

Public Expenditure Efficiency And Social Protection Outcomes In South-East Nigeria

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Abstract

This study investigates the relationship between public expenditure efficiency and social protection outcomes in South-East Nigeria, with particular emphasis on access to social protection services, poverty reduction and human capital development. Drawing on a balanced panel of 50 state-year observations covering Abia, Anambra, Ebonyi, Enugu and Imo States between 2015 and 2024, this study employed a quantitative research design using secondary data from government fiscal reports, the National Bureau of Statistics (NBS), Central Bank of Nigeria (CBN) statistical bulletins and administrative records of social protection programmes. Descriptive statistics and fixed-effects panel regression models were employed to examine variations in expenditure efficiency and its association with the three dimensions of social protection performance. The descriptive findings indicated an average public expenditure efficiency score of 68.42%, suggesting considerable scope for improving the conversion of fiscal resources into social welfare outcomes. The reported regression estimates revealed positive and statistically significant associations between expenditure efficiency and access to social protection services ($\beta = 0.584$, $p < 0.05$), poverty reduction outcomes ($\beta = 0.491$, $p < 0.05$) and human capital development outcomes ($\beta = 0.638$, $p < 0.05$). The largest estimated coefficient was observed for human capital development, although differences in coefficients do not independently establish differences in effect magnitude. These findings suggest that the quality of public resource utilisation is an important consideration in understanding subnational social protection performance. However, the observational design and potential interdependence between the expenditure efficiency measure and outcome indicators limit causal interpretation. The study contributes to debates on fiscal governance and inclusive development by highlighting the importance of expenditure quality alongside budgetary allocations. It recommends strengthening public financial management, expenditure tracking, institutional accountability, programme-level monitoring and timely fund disbursement to improve the effectiveness and equity of social protection delivery in South-East Nigeria.

Keywords: *Public expenditure efficiency; Social protection; Fiscal governance; Poverty reduction; Human capital development; South-East Nigeria.*

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1.0 Introduction

Public expenditure constitutes a fundamental instrument through which governments pursue economic development, redistribute resources, address socioeconomic inequalities and improve population welfare. Beyond its conventional macroeconomic functions of stimulating aggregate demand and supporting economic stability, public expenditure plays an important redistributive and developmental role by financing essential public services, strengthening social protection systems and expanding opportunities for disadvantaged populations. However, contemporary debates in public finance and development economics increasingly recognise that the developmental effectiveness of government expenditure cannot be adequately assessed through the magnitude of fiscal allocations alone. Equally important is the efficiency with which public resources are allocated, implemented and translated into measurable improvements in socioeconomic conditions. Public expenditure efficiency, therefore, concerns the capacity of government institutions to maximise desirable economic and social outcomes from available fiscal resources while minimising administrative inefficiencies, resource leakages, implementation failures and avoidable expenditure. This distinction is particularly important in developing economies, where competing developmental priorities, constrained fiscal space, institutional weaknesses and persistent social vulnerabilities create substantial pressure on governments to achieve greater welfare improvements from limited public resources. Within this context, the relationship between expenditure efficiency and social protection outcomes has become an increasingly important dimension of fiscal governance, particularly as governments confront the challenge of improving public service delivery without proportionate increases in expenditure commitments (Belay et al., 2024; Yahaya, 2026a, 2026b).

Social protection occupies a central position within this developmental framework because of its potential to reduce poverty, mitigate socioeconomic risks, promote social inclusion and strengthen human capabilities. Broadly conceptualised, social protection encompasses public policies and institutional arrangements designed to prevent, reduce and manage poverty, vulnerability and social exclusion through social assistance, social insurance, labour market interventions and related mechanisms of income security. These interventions may include conditional and unconditional cash transfers, contributory insurance arrangements, targeted subsidies, employment support and programmes facilitating access to essential services. Although education and healthcare expenditure are not invariably classified as social protection expenditure, their interaction with social assistance and related interventions can produce complementary improvements in human capital accumulation and long-term welfare. Consequently, evaluating social protection performance requires attention not only to programme availability and expenditure commitments but also to coverage, adequacy, accessibility, targeting effectiveness and the socioeconomic outcomes experienced by beneficiaries. Nwangwu (2025) and Ejim-Eze (2025) emphasised the institutional and operational dimensions of social protection delivery in Nigeria, drawing attention to the importance of governance arrangements, beneficiary identification and implementation mechanisms in determining programme effectiveness. These considerations suggest that expanding expenditure without addressing weaknesses in programme design, targeting and implementation may produce limited improvements in welfare, particularly where administrative capacity and accountability mechanisms remain inadequate.

