concluded that underfunding ECDE training systems reduces education quality and workforce readiness. However, the study focused on tertiary training institutions rather than ECDE service delivery at the county level. The present study fills this gap by focusing on how budget allocation directly influences ECDE service delivery outcomes at the grassroots level.

Murungi (2025) studied the effect of devolution on ECDE service delivery in Kajiado County, Kenya, using Public Finance Management Theory, which emphasizes efficient allocation and utilization of devolved resources. The study adopted a case study design with a sample of 120 education officers and ECDE teachers. The findings revealed that increased county-level budget allocation improved infrastructure development, teacher recruitment, and learning material provision, thereby enhancing ECDE service delivery. However, the study also noted challenges such as delayed fund disbursement and political interference. The study was limited to one semi-arid county and did not isolate budget allocation as a distinct variable affecting ECDE outcomes. The current study improves on this by specifically analyzing budget allocation as an independent variable alongside other expenditure practices in Marsabit County.

Muwonge et al. (2022) examined how devolution reforms influence service delivery in Kenya using Institutional Theory, which emphasizes the role of formal structures and governance systems in shaping public service outcomes. The study employed a comparative policy analysis across multiple counties with a sample of 300 respondents. Findings indicated that counties with stronger budgetary allocation systems achieved better ECDE service delivery outcomes, particularly in infrastructure expansion and teacher support services. However, the study focused broadly on devolution and not ECDE-specific budget allocation mechanisms. The current study narrows this gap by isolating ECDE budget allocation and examining its direct effect on service delivery in Marsabit County.

Wanza and Muna (2023) investigated the effects of budgetary allocation on pre-primary education provision in Machakos County, Kenya, using Public Expenditure Theory, which links government spending to service delivery efficiency. The study used a sample of 160 ECDE teachers and administrators and found that increased budget allocation significantly improved classroom infrastructure, learning materials availability, and enrollment rates. The study concluded that adequate funding enhances ECDE service delivery. However, the study was conducted in a more urbanized county with relatively better resource availability, limiting generalizability to ASAL regions. The current study differs by focusing on Marsabit County, where budget allocation constraints are more severe and service delivery challenges are more pronounced.

Mwangi (2023) assessed the influence of devolution support on ECDE retention in Wareng Sub-County, Kenya, using Human Capital Theory, which links investment in education to learner outcomes. The study involved 140 respondents and found that increased financial support from county governments improved retention rates and reduced dropout levels in ECDE centres. However, the study focused mainly on retention outcomes and not the broader dimensions of service delivery such as quality and equity. The current study addresses this gap by examining multiple ECDE service delivery indicators influenced by budget allocation.

Chenane et al. (2025) examined ECDE teachers' perceptions of administrative support in implementing Competency-Based Education in Bungoma County using Organizational Support Theory, which emphasizes the role of institutional support in performance outcomes. The study used a sample of 130 teachers and found that inadequate budget allocation for training and learning materials negatively affected instructional quality and curriculum implementation. However, the study focused on teacher perceptions rather than financial allocation mechanisms at the county level. The current study differs by analyzing budget allocation as a structural financial input affecting ECDE service delivery outcomes.

Magoma et al. (2025) explored ECDE programming in Kenya's ASAL regions using Equity and Access Theory, which emphasizes fairness in resource distribution. The study used a mixed-methods approach with 250 respondents across ASAL counties and found that insufficient budget allocation significantly hindered access to ECDE services, infrastructure development, and learning quality. The study concluded that inequitable funding remains a major barrier to ECDE development in ASAL regions. However, the study was broad and did not focus specifically on Marsabit County or isolate budget allocation as a distinct variable. The current study fills this gap by providing a focused analysis of budget allocation and ECDE service delivery in Marsabit County.

