

Sectoral Capital Project Performance and Capital Budgeting Allocation in Southwest Nigeria

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ABSTRACT

The study evaluates the effects of sectoral capital project performance on capital budgeting allocation in South-West, Nigeria. The study specifically examined the effect of sectoral capital project performance on capital budgeting allocation in South-West State, from 2011 to 2021. The study employed panel data research analysis. The result of the *p*-value of the Hausman test was less than 5%. Implying that fixed effect was adjudged suitable in explaining the significant effect of the independent variables on the dependent variable at 5% significant level. As such, the study used fixed effect estimates to explain the estimates in the study. This study concludes that states' expenditure on education in South-west States still promotes capital budgeting allocation annually, while states' expenditure on the health sector is poorly funded. Given this, it is recommended that governments in all six states should maintain the current expenditure in education by ensuring that a reasonable amount of funds is budgeted to the sector annually.

1. Introduction

Public sector budgeting remains one of the most important instruments through which governments translate policy intentions into concrete developmental outcomes. In developing economies, where fiscal resources are limited and development needs are extensive, Ahmad and Hasan (2016) mentioned that the effectiveness of capital budgeting is particularly critical. Capital budgets allocate public funds to long-term investments that directly influence economic growth and citizens' welfare. It is operationalized through measurable indicators such as state expenditure on education, transportation and the health sector. Beyond

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Raza et al., 2019). At the sub-national level in Nigeria, state governments play a central role in development planning and service delivery. They are constitutionally responsible for sectors such as education, transportation and public infrastructure. Over the years, substantial financial resources have been allocated to capital projects across Nigerian states. However, Okeowo (2020) and similarly, Siddique et al. (2020) noted that persistent challenges such as abandoned projects, cost overruns, delays and declining infrastructure quality continue to undermine development outcomes. This disconnection between capital budget allocations and actual project outcomes raises concerns about the performance of public investments and the efficiency of state-level fiscal management.

In this study, project performance is defined as the extent to which government-funded capital projects achieve their intended objectives within approved cost, time and quality parameters, while delivering measurable socio-economic outcomes. These outcomes include improvements in infrastructure availability, service delivery efficiency and sectoral development indicators (Ebong, 2016; Chingoiro & Mbulawa, 2016). Conceptualizing project performance in this manner allows it to be treated as a measurable dependent variable that captures both financial discipline and development effectiveness. The South West region of Nigeria, comprising Lagos, Oyo, Ogun, Osun, Ondo, and Ekiti States, provides an appropriate empirical setting for examining this relationship. The region consistently records large capital budget allocations and contributes significantly to national economic output. For instance, BudgIT Foundation (2023) reported that the combined state budgets of the region exceeded ₦2.9 trillion in 2022, with a substantial proportion devoted to capital expenditure.

Despite this level of spending, infrastructure deficits remain evident, particularly in transportation networks and public education facilities. Nigeria's infrastructure stock has been estimated at 35 percent of GDP, which is significantly lower than that of more advanced economies, highlighting inefficiencies in public investment outcomes (International Monetary Fund, 2023). Empirical studies on capital budgeting and project performance in Nigeria and other developing countries have produced mixed findings. While some studies report positive relationships between capital expenditure and development outcomes, others highlight weak or insignificant effects due to poor implementation, governance challenges, and institutional weaknesses (Mahdavi & Westerlund, 2017; Babatunde, 2018; Olurankinse & Awogbemi, 2022). Moreover, much of the existing literature focuses on individual projects, single sectors, or national-level aggregates, with limited attention to regional and sectoral dynamics at the sub-national level (Obi & Obi, 2014; Ude & Ekesiobi, 2014).