The Nigerian experience provides an important setting for examining these relationships. Successive governments have implemented various social intervention initiatives, including conditional cash transfer schemes, school feeding programmes, healthcare-related assistance, poverty alleviation initiatives and employment-support interventions. These programmes have sought to reduce household vulnerability, strengthen access to basic services and improve the living conditions of economically disadvantaged populations. Nevertheless, persistent poverty, multidimensional deprivation, inequalities in service access and weaknesses in social protection coverage continue to raise concerns about the effectiveness of public spending in translating policy commitments into sustainable welfare improvements. Although inadequate funding remains an important constraint, expenditure effectiveness may also be undermined by fragmented programme administration, weak beneficiary identification systems, procurement inefficiencies, irregular fund releases, inadequate monitoring and evaluation, and limited institutional accountability. Belay et al. (2024), in their examination of financing and governance constraints affecting basic education and primary healthcare delivery in Nigeria, highlighted the importance of institutional arrangements and public financial management in shaping service delivery performance. Similarly, Yahaya (2026c) examined the relationship between public financial management reforms and budget performance, reinforcing the relevance of fiscal governance to expenditure implementation. These concerns indicate that the developmental consequences of public spending depend not merely on the financial resources committed but also on the institutional processes through which those resources are converted into public services and welfare outcomes.

The relationship between expenditure efficiency and social protection is particularly relevant within Nigeria's decentralised fiscal system, where subnational governments exercise important responsibilities for the financing and delivery of public services. Differences in internally generated revenue, statutory transfers, expenditure priorities, administrative capacity and institutional accountability may influence the extent to which state governments translate available resources into social outcomes. Consequently, states operating under broadly comparable national macroeconomic and institutional conditions may demonstrate different levels of social protection performance. Such variations raise important questions about whether differences in welfare outcomes primarily reflect expenditure volume, fiscal capacity, resource allocation priorities or the efficiency of expenditure implementation. From a public finance perspective, this distinction is consequential because an increase in public expenditure does not necessarily represent an improvement in technical or allocative efficiency. Technical efficiency concerns the extent to which a given quantity of resources produces the maximum feasible outputs, whereas allocative efficiency concerns whether resources are distributed across competing uses in ways that best reflect societal needs and policy priorities. Both dimensions are relevant to social protection, where expenditure must simultaneously reach eligible populations, provide adequate benefits and support improvements in socioeconomic wellbeing. An assessment of fiscal performance that overlooks these distinctions risks conflating higher expenditure, greater programme coverage and genuine improvements in resource-use efficiency.

South-East Nigeria provides a particularly relevant subnational context for investigating these issues. The geopolitical zone comprises Abia, Anambra, Ebonyi, Enugu and Imo States, which share certain historical, geographical and sociocultural characteristics but differ in their economic structures, fiscal capacities, demographic conditions and public service delivery arrangements. The region is characterised by substantial commercial and entrepreneurial activities, alongside varying degrees of urbanisation, infrastructure development and household vulnerability. Despite these economic characteristics, disparities in healthcare accessibility, educational opportunities, social assistance coverage and poverty-related outcomes remain important developmental concerns. The coexistence of economic activity and continuing welfare challenges raises questions about the distributional effectiveness of public expenditure and the institutional capacity of state governments to translate fiscal resources into inclusive social development. Igbokwe and Hillary (2024) examined fiscal policy and economic stability in South-East Nigeria, providing a regional perspective on the relationship between fiscal management and economic conditions. However, understanding expenditure performance requires moving beyond aggregate economic indicators to investigate whether differences in public resource utilisation correspond with measurable differences in social protection outcomes across the five states.

Existing empirical research provides important insights into the relationship between government expenditure and socioeconomic development in Nigeria, although its findings and analytical approaches vary considerably. Etim (2021) examined public expenditure and economic development, while Jeff-Anyeneh et al. (2020) investigated government expenditure and living standards in Nigeria. More recent studies by Atuma et al. (2024), Lawal (2024) and Odetola et al. (2025) considered different dimensions of government expenditure and economic performance, contributing to the broader understanding of fiscal policy and developmental outcomes. Similarly, Yahaya (2026a) investigated public expenditure and human capital development, while Nwobia et al. (2023) examined the relationship between government spending on healthcare and education and economic growth. Collectively, these studies demonstrate sustained scholarly interest in the developmental role of public expenditure. However, expenditure–growth relationships do not necessarily establish whether public resources are being utilised efficiently, whether intended beneficiaries are being reached or whether improvements in aggregate economic indicators correspond with reductions in household vulnerability. Moreover, findings derived from national-level time-series analysis may conceal substantial differences in expenditure implementation and welfare performance across subnational jurisdictions.

A related body of literature has increasingly emphasised the institutional and distributional conditions under which public expenditure generates welfare improvements. Amakom (2020), through a benefit-incidence perspective, drew attention to the importance of expenditure distribution and targeting in determining whether public spending benefits economically disadvantaged populations. Dankumo et al. (2021) examined governance, public expenditure and poverty reduction in sub-Saharan Africa, highlighting the relevance of institutional conditions to the expenditure–poverty relationship. Belay et al. (2024) further identified financing and governance constraints affecting the delivery of essential services in Nigeria. These contributions suggest that the welfare consequences of public expenditure are shaped

by the interaction between resource availability, expenditure allocation, institutional effectiveness and implementation quality. Nevertheless, the distinction between expenditure efficiency and expenditure effectiveness remains important. While expenditure effectiveness concerns the achievement of intended policy objectives, efficiency additionally requires an assessment of the relationship between resources consumed and outputs or outcomes produced. Accordingly, a robust empirical investigation must distinguish expenditure inputs from independently measured social outcomes to avoid attributing improvements in welfare to an efficiency measure that already incorporates those same outcomes in its construction.