2.2.2 ECDE Service Delivery

ECDE service delivery encompasses the range of activities and processes through which early childhood education services are provided to children and their families. Effective service delivery in ECDE requires the coordinated provision of multiple inputs including infrastructure, learning materials, qualified teachers, and support services, all of which contribute to creating enabling learning environments for young children (UNICEF, 2021; UNESCO, 2022). The quality of ECDE service delivery is determined by the availability, accessibility, and effectiveness of these inputs in promoting children's holistic development.

Access to ECDE services is a fundamental dimension of service delivery. In Kenya, despite constitutional and policy commitments to universal access to early childhood education, significant disparities persist across counties and regions. National data indicate that 7.4 percent of children enter Grade 1 without any prior ECDE experience, with the situation worse in rural areas where exclusion rises to 8.4 percent (Zizi Afrique Foundation & Usawa Agenda, 2025). In Marsabit County, the exclusion rate stands at 33.3 percent, reflecting severe access challenges that are rooted in inadequate infrastructure, long distances to ECDE centres, and insufficient investment in early childhood education (Zizi Afrique Foundation & Usawa Agenda, 2025).

Quality of ECDE services is equally important as access. Quality in early childhood education is determined by multiple factors including the learning environment, teacher qualifications and training, availability of learning materials, curriculum implementation, and child-teacher interactions (UNESCO, 2022). Research indicates that ECDE teachers in Kenya often have the lowest qualifications and shortest training durations across the education system, raising concerns about instructional quality and learner outcomes (Zizi Afrique Foundation & Usawa Agenda, 2025). Inadequate infrastructure, limited learning materials, and poor teacher welfare further undermine the quality of ECDE services, particularly in marginalized regions such as Marsabit County.

The effectiveness of ECDE service delivery is ultimately measured by children's learning and development outcomes. Research demonstrates that quality early childhood education significantly improves children's cognitive development, school readiness, and later academic performance (UNICEF, 2021). Children who attend preschool are 9 percent more likely to perform better in mathematics and 18 percent more likely to perform better in English than those who do not (Zizi Afrique Foundation & Usawa Agenda, 2025). These findings underscore the critical importance of effective ECDE service delivery in building human capital and reducing educational inequalities.

Improving ECDE service delivery requires adequate and sustained investment in early childhood education. This includes budget allocation for infrastructure development, learning materials, teacher recruitment and training, and support services. Effective public financial management ensures that resources are efficiently directed toward priority areas and that expenditure is monitored to assess its impact on service delivery outcomes (World Bank, 2022). In the context of Marsabit County, strengthening budget allocation and expenditure management for ECDE is essential for addressing the severe access and quality challenges facing early childhood education in the county.

2.3 Conceptual Framework

The conceptual framework illustrates the relationship between the study variables. Budget allocation is the independent variable, while ECDE service delivery is the dependent variable. The framework proposes that adequate budget allocation enhances learning materials, infrastructure, teacher welfare, and overall service delivery, thereby improving the quality of ECDE in pre-primary schools in Marsabit County, Kenya.