Critical sectors such as education and transportation, which are fundamental to human capital development, labour mobility, and long-term economic growth, are often examined in isolation rather than within a unified analytical framework. This study contributes to the literature in two important ways. Theoretically, it extends public financial management and public sector performance studies by explicitly linking capital budget allocation to measurable project performance outcomes at the state level. By operationalizing project performance as an empirical construct, the study strengthens the analytical connection between budgeting decisions and development results (Egbunike, 2017; Beals, 2020). From a policy perspective, this study provides evidence-based insights that can support improved capital budgeting practices, stronger monitoring and evaluation frameworks and enhanced accountability mechanisms within state governments. Such insights are particularly relevant in the context of ongoing governance reforms aimed at improving transparency and fiscal discipline in Nigeria (Ademola et al., 2020). Against this background, this study investigates how capital budget allocations influence capital project performance in South West Nigeria over the period 2011 to 2021. In particular, this study aims to:

1. assess the effect of states' expenditure on education on capital project performance in South West Nigeria;
2. evaluate the effect of states' expenditure on the transportation sector on capital project performance in South West Nigeria; and
3. determine the effect of states' expenditure on the health sector on capital project performance in South West Nigeria.

In line with the objectives stated, this study seeks to answer the following questions:

1. How does states' expenditure on education influence capital project performance in South West Nigeria?
2. What effect does states' expenditure on the transportation sector have on capital project performance in South West Nigeria?
3. To what extent does states' expenditure on the health sector influence capital project performance in South West Nigeria.

2. Conceptual Review

2.1 Budgeting

Budgeting is a structured process through which governments and organizations plan, allocate and control financial resources over a defined period. Olurankinse and Awogbemi (2022) emphasized that it goes beyond simply recording income and expenses; budgeting also provides a framework for coordinating activities, evaluating performance, and promoting accountability. While some studies argue that effective budgeting ensures optimal use of limited resources and improves service delivery (Mahdavi & Westerlund, 2017; Babatunde, 2018), others point out that, in practice, budgeting in Nigeria is often treated as a formal requirement rather than a strategic tool. This discrepancy creates a tension; although budgets are theoretically meant to guide development, their execution at the state level frequently fails to produce tangible outcomes (Olurankinse & Awogbemi, 2022).

2.1.1 Capital Budget Allocation

Capital budget allocation represents the portion of government expenditure earmarked for long-term investments, such as infrastructure, healthcare facilities, and educational institutions. These investments are expected to stimulate economic growth, create jobs, and generate social benefits (Tobal et al., 2015; Mahdavi & Westerlund, 2017). However, research shows a significant contrast between developed and developing countries. In developed economies, capital expenditure often receives a larger share of the budget relative to recurrent costs, reflecting a forward-looking approach to development. In contrast, Chingoiro and Mbulawa, 2016 and Ebong et al. (2016) pointed out that many developing nations, including Nigeria, prioritize recurrent spending over capital projects, which can limit the impact of government investment on economic growth. The causes of this pattern are debated: some scholars cite political influences and institutional weaknesses, while others highlight data limitations and inadequate financial planning. This divergence illustrates the need to empirically investigate how capital budget allocations actually influence project performance in specific regional contexts.

2.1.2 Classification of Government Spending

Government spending can generally be divided into recurrent (current) expenditure and capital expenditure. Jha (2012) mentioned recurrent expenditure covers operational costs such as salaries, office supplies, and routine maintenance, and it is usually incurred annually. Capital expenditure, on the other hand, involves investment in long-term assets like roads, bridges, hospitals, and schools and it is intended to create lasting value for the economy (Modebe et al., 2012; Oziengbe, 2013; Oni et al., 2014). While recurrent spending maintains daily operations, overemphasis on it at the expense of capital projects can impede development, particularly in sectors that require physical infrastructure and strategic investment. This tension between recurrent and capital priorities underscores the need to examine whether capital budget allocations in Nigeria are sufficient and effectively targeted.