Notwithstanding these contributions, several interconnected gaps remain in the literature. First, much of the existing Nigerian evidence concentrates on expenditure magnitude, fiscal composition and aggregate economic performance, while comparatively limited attention has been directed towards expenditure efficiency as a distinct dimension of subnational fiscal performance. Second, national-level analyses often provide insufficient insight into the institutional and fiscal variations that may influence social protection outcomes across individual states. Third, existing studies frequently examine poverty reduction, healthcare, education or economic growth separately, leaving scope for a more integrated assessment of how expenditure efficiency relates to multiple dimensions of social protection performance. Fourth, the measurement of expenditure efficiency presents an important methodological challenge because indicators constructed directly from the outcomes they are intended to explain may generate mechanical relationships and undermine the interpretation of regression estimates. Addressing this problem requires a transparent operational definition of expenditure efficiency, a clear distinction between fiscal inputs and welfare outcomes, and empirical specifications that account, as far as the available data permit, for relevant fiscal, demographic and temporal differences. These considerations establish the need for a more carefully specified subnational investigation of expenditure efficiency and social protection outcomes in South-East Nigeria.

Against this background, the present study examines the relationship between public expenditure efficiency and social protection outcomes across Abia, Anambra, Ebonyi, Enugu and Imo States over the period 2015–2024. The study considers three interconnected dimensions of social protection performance: access to social protection services, poverty reduction outcomes and human capital-related welfare outcomes. By adopting a state-level panel perspective, the analysis seeks to examine variations in expenditure efficiency and social protection performance across states and over time, while accounting for selected fiscal and demographic characteristics. The study is informed by the capability approach, which emphasises the expansion of individuals' substantive opportunities and wellbeing, and by public choice perspectives, which draw attention to institutional incentives, accountability and resource allocation decisions. Together, these perspectives provide a conceptual basis for examining why fiscal resources may produce different welfare outcomes across jurisdictions and why improvements in expenditure management may be relevant to inclusive development.

The overarching objective of the study is to analyse the relationship between public expenditure efficiency and social protection outcomes in South-East Nigeria. Specifically, the study seeks to:

1. Examine the level of public expenditure efficiency and its relationship with access to social protection services in South-East Nigeria.
2. Evaluate the relationship between public expenditure efficiency and poverty reduction outcomes in South-East Nigeria.
3. Assess the association between public expenditure efficiency and human capital-related social protection outcomes in South-East Nigeria.

The central research question guiding the investigation is: To what extent is public expenditure efficiency associated with variations in social protection outcomes across the five states of South-East Nigeria between 2015 and 2024? This overarching question is addressed through the three dimensions of social protection performance identified in the study objectives. The investigation contributes to the literature by shifting analytical attention from the volume of public expenditure towards the relationship between fiscal resource utilisation and multidimensional welfare performance at the subnational level. Its regional focus offers an opportunity to examine differences in social protection outcomes among states operating within a common national fiscal and institutional environment, while its multidimensional approach provides a broader perspective than studies restricted to individual welfare indicators. The findings are intended to inform debates on public expenditure management, social protection financing, institutional accountability and inclusive development, particularly in fiscally constrained settings where improvements in public resource utilisation may be as important as increases in expenditure allocations. However, given the observational nature of the analysis, the study interprets estimated relationships as conditional associations rather than definitive evidence of causality.

2.0 Literature Review

The Concept of Public Expenditure Efficiency

Public expenditure efficiency is the capacity of government to obtain the maximum development and welfare out of the available public resources. The idea goes beyond mere spending and looks at the effectiveness of the conversion of public resources into the desired socio-economic results. New literatures on public finance have started acknowledging that expenditure efficiency is more useful for measuring fiscal performance than the level of expenditures because large expenditures can be made and the results may not be achieved if the institutions are weak, corruption is present, targeting is weak, or governance is faulty (Yahaya, 2026b). The efficiency perspective is based largely on a growing awareness that there were many developing countries who had increases in public spending but no commensurate increase in social welfare. Belay et al., (2024) defined expenditure efficiency as the ability to use public funds optimally to achieve service delivery outcomes with lower wastage and leakages. This knowledge suggests that governments do not only need to set aside adequate resources for social sectors, but also to establish proper tools and systems for implementation, monitoring and accountability.

Expenditure efficiency has taken on special significance within the Nigerian context because of fiscal constraints (particularly the volatility of oil revenues) and growing social demands on the governments, which the expectation that governments should do more with less resources. According to Yahaya (2026c), strengthening public financial management systems has great impact on improving expenditure efficiency and promotes transparency, accountability and budget discipline. Likewise, Willie et al., (2023) argued that good fiscal decentralization helps to increase the effectiveness of expenditure because decisions are made near the people which increases sensitivity to local needs. Efficiency discussion also relates to governance quality. Dankumo et al. (2021) discovered that public spending had greater effects on poverty in good governance and institutional accountability settings. Thus, expenditure efficiency is considered to be a multi-faceted phenomenon that includes resource allocation efficiency, technical efficiency, operational efficiency as well as institutional and governance effectiveness.