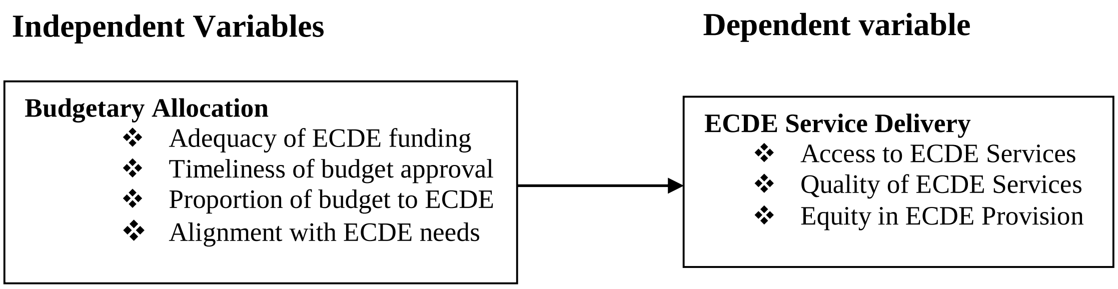

Figure 1: Conceptual Framework

3.0 RESEARCH METHODOLOGY

The study adopted a positivist philosophy and a quantitative descriptive research design to facilitate objective measurement and statistical analysis of the relationship between budget allocation and ECDE service delivery. The positivist philosophy was appropriate for this study because it allowed for the systematic collection and analysis of numerical data to test hypotheses and establish causal relationships between variables. The quantitative descriptive research design enabled the researcher to describe the characteristics of the study population and examine the relationships between budget allocation and ECDE service delivery outcomes. The target population comprised 500 respondents, including county education officers, sub-county ECDE coordinators, headteachers, ECDE teachers, and School Management Committee representatives in Marsabit County. A sample of 222 respondents was determined using Yamane's formula, with stratified and simple random sampling techniques applied to ensure representativeness across different categories of respondents. Stratified sampling ensured that each subgroup within the population was adequately represented, while simple random sampling within each stratum ensured that every individual had an equal chance of being selected. Primary data were collected through structured questionnaires using a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The questionnaire was designed to capture respondents' perceptions of budget allocation practices and ECDE service delivery outcomes. Secondary data were obtained from county budget reports, audit reports, and education records to complement the primary data and provide context for the findings. A pilot study was conducted in Isiolo County to assess instrument validity and reliability, with Cronbach's Alpha values of 0.70 and above considered acceptable. Data were analyzed using SPSS version 28 through descriptive statistics, Pearson correlation, and multiple linear regression. Descriptive statistics including frequencies, percentages, means, and standard deviations were used to summarize respondents' perceptions of budget allocation and ECDE service delivery. Pearson correlation was used to examine the direction and strength of relationships between variables.

4.0 RESEARCH FINDINGS AND DISCUSSION

4.1 Response Rate

The study targeted 222 respondents drawn from county education officers, sub-county ECDE coordinators, headteachers, ECDE teachers, and School Management Committee representatives in Marsabit County. The response rate is presented in Table 1.

Table 1: Response Rate

Response	Frequency	Percent
Returned	207	93.2
Not Returned	15	6.8
Total	**222**	**100**

Source: Research Data (2026)

The study findings indicate that out of the 222 questionnaires administered, 207 were successfully returned, representing a response rate of 93.2 percent, while 15 questionnaires were not returned, representing 6.8 percent. The high response rate suggests adequate participation by respondents and provides sufficient data for analysis. According to Creswell and Creswell (2018), a response rate above 70 percent is considered appropriate for social science research, indicating that the findings are reliable for interpretation. The high response rate achieved in this study can be attributed to the researcher's efforts in follow-up communication with respondents, the relevance of the study topic to the respondents, and the support received from county education officials in facilitating data collection.

4.2 Descriptive Analysis

4.2.1 Budget Allocation and ECDE Service Delivery

This section examines the influence of budget allocation on ECDE service delivery. Responses were measured using a five-point Likert scale where 1 = Strongly Disagree and 5 = Strongly Agree. The findings are presented in Table 2 below.

Table 2: Budget Allocation and ECDE Service Delivery

Statement	SD (%)	D (%)	N (%)	A (%)	SA (%)	Mean	Std. Dev
ECDE budgets are adequately allocated annually	2.4	6.3	10.6	50.2	30.5	4.00	0.82

Budget allocation supports provision of learning materials	2.0	5.8	9.7	51.7	30.8	4.03	0.80
Budget allocation improves ECDE infrastructure	2.9	7.2	11.1	49.3	29.5	3.96	0.85
Budget allocation supports teacher welfare	3.4	8.2	10.6	48.8	29.0	3.92	0.88
Budget allocation enhances service delivery	2.0	5.3	9.2	52.2	31.3	4.05	0.79

Source: Research Data (2026)