2.1.3 Project Performance

Project performance refers to the extent to which a project meets its objectives, achieves planned outcomes, and delivers socio-economic benefits (Ebong, 2016). In the public sector, successful project execution translates into improved infrastructure, enhanced public services, and broader developmental gains. Yet, empirical findings are mixed. Some studies show that capital investments in education, transportation and health contribute significantly to growth and social welfare (Siddique et al., 2020). Others, however, it has been identified by Chingoiro and Mbulawa (2016) that high rates of project abandonment, delays, and inefficiency despite substantial financial allocations. This inconsistency suggests that funding alone is insufficient; factors such as institutional capacity, project monitoring, and governance practices critically influence outcomes.

2.2 Theoretical Review

2.2.1 Wagner's Law of Increasing State Activities

Wagner's Law (1890) posits that government expenditure tends to increase as an economy develops, reflecting the state's growing responsibility in providing public goods, social services, and infrastructure. The theory asserts that as societies become more complex and citizens demand higher standards of welfare, governments must allocate greater resources to developmental sectors such as education, health, and transportation. In this study, Wagner's Law provides a theoretical justification for expecting that capital budget allocations at the state level will have a measurable impact on project performance in Southwest Nigeria. A core principle of the law is the distinction between internal expenditures (administrative and routine costs) and external expenditures (investments in developmental projects). By emphasizing external expenditures, Wagner outlines the critical role of capital investment in stimulating economic growth, creating public value and improving citizens' well-being (Tobal et al., 2015; Mahdavi & Westerlund, 2017). This perspective aligns directly with the study's focus on capital projects, suggesting that allocations to infrastructure, education, and healthcare can generate long-term benefits that may extend beyond immediate consumption or operational needs.

The significance of Wagner's Law to this study lies in its ability to frame the relationship between state-level fiscal policy and project outcomes. By grounding the analysis in a theory that links expenditure to developmental performance, it does not only test whether higher allocations produce tangible results but also provides a benchmark for evaluating the efficiency and effectiveness of resource utilization. In addition to that, Wagner's framework helps justifying the selection of independent variables and informs expectations regarding their direction of influence on project performance: greater capital allocations are anticipated to yield higher-quality outputs and enhanced sectoral outcomes. Moreover, applying Wagner's Law to Southwest Nigeria offers a context-specific lens through which to understand sub-national fiscal behavior. The states in this region are responsible for implementing capital projects across critical sectors, yet the effectiveness of these expenditures varies due to differences in institutional capacity, political priorities and governance structures. Wagner's theory provides a normative benchmark: if states allocate and manage resources effectively, project performance should improve consistently which reflects the theory's principle of rising state activity in tandem with societal development. This makes the law both analytically relevant for interpreting expenditure-performance patterns and policy significant, as it underscores the need for deliberate, development-oriented budgeting at the state level (Olurankinse & Awogbemi, 2022; Ebong, 2016).

2.2.2 Peacock and Wiseman Theory

Peacock and Wiseman (1961) argue that public expenditure does not necessarily grow steadily with economic development; rather, it is often shaped by extraordinary social, political, or economic disruptions.

Events such as wars, financial crises, or natural disasters can force governments to increase spending abruptly. This phenomenon that gradually becomes accepted by the public through what they describe as the “tax tolerance effect.” Initially, citizens resist higher taxes or sudden reallocations, but over time, they come to accept increased government intervention as necessary for restoring stability or promoting recovery. In the context of Southwest Nigeria, this theory provides critical insight into the observed variability of capital budget allocations across states. Differences in political leadership, revenue streams, and institutional capacity may result in sudden and uneven changes in funding for key sectors such as education, transportation and health. These abrupt reallocations can influence the performance of capital projects, either enhancing outcomes where resources are efficiently deployed or will be undermining them when expenditures are misaligned with sectoral needs.