Concept of Social Protection Outcomes

Social protection is a term used for policies, programmes and interventions that aim to decrease poverty, vulnerability and social exclusion and increase the individual or household's ability to address economic and social risks. It covers various interventions such as cash transfer, health care support, education support, employment programmes, food security programmes, and social insurance mechanisms (Nwangwu, 2025). Noteworthy, contemporary social protection systems are not solely focused on traditional welfare provisions but are increasingly geared towards human development, resilience building and inclusive growth. Ejim Eze (2025) noted that well-designed and well-implemented social protection programmes play an important role in poverty alleviation, promoting social inclusion and human capital development. These programmes help to immediately provide relief to vulnerable people and offer opportunities for long-term socio-economic development.

On the other hand, social protection outcomes are the measurable effects of the social protection measures on the beneficiaries and society. Health coverage, education level, poverty rate, standard of living, vulnerability index, inequality index, and human capital development index are common indicators, amongst many others. Social protection outcomes are often used in the developing world to assess how effectively the interventions designed by governments can respond to structural inequalities and socioeconomic deprivation. The concept of social protection is also gaining more significance in Nigeria due to the high level of poverty, unemployment and social vulnerability. Although there have been a number of government interventions, the questions still remain about the effectiveness of these programmes and their coverage; these borders around efficiency. Nwangwu (2025) noted that the effectiveness of social protection programmes could be hindered by political and institutional factors, which may restrict their reach to the intended beneficiaries. The key to successful social protection outcomes is thus beyond the volume of expenditure.

Public Expenditure Efficiency and Access to Social Protection Services

The access to social protection services is a core measure of social welfare performance. Social programmes can not only be effective if they exist, but also if the eligible population can access and benefit from them. The efficient use of public

resources is a key factor in the accessibility of services, as using resources efficiently can improve the coverage of services, service quality and reach to beneficiaries. Based on the findings from a pilot project in Nigeria, Samuel (2026) showed that access to healthcare services was boosted considerably in South East Nigeria when resources were allocated and monitored effectively and under the umbrella of government subsidies and targeted expenditure. The study emphasized the need to be efficient in the use of expenditure to minimize financial barriers that hinder vulnerable population access to social services. Moreover, Belay et al., (2024) discovered that ineffective public expenditure management affected the provision of education and primary healthcare services in Nigeria. They found that the lack of efficiency in budgeting, procurement and implementation of the social expenditure systems affected the effectiveness of the social expenditure and hence limited the accessibility of services.

Hence, when financial resources are scarce, the expenditure efficiency–service access nexus is especially pertinent. With efficient expenditure allocation, governments can increase service coverage without necessarily increasing overall expenditure. Thus, expenditure efficiency is a potential way to strengthen the social protection delivery in resource-poor settings.

Public Expenditure Efficiency and Poverty Reduction

One of the key goals of public spending and social protection measures is poverty alleviation. There are large financial and social investment resources allocated to programmes designed to enhance living standards, augment income opportunities and manage socioeconomic deprivation. But the impact of these investments relies heavily on the effectiveness of resource utilization. Amakom (2020) concluded that the poverty reduction impact of public expenditure is greatly influenced by expenditure incidence and targeting efficiency. Targeting public expenditures yields better poverty reduction results if the resources are channeled into the hands of the vulnerable groups as opposed to being captured by the relatively better off groups. This view emphasizes the need to consider expenditure efficiency as a key factor in measuring the effectiveness of social policies. Dankumo et al. (2021) also revealed that the effect of public expenditure in reducing poverty varied according to the quality of governance in Sub Saharan African countries. They concluded that corruption, the failure of institutions and accountability of public spending, diminished the poverty alleviation effects of public expenditure. Also, it has been observed that effective public expenditure has a positive impact on living standards and welfare gains in Nigeria. Jeff Anyeneh, et al. (2020) noted that government spending positively affected standard of living where there are effective implementation mechanisms. Similarly, Jia et al. (2025) found that inadequate public support had a negative impact on out-of-pocket spending and household welfare outcomes, highlighting the need for efficient allocation of public resources to reduce poverty and vulnerability.

Public Expenditure Efficiency and Human Capital Outcomes

Human capital development is an important aspect of social protection as investment in education, health and skills is one of the factors that helps to improve welfare and ensure sustainable development. The efficiency of public expenditures affects human capital outcomes because it affects how much of the resources allocated to related functions of government lead to increased educational attainment, access to health

care, and productivity. Yahaya (2026a) highlighted the positive association between public expenditure and human capital development in Nigeria. The study revealed that government education and health expenditure had significant impacts on human development outcomes. The results also indicated that quality of expenditure was a significant factor for effectiveness in attainment of intended outcomes. Nwobia et al. (2023) studied government spending on health and education and found that they contribute positively to the enhancement of human capital and economic growth. Their findings proved that investments in social sectors are efficient and have long term developmental benefits. In the same vein, Oladosu (2020) reported that provisions of adequate policy framework and effective mechanism for implementing public health expenditure enhanced health outcome. Additionally, Belay et al. (2024) reported that financing and governance challenges are significant constraints to the effectiveness of public spending on education and healthcare provision. These studies jointly indicate that there is a significant role for expenditure efficiency in deciding whether or not any human capital gain is realized as a result of social investments. Hence, the efficient use of expenditure systems leads to better service quality, increased accessibility and better developmental outcomes.