The findings in Table 2 indicate that respondents generally agreed that budget allocation positively influences ECDE service delivery in pre-primary schools in Marsabit County. Mean scores ranged from 3.92 to 4.05, demonstrating positive perceptions regarding the contribution of financial allocation to service delivery. The statement that budget allocation enhances service delivery recorded the highest mean (M = 4.05), with 52.2% of respondents agreeing and 31.3% strongly agreeing, highlighting the importance of adequate funding in improving educational outcomes. Similarly, budget allocation was perceived to support the provision of learning materials (M = 4.03) and annual ECDE budgeting (M = 4.00). However, teacher welfare recorded the lowest mean (M = 3.92), suggesting that respondents viewed teacher support as an area requiring additional financial investment. Overall, the low standard deviations (0.79–0.88) indicate consistency in respondents' views. These findings imply that adequate and well-managed budget allocation is essential for improving infrastructure, learning resources, teacher support, and overall ECDE service delivery.

4.2.2 ECDE Service Delivery in Pre-Primary Schools

This section presents the descriptive findings on ECDE service delivery in pre-primary schools in Marsabit County. Responses were measured on a five-point Likert scale where 1 = Strongly Disagree and 5 = Strongly Agree. The findings are presented in Table 3 below.

Table 3: ECDE Service Delivery

Statement	SD (%)	D (%)	N (%)	A (%)	SA (%)	Mean	Std. Dev
Learning materials are adequately available in ECDE centres	2.4	6.3	11.1	49.8	30.4	3.99	0.84
ECDE infrastructure supports effective learning	3.0	7.2	10.6	50.7	28.5	3.94	0.86
Teachers receive adequate support to deliver quality services	2.4	6.8	10.1	51.2	29.5	4.00	0.83
Learners receive quality early childhood education services	2.0	5.8	9.7	52.2	30.3	4.03	0.81
ECDE programmes achieve their intended objectives	2.4	5.3	10.6	51.7	30.0	4.02	0.81

Source: Research Data (2026)

The findings in Table 3 show that respondents generally rated ECDE service delivery positively in pre-primary schools in Marsabit County. Mean scores ranged from 3.94 to 4.03, indicating overall satisfaction with the quality of services provided. The highest mean was recorded for the statement that learners receive quality early childhood education services (M = 4.03), followed closely by achievement of ECDE programme objectives (M = 4.02) and teacher support (M = 4.00). Availability of learning materials also received positive ratings (M = 3.99), reflecting respondents' confidence in resource provision. However, ECDE infrastructure recorded the lowest mean (M = 3.94), suggesting that classroom facilities, sanitation, and learning environments require further improvement. The relatively low standard deviations (0.81–0.86) indicate consistent responses across participants. Overall, the findings suggest that ECDE service delivery is generally effective, although continued investment in infrastructure and educational resources is necessary to sustain and enhance service quality.

4.3 Inferential Statistics

Inferential statistics were conducted to determine whether budget allocation significantly influenced ECDE service delivery and to test the study hypothesis objectively. The findings are presented in Table 4 below.

Correlation Analysis

Pearson correlation analysis examined the strength, direction, and statistical significance of the relationship between budget allocation and ECDE service delivery. The findings are presented in Table 4 below.

Table 4: Correlation between Budget Allocation and ECDE Service Delivery

Variable	Budget Allocation	ECDE Service Delivery
Budget Allocation	.000	.641**
ECDE Service Delivery	.641**	.000

Correlation is significant at the 0.01 level (2-tailed)
***Source:** Research Data (2026)*

The findings in Table 4 indicate a strong positive and statistically significant relationship between budget allocation and ECDE service delivery ($r = 0.641$, $p < 0.01$). This implies that increased budget allocation is associated with improved ECDE service delivery in pre-primary schools in Marsabit County. Adequate funding enhances the provision of learning materials, infrastructure development, and teacher support, leading to better educational outcomes. These findings are consistent with Wanza and Muna (2023), who found that increased budget allocation improved pre-primary education services, and Murungi (2025), who reported that adequate funding enhanced infrastructure, teacher recruitment, and learning resources in ECDE centres.