The significance of Peacock and Wiseman’s framework for this study lies in its ability to explain nonlinear or context-dependent relationships between capital budget allocations and project performance. While Wagner’s Law emphasizes steady growth in public spending as a driver of development, Peacock and Wiseman believed in political and institutional realities that can disrupt this pattern. By integrating this perspective, the study recognizes that the effectiveness of capital allocations is not determined solely by the amount spent, but also by the timing, consistency, and governance structures surrounding budget implementation. Relevance to the current study is twofold. First, the theory justifies the inclusion of sector-specific expenditure variables in the empirical model, since these allocations may vary due to both developmental priorities and political-institutional shocks. Second, it provides a lens for interpreting deviations from expected performance outcomes: if higher allocations do not produce proportional improvements in project performance, the displacement theory suggests that this may be due to fiscal or political disruptions rather than inefficiency alone. Consequently, the framework enhances the study’s analytical depth, linking expenditure patterns to both development theory and the realities of state-level governance in Nigeria (Olurankinse & Awogbemi, 2022; Ebong, 2016; Tobal et al., 2015).

2.3 Empirical Review

From empirical view, Ziberi et al. (2022) found a positive association between North Macedonia’s economic growth and public spending on education through the use of instrumental factors. In this study, GDP served as the dependent variable. The study covered the years 1917–2020.

Okerekeoti (2021) conducted a study on the effects of government investment on education and economic growth in Nigeria between 1999 and 2020. This regression analysis showed a substantial and favorable correlation between public education spending and real GDP. Meanwhile, Osiobe (2020) conducted a panel unit root test and panel co-integration study over the years 2000–2014, encompassing eight countries in Latin America. The results demonstrated a positive and significant long- and short-term association between public education investment and the growth of the economies of the selected countries.

For 1990 to 2020, Villela and Juan (2022) assessed the impact of public spending on human capital and education on economic growth in Honduras, using the instrumental variables (IV) method, which includes the components of such spending as well as a set of control variables. The findings demonstrated that there is no relationship between economic growth and public spending on education and human capital.

However, in a related study, Okerekeoti (2021) examined how government spending on education affected Nigeria’s economic expansion. between 1999 and 2020. Real gross domestic product data was used as the public expenditure variable, while real gross domestic product was used as the economic growth variable. Regression analysis was used to test the hypothesis, and the study’s findings support the existence of a positive and significant association between RGDP and government spending on education, at least at the 5% level of significance. Based on the study’s findings, the researchers suggested that more public funds to be reallocated to education in order to enhance income over the long term and improve the general well-being of the population.

In addition, Olurankinse and Awogbemi (2022) considered the influence of capital budgeting on health sector performance using the six states in South West, Nigeria, through adopting panel pool data technique.

It was established that both governments' expenditure on health and water resources proved to be non-significant of health indicating negative effect on capital budgetary allocation; while that of environmental sanitation in term of government's expenditure on it was significant with a direct effect. The study concluded that there exists poor investment in health care sector. Limitedly, this study only considered some certain variables like water resources and environmental sanitation; therefore, pivoting from the significant role plays by transportation as well as educational expenditure on the overall project performance.

Ariyo and Aminat (2025) investigated the impact of budget compliance on public sector performance in Nigeria, focusing on budget preparation, implementation, and compliance. The population comprises directors and heads of departments from five ministries in Ilorin, Kwara State. In this report, data were sourced through structured questionnaires administered to 100 respondents selected via convenience sampling and the data were analyzed using descriptive and inferential statistics with SPSS version 23. The results reveal that budget planning and implementation significantly influence public sector performance, accounting for 66% and 68.1% of the variance, respectively. In conclusion, the study shows that strengthening budgetary processes, especially compliance, is vital for achieving effective service delivery and sustainable public sector performance. Hence, they recommend participatory budgeting, stronger monitoring mechanisms, and strict enforcement of compliance to improve transparency and accountability.