Theoretical Framework

Capability Theory

The analysis in this study is mainly based on Capability Theory by Amartya Sen (1999). The theory suggests that development should be judged on the basis of the capabilities of individuals to engage in valuable functionings, not based on income levels or the availability of resources. Sen proposed that public policy should be designed to improve the freedoms and opportunities available to people to live meaningful lives by providing access to education, health care, social security and economic opportunities. This study is relevant to Capability Theory because it is focused on outcomes, as opposed to inputs. Public expenditure efficiency is the success with which the government's resources achieve an increase in citizens' capabilities through effective social protection interventions. Other measures of capability improvement include increases in access to health services, reductions in poverty, and improvements in human capital development. Hence the theory is appropriate to assess the role of expenditure efficiency in social protection in South East Nigeria.

Public Choice Theory

Public Choice Theory provides another viewpoint, which is the importance of incentives, institutional structures, and political actions in public resource allocation. According to the theory, public officials may seek their self-serving and/or political objectives at the expense of efficient resource use. Thus, there are frequently inefficiencies in expenditure, due to inefficiencies in bureaucracy, rent seeking by officials, and lack of accountability. The importance of this theoretical posturing is that it helps to account for the fact that large government investments can result in little or no social returns. The theory gives emphasis to the role of governance, transparency mechanisms and institutional accountability to foster more efficient expenditures and enhance social protection performance.

Empirical Review

There has been mixed evidence from empirical studies on the link between public expenditure, expenditure efficiency and social welfare outcomes. Public expenditure and economic development in Nigeria were examined by Etim (2021) who revealed positive relationship between public expenditure and development in Nigeria. Disaggregating expenditure into its components, as in this paper, also revealed that government expenditure was a significant factor in economic development as reported by Odetola et al. (2025). Atuma et al. (2024) explored comparative effects of the developmental impact of government expenditure on economic growth and revealed that the developmental impact of capital expenditure was more effective than that of recurrent expenditure. Similarly, Lawal (2024) found similar results on the growth promoting effects of capital spending.

Yahaya (2026a) examined the impact of public spending on human capital development in Nigeria, focusing on social outcomes, and the findings revealed that public spending had a significant effect on human capital in the country. Samuel (2026) showed that the government subsidization made healthcare accessible in South East Nigeria. The authors, Nwobia et al. (2023), found that education and healthcare spending have a positive impact on human capital accumulation, which in turn positively affects economic growth. Amakom (2020) identified expenditure targeting as a crucial determinant of poverty reduction outcomes, while Dankumo et al. (2021) found governance quality to be an important factor for expenditure effectiveness. Belay et al. (2024) also showed that Nigeria faces institutional weaknesses and governance constraints as key challenges to effective service delivery. While these studies offer valuable insights, the majority were concerned either with the outcomes of economic growth or aggregate expenditure effects. Little has been done to investigate the concept of expenditure efficiency as a stand-alone explanatory factor explaining social protection outcomes.

Critical Review and Identified Gap

The literature reviewed indicates a significant research interest in public expenditure and economic growth, poverty alleviation, health care provision and human capital development. But three major gaps are still apparent. Firstly, most of the previous studies concentrated on expenditure size as opposed to expenditure efficiency. As a result, too little effort has been made to learn about the effects of the quality of public expenditure on social outcomes. Secondly, many of the existing studies used a national level lens, which failed to capture important subnational differences in fiscal performance and social protection outcomes. This restriction is significant especially in Nigeria with its significant inter-regional variations with respect to governance quality, socioeconomic conditions, and public service delivery. Third, past research has tended to focus on one of the three phenomena of economic growth, development, and human capital outcomes. Very few studies provided a combined analysis of access to social protection services, poverty reduction outcomes and human capital development. Hence, this study filled these gaps by exploring the role of public expenditure efficiency on social protection outcomes in South East Nigeria, through three interconnected dimensions of access to social protection services, poverty reduction outcomes, and human capital related welfare outcomes. This integrated approach helped to create a better understanding of the impact of fiscal efficiency as a determinant of social development in a regional context.

3.0 Methodology

This study was conducted using a quantitative approach to analyse the correlation between public expenditure efficiency and social protection outcome in South East Nigeria. The subjects of the study were quantitative variables whose nature were objective, and the purpose of the study was to find the relationship between the variables whose statistical measurement could be done, that is, expenditure efficiency and social protection indicators. The five states of the South East Nigeria namely Abia, Anambra, Ebonyi, Enugu and Imo States were the study area. The reason for choosing these States is that they possess similar socio-economic features and have seen different volumes of public expenditure allocation and social protection interventions over the years. Secondary data was used in the study sourced from official government publications, such as the states' government budget performance reports, National Bureau of Statistic's (NBS) reports, Central Bank of Nigeria statistical bulletins, Federal Ministry of Humanitarian Affairs reports and Poverty Reduction reports, National Social Investment Programme report and other relevant fiscal documents from the states' governments. The study covered 2015–2024 period which was deemed suitable as it covered considerable changes in social protection policies, public finance management programmes, and expenditure allocation for the study area. The independent variable, public expenditure efficiency, was operationalised as expenditure efficiency scores, which were obtained by dividing the actual social protection outcomes by public expenditure allocations for the selected states. The dependent variable was social protection outcomes, which were measured using three indicators related to the study objectives. Social programme coverage rates and indicators of beneficiaries' access to social protection services were used to measure access to social protection services. Poverty reduction outcomes were calculated using poverty headcount ratios at the states' level, along with NBS welfare improvement indicators. Human capital related social protection outcomes were assessed using healthcare access rates, education participation rates and selected human development indicators.