Regression Analysis

Multiple regression analysis was performed to determine whether budget allocation significantly predicts ECDE service delivery in pre-primary schools in Marsabit County. The findings are presented in Tables below.

Model Summary

Table 5: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of Estimate
1	0.426	0.182	0.176	0.537

Predictor: Budget Allocation
Source: Research Data (2026)

The model summary shows that budget allocation had a moderate positive relationship with ECDE service delivery (R = 0.426). The coefficient of determination ($R^2 = 0.182$) indicates that budget allocation explained 18.2% of the variation in ECDE service delivery, while the remaining 81.8% was explained by other factors outside the model. The adjusted R^2 value of 0.176 confirms that the regression model adequately fits the study data. The findings demonstrate that although budget allocation significantly contributes to ECDE service delivery, improving educational outcomes also requires complementary interventions such as effective financial management, teacher motivation, adequate staffing, and efficient programme implementation. These findings are consistent with Wanza and Muna (2023), who found that budget allocation significantly explained variations in ECDE performance, and support Public Finance Management Theory, which emphasizes effective resource allocation for improved public service delivery.

ANOVA

Table 6: ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	14.769	4	14.769	51.213	0.000
Residual	38.564	202	0.254		
Total	**53.333**	**206**			

Dependent Variable: ECDE Service Delivery
Source: Research Data (2026)

The ANOVA results indicate that the regression model was statistically significant ($F = 51.213$, $p < 0.001$). This confirms that budget allocation significantly predicts ECDE service delivery in pre-primary schools in Marsabit County. Since the significance value is below 0.05, the null hypothesis that budget allocation has no significant effect on ECDE service delivery was rejected. The findings imply that improvements in budget allocation contribute significantly to enhancing service delivery within ECDE institutions. The results are consistent with previous studies by Wanza and Muna (2023), Murungi (2025), and Muwonge et al. (2022), which established that adequate financial allocation positively influences educational service delivery.

Regression Coefficients

Table 7: Regression Coefficients

Variables	B	Std. Error	Beta	t	Sig.
Constant	0.421	0.186		2.263	0.025
Budget Allocation	0.365	0.068	0.426	5.368	0.000

Dependent Variable: ECDE Service Delivery

Source: Research Data (2026)

The regression coefficients indicate that budget allocation had a positive and statistically significant effect on ECDE service delivery ($\beta = 0.426$, $B = 0.365$, $t = 5.368$, $p < 0.001$). This implies that a one-unit improvement in budget allocation results in a corresponding 0.365-unit improvement in ECDE service delivery. The standardized coefficient further shows that budget allocation has a moderate positive influence on service delivery. The findings demonstrate that increasing financial allocation to ECDE programs improves teaching and learning resources, infrastructure, teacher welfare, and the overall quality of educational services. Consequently, strengthening budget allocation mechanisms is likely to enhance service delivery outcomes across pre-primary schools in Marsabit County. These findings support Public Finance Management Theory, which emphasizes that effective allocation and utilization of public financial resources improve institutional performance and service delivery. The results are also consistent with empirical findings by Wanza and Muna (2023), Murungi (2025), and Muwonge et al. (2022), all of whom concluded that increased budget allocation significantly enhances ECDE service delivery.

5.0 SUMMARY OF THE STUDY

This study examined the effect of budget allocation on service delivery in ECDE in pre-primary schools in Marsabit County, Kenya. The study was guided by Public Finance Management Theory, which emphasizes the importance of effective budgeting and prudent financial management in enhancing public service delivery. A quantitative descriptive research design was adopted to establish the relationship between budget allocation and ECDE service delivery. The study targeted county education officers, sub-county ECDE coordinators, headteachers, ECDE teachers, and School Management Committee representatives drawn from a population of 500 respondents.

Descriptive findings indicated that respondents generally agreed that adequate budget allocation positively influences ECDE service delivery by supporting the provision of learning materials, improving infrastructure, strengthening teacher welfare, and enhancing the quality of educational services. Respondents also rated the overall level of ECDE service delivery positively, although infrastructure development remained an area requiring further improvement.