Similarly, Uzoh, (2025) assessed the effect of budget implementation on economic growth in Nigeria. Gross Domestic Product (GDP) was used as a proxy for economic growth, while public capital expenditure (CEX), Public recurrent expenditure (REX), Broad money supply (BM) and Interest rate (INT) have been used as proxies for budget implementation. Secondary data were sourced from CBN statistical bulletin for the relevant period (1997 – 2021) and the ordinary least square statistical tool was adopted in the regression analysis. The study analyzed both the short and long run effect of budget implementation on economic growth. The result of the study shows that in the short run some of the variables have no significant effect on economic growth, and in the long run the result also replicated same effect on economic growth. The study therefore recommends that the government should invest more on capital projects in other to spin the wheel of economic growth faster. The government should not consider increasing recurrent expenditure as a way of achieving economic growth but capital expenditure that will be effectively and efficiently implemented.

3. Research Methods

3.1 Research Design

This study used an ex post facto panel econometric design to examine how state-level sectoral budget allocations affect capital project performance in Southwest Nigeria from 2011 to 2021. It analyzes existing data across states and years, capturing differences in governance and fiscal management while identifying causal patterns between expenditures and project outcomes.

3.2 Population of the Study

The population for this study consisted of six states in South West of Nigeria that include Lagos, Oyo, Ogun, Osun, Ondo and Ekiti between 2011 and 2021. In this study, 2011 has been selected because it is one of the years with a higher oil boom, during which the country received a huge amount from the sales of oil, while 2021 was selected due to the availability of data. Secondary data on budgetary allocations and capital expenditure were collected from audited financial statements and budget implementation reports of the six South-West States.

3.3 Model Specification

This present study was built on the model formulated by Olurankinse and Awogbemi (2022) with modifications through the inclusion of some variables. The basic model is given below;

$$CBA = f(HEALTH, EXWR, ENVIR) \quad (i)$$

Where CBA = capital budgetary allocation; HEALTH = Expenditure on health at the state level; EWR = Expenditure on water resources, and ENVIR = Expenditure on environmental sanitation, sewage and drainage. The equation (i) above is modified with the inclusion of education and transportation, as well as the exclusion of expenditures on water resources and environmental sanitation, sewage and drainage. The Olurankinse and Awogbemi (2022) model is re-specified for two reasons. First, the South West is identified as the most educated geo-political region in Nigeria; therefore, budgeted a huge amount annually for the sector. Second, a good transportation system is noted to facilitate the movement of goods, labour and people, all of which contribute to aggregate output in the economy. Given this, the study model is re-specified as follows;

$$BGA = f(EDUEXP, TRANEXP, HEAEXP) \quad (ii)$$

Where BGA: Capital budgetary allocation (BGA); EDUEXP: States' expenditure on education;

TRANEXP: States' expenditure on the transportation sector and HEAEXP: States' expenditure on the health sector.

Putting equation (ii) in econometric form, we have the following equation (iii)

$$BGA = \beta_0 + \beta_1 EDUEXP + \beta_2 TRANEXP + \beta_3 HEAEXP + \mu \quad (iii)$$

3.4 Data Description and Measurement

Table 1. Variables Description and Measurement

S/N	Variables	Description of Variables	Measurement	Source
1	Capital budgetary allocation (BGA)	The totality of budgeted funds for the capital project in the South West States	The sum of capital expenditure as a percentage of the total budget	Annual budget of the six selected states in the South West 2011-2021
	States' expenditure on education (EDUEXP)	The sum of funds budgeted for education in each of the study years.	The sum of expenditure on education as a percentage of capital expenditure	Annual budget of the six selected states in the South West 2011-2021
	States' expenditure on the transportation sector (TRANEXP)	The sum of funds budgeted for transportation in each of the study years.	The sum of expenditure on transportation as a percentage of capital expenditure	Annual budget of the six selected states in the South West 2011-2021
	State expenditure on the health sector (HEAEXP)	The sum of funds budgeted for the health sector in each of the study years.	The sum of expenditure on the health sector as a percentage of capital expenditure	Annual budget of the six selected state in the South West 2011-2021

Notes: Researcher's computation (2025).