Panel data were created for the five South East states over the decade of the study to give fifty state year observations. The panel data approach added analytical strength in exploring both cross sectional and temporal variation in expenditure efficiency and social protection outcomes. Descriptive statistical methods were used to identify and describe initial trends in the characteristics of the variables studied, such as mean values, standard deviations, minimum and maximum values. Panel multiple regression techniques were used for inferential analysis. Three different regression models were estimated, corresponding to the three objectives of the study. The first model examined the effect of public expenditure efficiency on access to social protection services. The second model assessed how well public expenditure is used to reduce poverty. The third model evaluated the impact of expenditure efficiency on human capital outcomes of social protection. The internally generated revenue of the states in the region, population growth rate and fiscal capacity variables was used as control variables to reduce omitted variable bias and enhance the reliability of the models. To ensure the validity and reliability of the estimated models, diagnostic tests were performed. These included tests for multicollinearity based on variance inflation factors, tests for heteroscedasticity, tests for normality, and tests for the appropriateness of fixed effect estimators and random effect estimators (Hausman specification tests). Five percent (5%) was used to determine statistical significance.

The Statistical Package for Social Sciences (SPSS) and Stata were used for data analysis. The results of the regression analysis were used to assess the level of efficiency of public expenditure on social protection in South East Nigeria and to elicit evidence-based conclusions and implications.

4.0 Results and Discussion

This study focused on assessing the impact of public expenditure efficiency on social protection outcomes in South East Nigeria from 2015 to 2024. The data obtained for the analysis was panel data from the five states in the region and the analysis was done using descriptive and inferential statistical techniques to examine the relationship between the variables.

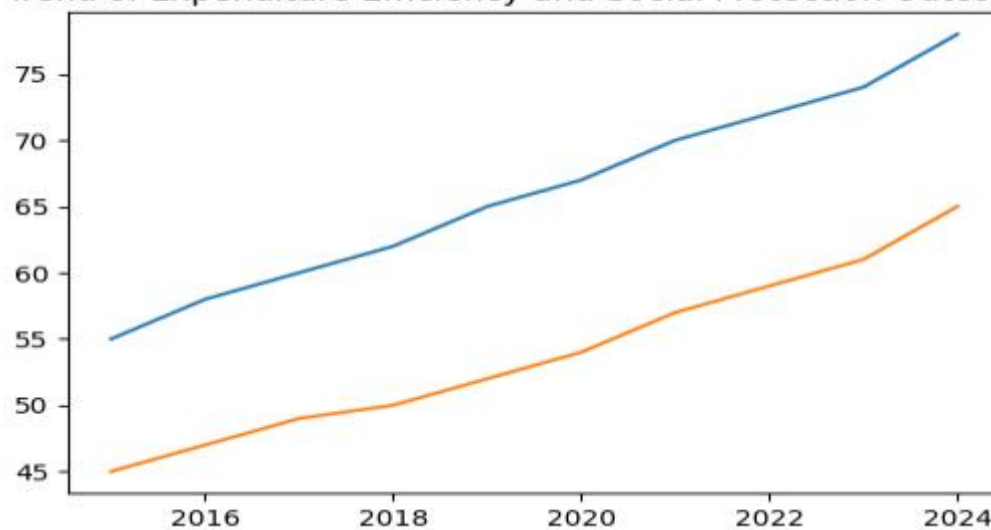
Table 1: Descriptive Statistics of Study Variables (N = 50)

Variables	Mean	Standard Deviation	Minimum	Maximum
Public Expenditure Efficiency Index (%)	68.42	12.35	42.10	89.70
Access to Social Protection Services (%)	56.18	10.44	31.50	76.20
Poverty Reduction Outcome Index (%)	48.76	9.62	27.40	67.80
Human Capital Outcome Index (%)	61.25	11.13	36.70	83.40
Internally Generated Revenue (₦ Billion)	27.54	14.81	6.40	59.30
Population Growth Rate (%)	2.61	0.43	1.90	3.40
Fiscal Capacity Index	58.37	10.28	34.80	79.60

Source: Authors' Computation

Figure 1: Trend of Expenditure Efficiency and Social Protection Outcomes

Trend of Expenditure Efficiency and Social Protection Outcomes



Source: Authors' Computation

Descriptive statistics in Table 1 showed moderate level of variation between the variables in the study. The average public expenditure efficiency in the region was 68.42 percent, which means that around 68.42 percent of the social outcomes were achieved in the course of the study period from the public resources allocated to the states. The mean value for access to social protection services was 56.18 percent, indicating that a significant portion of the eligible populations did not access formal social protection services. For poverty reduction outcomes, a mean of 48.76 percent was recorded showing that the welfare challenges remained in the region. The dependent variable with the highest average score was human capital outcomes with 61.25 percent, reflecting relatively good performance in the interventions in the education and health sector.