Inferential analysis established a statistically significant positive relationship between budget allocation and ECDE service delivery. Regression results further confirmed that budget allocation significantly predicts improvements in service delivery. The findings demonstrate that adequate financial allocation is essential for improving ECDE services and support the propositions of Public Finance Management Theory regarding the role of effective resource allocation in enhancing public education outcomes.

6.0 CONCLUSION

The study concludes that budget allocation significantly influences service delivery in ECDE pre-primary schools in Marsabit County, Kenya. Adequate financial allocation enhances the availability of teaching and learning materials, improves classroom infrastructure, supports teacher facilitation, and creates a conducive learning environment, thereby improving the quality of early childhood education. However, the findings indicate that existing budgetary allocations remain insufficient to adequately address infrastructure needs, instructional resources, and teacher welfare, limiting the effectiveness of ECDE programs.

The study further concludes that effective service delivery depends not only on adequate funding but also on sound financial management practices. Proper planning, timely disbursement of funds, prudent utilization of resources, accountability, and regular monitoring are essential to ensure that budget allocations achieve the intended educational outcomes. Weak financial management reduces the impact of available resources and compromises service quality.

Additionally, Marsabit County's vast geographical coverage and ASAL conditions increase the cost of delivering ECDE services. The study therefore concludes that sustained government commitment, equitable budget allocation, and strengthened financial management systems are necessary to improve ECDE service delivery, enhance equitable access to quality early childhood education, and support sustainable educational development across the county.

7.0 RECOMMENDATIONS

Based on the findings, Marsabit County should prioritize adequate and equitable budget allocation to strengthen ECDE service delivery in pre-primary schools. Budget planning should be evidence-based and involve key stakeholders to ensure resources address priority needs. The county treasury should ensure timely disbursement of allocated funds to facilitate effective implementation of ECDE programmes and minimize service disruptions. Greater investment should be directed towards improving classrooms, sanitation facilities, teaching and learning materials, and child-friendly infrastructure. The county should also enhance teacher welfare through competitive remuneration, timely salary payments, and continuous professional development. Robust monitoring and evaluation systems should be established to track budget utilization, promote accountability, and assess the impact of financial allocations on service delivery. Capacity building in public financial management should be provided to education officers, headteachers, and school management committees. Finally, both county and national governments should allocate additional resources to underserved areas in Marsabit County to reduce regional disparities and improve access, quality, and equity in ECDE services.

8.0 AREAS FOR FURTHER RESEARCH

Future studies should adopt qualitative and longitudinal approaches to provide deeper insights into how budget allocation influences ECDE service delivery. Researchers should also examine additional factors, including teacher capacity, parental involvement, and programme implementation, and conduct comparative studies across counties to identify best practices for improving ECDE service delivery and learning outcomes.

9. REFERENCES

Allen, R., Hemming, R., & Potter, B. H. (2017). *The International Handbook of Public Financial Management*. Palgrave Macmillan. https://pdfs.semanticscholar.org/5047/f14e592f2e8e04b8ed6f20e04413d245c979.pdf

Armstrong, M. (2020). *Armstrong's Handbook of Human Resource Management Practice* (15th ed.). Kogan Page. https://www.scirp.org/reference/referencespapers?referenceid=2866563

Chenane, J., Wekesa, P., & Ochieng, R. (2025). ECDE Teachers' Social Concerns on Administrative Support in the Competency Based Education: A Case of Bungoma County, Kenya. *Journal of Early Childhood Education Research*, 12(3), 45-62. https://saudijournals.com/media/articles/JAEP_910_459-475c.pdf

Creswell, J. W., & Creswell, J. D. (2018). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (5th ed.). SAGE Publications. https://www.ucg.ac.me/skladiste/blog_609332/objava_105202/fajlovi/Creswell.pdf

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2022). *Multivariate Data Analysis* (8th ed.). Cengage Learning. https://eli.johogo.com/Class/CCU/SEM/_Multivariate%20Data%20Analysis_Hair.pdf