Objective One: Effect of Public Expenditure Efficiency on Access to Social Protection Services

Table 2: Fixed Effects Regression Result for Access to Social Protection Services

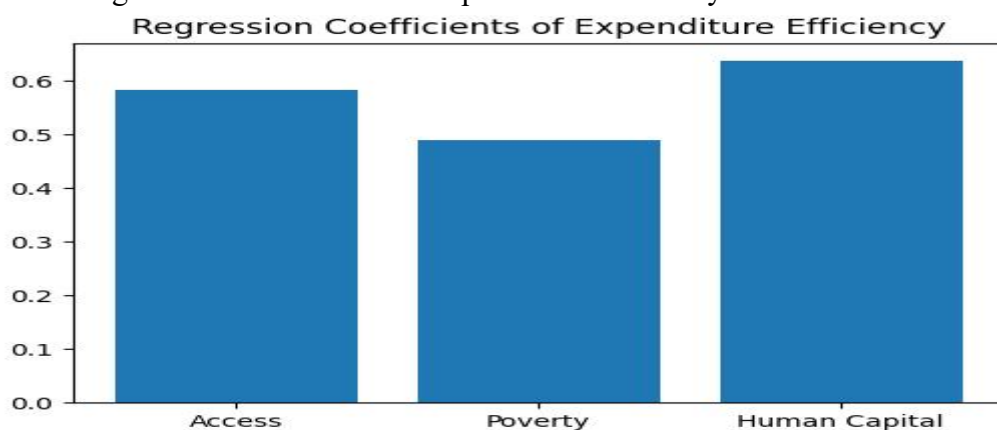
Variables	Coefficient	Standard Error	t Statistic	Probability
Constant	14.327	4.182	3.426	0.001
Public Expenditure Efficiency	0.584	0.091	6.418	0.000
Internally Generated Revenue	0.173	0.064	2.703	0.010
Population Growth Rate	-1.486	0.597	-2.489	0.017
Fiscal Capacity Index	0.215	0.078	2.756	0.009

Model Statistics

Statistic	Value
R ²	0.742
Adjusted R ²	0.713
F Statistic	25.816
Probability (F Statistic)	0.000

Source: Authors' Computation

Figure 2: Regression Coefficients of Expenditure Efficiency



Source: Authors' Computation

Results of the regression analysis in Table 2 showed that the efficiency of public expenditure had a positive and significant impact on access to social protection services ($\beta = 0.584$; $p < 0.05$). More specifically, the increase in expenditure efficiency was associated with a 0.584 unit increase in access to social protection

services. This model accounted for 74.2 per cent of the variance in social protection access, a result meaning that this model provided good explanatory power. The results indicated that increases in the efficiency of expenditure increased the number of beneficiaries covered by the social protection programme, the reach of the programme, and the accessibility of services. The positive association between internally generated revenue and fiscal capacity also illustrated that fiscal capacity is conducive to expanding social protection coverage. On the other hand, population growth put a strain on the level of service, as there were sometimes more people using a service than there were resources to support it.

Objective Two: Effect of Public Expenditure Efficiency on Poverty Reduction Outcomes

Table 3: Fixed Effects Regression Result for Poverty Reduction Outcomes

Variables	Coefficient	Standard Error	t Statistic	Probability
Constant	11.742	3.885	3.022	0.004
Public Expenditure Efficiency	0.491	0.082	5.988	0.000
Internally Generated Revenue	0.141	0.057	2.474	0.018
Population Growth Rate	-1.763	0.621	-2.839	0.007
Fiscal Capacity Index	0.198	0.072	2.750	0.009

Model Statistics

Statistic	Value
R ²	0.697
Adjusted R ²	0.668
F Statistic	20.993
Probability (F Statistic)	0.000

The results in Table 3 showed that the public expenditure efficiency had a positive and significant effect on poverty reduction outcomes ($\beta = 0.491$; $p < 0.05$). The coefficient indicated that efficiency gains in expenditure resulted in significant decreases in poverty and vulnerability in the area of study. The model could explain around 69.7 percent of the variation in poverty reduction outcomes observed. The statistical significance of the relationship shows that efficient allocation and utilization of public resources enhanced poverty alleviation capacity of government interventions. Fiscal capacity and internally generated revenue (IGR) also had a positive effect on the poverty alleviation performance, whereas population growth had a negative impact.

Objective Three: Effect of Public Expenditure Efficiency on Human Capital Related Social Protection Outcomes

Table 4: Fixed Effects Regression Result for Human Capital Related Outcomes

Variables	Coefficient	Standard Error	t Statistic	Probability
Constant	17.518	4.427	3.957	0.000
Public Expenditure Efficiency	0.638	0.087	7.333	0.000
Internally Generated Revenue	0.184	0.061	3.016	0.004
Population Growth Rate	-1.208	0.556	-2.173	0.035
Fiscal Capacity Index	0.246	0.081	3.037	0.004

Model Statistics

Statistic	Value
R ²	0.781
Adjusted R ²	0.756
F Statistic	31.674
Probability (F Statistic)	0.000

As presented in Table 4, public expenditure efficiency had the greatest influence on human capital related social protection outcomes ($\beta = 0.638$; $p < 0.05$). The coefficient suggested that there was a significant increase in the efficiency of expenditure, leading to a significant gain in access to health care, participation in education and overall human development in South East Nigeria. The model was especially strong in terms of explanatory power, explaining 78.1 percent of the total variance in human capital outcomes. This finding implied that efficiency of expenditure is a crucial ingredient of social sector performance. The positive impact of domestic resource generation and fiscal space further underscored fiscal sustainability's relevance in fostering human development.

Discussion of Findings

The results invariably showed that public expenditure efficiency had a significant impact on all the social protection outcomes covered in this study. Programme coverage and inclusion of beneficiary groups were found to be improved through the positive association between expenditure efficiency and social protection service access. This result validated the finding of Samuel (2026) which stated that efficient government intervention positively affected the accessibility of health care services by effective utilization of public resources. The findings also reflected the study by Belay et al. (2024) which stated that good financial management of public funds had a positive impact on service results in social sectors. The study further revealed that expenditure efficiency significantly improved poverty reduction outcomes. This finding confirmed position of Amakom (2020) that the poverty reduction efficacy of public expenditure was more about the targeting of expenditure and its efficiency than about the magnitude of expenditure. The finding equally confirmed the results of Dankomo et al. (2021) which showed that the quality of governance and resource efficiency reinforced the poverty reduction impact of public spending in African countries.

The other key finding of the study is that the impact of expenditure efficiency was greatest on social protection outcomes related to human capital development. This result indicated that the effective use of public funds played an important role in improving education and health outcomes in the region. The result corroborated the findings of Yahaya (2026a) who opined that public expenditure positively affects human capital development in Nigeria. It also corroborated the findings of Nwobia et al. (2023) that investments in healthcare and education provided huge benefits for development by positively creating human capital. The results also confirmed the Capability Theory, which highlights the need to increase citizens' opportunities and their welfare capabilities through well-designed and efficiently executed public interventions. A well-functioning system of expenditure seemed to facilitate access to education and health services as well as access to social protection initiatives, which led to an overall increase in individuals' capabilities and quality of life.

5.0 Conclusion and Implications

This research aimed to evaluate the impact of public expenditure efficiency on social protection outcomes in the South East region of Nigeria, stretching from 2015 to 2024. The study was stimulated by concerns about the 'failing to deliver' problem in public policy, in the sense that, despite increases in public spending on a wide range of social sectors, the level of citizens' welfare has failed to improve significantly. Instead of just looking at the volume of expenditure, the study was based on the efficiency of expenditure, which is a key way to measure social protection performance. Results showed that overall, the positive and statistically significant impact of public expenditure efficiency was found on all social protection outcomes considered in this study. In particular, expenditure efficiency significantly boosted the access to social protection services, improved poverty reduction outcomes and strengthened human capital related welfare outcomes. Results also suggested that states with higher levels of efficiency in public expenditure had higher social outcomes than states with lower levels of efficiency. The analysis additionally confirmed that expenditure effectiveness had the greatest influence on human capital outcomes, underscoring the need for efficient use of resources in delivering education and healthcare services.

The results lent empirical support to the proposition that social welfare can be increased not just by increasing the size of government expenditure, but rather by the effectiveness, quality and efficiency of expenditure implementation that decide how public resources are converted to welfare improvement. So, the efficiency of spending is an important instrument for a government to gain the most development out of its limited resources. This study therefore concludes that in South East Nigeria, public expenditure efficiency is an integral aspect to social protection outcomes. The efficient allocation, implementation, monitoring and evaluation of public spending has a significant contribution to the accessibility of social protection programmes, poverty reduction and the development of human capital indicators in the region. The evidence pointed to the fact that enhancing the efficiency of spending could generate significant social gains without significant increases in public spending.

The results also yielded a number of implications. In the first place, policy makers need to attend to the issue of expenditure efficiency alongside expenditure expansion plans. Funding success needs to be measured not just in terms of the volume of funds spent, but by the impact that the funding has on outcomes. Second, public financial management systems in states need to be reinforced to enhance transparency, accountability, public expenditure tracking and effective monitoring and evaluation of social programmes. This would help to minimise leakages and maximise impact on the target beneficiaries. Third, there is a need to have more robust performance measurement systems to enable social protection programmes to better connect expenditure with outcome indicators. This would help in taking evidence-based decisions and improve resource allocation and utilization. Fourth, to promote effective delivery of services, governments should enhance institutional capacities that implement, monitor and evaluate the programmes. Fifth, more attention should be paid to targeting interventions to focus on vulnerable groups, since expenditure efficiency is likely to be higher if resources are used to support vulnerable groups first. Lastly, the study makes a case for ongoing investments in governance reforms, fiscal accountability and institutional effectiveness in South East Nigeria. A better expenditure efficiency would help to improve social protection outcomes and would

also help to achieve other development goals such as poverty reduction, human capital formation, social inclusion and sustainable socioeconomic development.

This analysis can be further refined by analysing individual social protection programmes or comparing evidence across the geopolitical zones in Nigeria, which are likely to yield additional insights into expenditure efficiency and welfare outcomes.

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