Kothari, C. R. (2004). *Research Methodology: Methods and Techniques* (2nd ed.). New Age International Publishers. https://www.scirp.org/reference/referencespapers?referenceid=1285422

Magoma, D., Ochieng, P., & Mwangi, S. (2025). Exploring early childhood development programming in Kenya's arid and semi-arid lands. *African Journal of Education Studies*, 18(2), 78-95. https://sajce.co.za/index.php/sajce/article/view/1649/3394

Matsiko, F., Uwimana, D., & Niyonzima, T. (2026). Integrated Early Childhood Development Centres in Market and Cross-Border Settings: a Mixed-Methods Evaluation in Rwanda. *Journal of Early Childhood Development*, 15(1), 112-130. https://doi.org/10.64898/2026.05.14.26353227

Murungi, C. G. (2025). THE EFFECT OF RESOURCE ALLOCATION ON EARLY CHILDHOOD DEVELOPMENT (ECD) SERVICE DELIVERY IN KAJIADO COUNTY, KENYA. *Kenya Journal of Education*, 10(2), 67-84. https://mail.reviewedjournals.com/index.php/RJSSH/article/view/393

Muwonge, A., Williamson, T. S., Owuor, C., & Kinuthia, M. (2022). *Making Devolution Work for Service Delivery in Kenya: Progress, Challenges, and Policy Options*. World Bank Group. https://documents1.worldbank.org/curated/en/520481645582955062/pdf/Making-Devolution-Work-for-Service-Delivery-in-Kenya.pdf

Mwangi, C. W. (2023). Influence of devolution support to Early Childhood Development Education on retention of pupils in public pre-primary schools in Wareng Sub County, Kenya. http://erepository.uoeld.ac.ke/handle/123456789/2030

OECD. (2021). *Government at a Glance 2021*. OECD Publishing. https://doi.org/10.1787/1c258f55-en

Ramadani, L. (2026). Strategic Financial Management in Islamic Early Childhood Education: Facility Development and Student Enrollment Growth. *Journal of Islamic Education*, 9(1), 34-51. https://doi.org/10.31538/cjotl.v6i1.2924

Schick, A. (2018). *The Federal Budget: Politics, Policy, Process* (4th ed.). Brookings Institution Press.

https://books.google.com/books/about/The_Federal_Budget.html?hl=ms&id=RL0qkP6ApLQC

Sello, M. (2026). The cost of care: Payment delays and socioeconomic pressures facing early childhood development practitioners in South Africa. *Contemporary Issues in Early Childhood*, 27(2), 156-173. https://doi.org/10.1177/14639491261444816

Sulungai, M. W. (2026). The relationship between the alignment of Early Childhood Development Education university curricula with labour market requirements and the employability of ECDE student trainees in Kenya. *Journal of Education and Practice*, 17(3), 89-106. https://doi.org/10.46827/ejes.v13i7.6786

UNESCO. (2022). *Global Education Monitoring Report 2022: Gender Report, Deepening the Debate on Those Still Left Behind*. UNESCO Publishing. https://southsouthgstg.wpenginepowered.com/wp-content/uploads/2022/06/UNESCO-381329eng.pdf

UNICEF. (2021). *The State of the World's Children 2021: On My Mind - Promoting, Protecting and Caring for Children's Mental Health*. UNICEF. https://www.unicef.org/reports/state-worlds-children-2021

Wanza, F., & Muna, W. (2023). Effects of budgetary allocation on provision of pre-primary education in Machakos County, Kenya. *Research and Innovation Journal*, 5(2), 23-41. https://mail.reviewedjournals.com/index.php/RJSSH/article/download/125/108/

World Bank. (2022). *Public Financial Management: A Framework for Analysis and Reform*. World Bank Group. https://openknowledge.worldbank.org/entities/publication/ac2ceeea-5674-5c41-bfa9-1146301a38b5