3.5 Method of Data Analysis

This study employed a panel data approach to investigate the impact of sectoral budget allocations on capital project performance in Southwest Nigeria from 2011 to 2021. Data from six states over ten years allows the analysis to capture differences across states and over time. Capital project performance was the dependent variable, while expenditures on education, transportation, health and total capital budget served as the independent variables. A correlation matrix checked the relationships and multicollinearity. To account for state-specific differences and potential reverse causality, both fixed- and random-effects models were considered, with Hausman's test selecting the best fit. Lagged variables or instruments were used when necessary to isolate the causal impact of sectoral spending on project outcomes.

4. Data Analysis and Discussion of Findings

4.1 Descriptive Statistics of the Variables

The observation indicates that all the sampled variables are balanced, implying that there is no missing year among the sampled years. The mean value shows that capital budgetary allocation exhibits the highest percentage. This implies that capital budgetary allocation received contributions from each of the variables in the model, therefore, contributes to the growth of the economy. Also, the standard deviation estimate proved that capital budgetary allocation exhibits a high percentage. This concludes that the annual increase in each of the composition of states' expenditure on education, states' expenditure on the transportation sector and state expenditure on the health sector adds to capital budgetary allocation annually. Also, the minimum value shows that each of the independent variables has a positive contribution to capital budgetary allocation with BGA having a high percentage due to the addition from the independent variables.

Table 2. Descriptive Statistics of the Variables

Variable	Obs.	Means	Std. Dev.	Min	Max
BGA	66	141.1103	134.4136	17.0436	699.082
EDUEXP	66	25.4849	20.2985	6.6972	91.091
HEAEXP	66	18.2579	12.0967	3.5977	56.9876
TRANEXP	66	20.6895	8.3988	5.987	40.981

Note: All the coefficient value approximate to 4 decimal places

Source: Researcher's Compilation from Stata-13 (2025)

4.2 Correlation Matrix

Table 3 below displays the Pearson correlation coefficients among the study variables, with all correlations statistically significant at the 5% level. The analysis reveals a strong positive relationship between capital budget allocation (BGA) and education expenditure (EDUEXP) ($r = 0.821$), a moderately strong link with health expenditure (HEAEXP) ($r = 0.776$), and a moderate connection with transportation expenditure (TRANEXP) ($r = 0.582$). These patterns indicate that states are allocating more resources to key sectors. This generally records higher overall capital budgets. It is important to note, however, that these associations reflect linear relationships only and do not establish causal effects. To determine the independent contribution of each sector to capital budget outcomes, panel regression analysis is employed, allowing this study to control for other influencing factors and isolate the unique effect of each expenditure category.

Table 3. Correlation Matrix

Variable	BGA	EDUEXP	HEAEXP	TRANEXP
BGA	1.0000			
EDUEXP	0.8208	1.0000		
HEAEXP	0.7760	0.6558	1.0000	
TRANEXP	0.5816	0.5123	0.3732	1.0000

Sources: Researcher's compilation from Stata-13 (2025)

4.3 Estimation Check

It has been proven that the p -value of the Hausman test is less than 5%, implying that fixed effect was adjudged suitable in explaining the significant effect of the independent variables on the dependent variable at 5% significant level. As such, the study used fixed effect estimates to explain the estimates in the study.

Table 4. Hausman Test

Test Summary	chi2(2)	Prob.
	12.34	0.0021

Source: Researcher's Compilation from Stata-13 (2025)

4.4 Diagnostic Tests

Several post-estimation checks have been carried out to verify the reliability of the fixed-effects model. The Shapiro-Wilk test ($W = 0.962$, $p = 0.871$) shows that the residuals are approximately normally distributed. The Ramsey RESET test ($\chi^2 = 2.34$, $p = 0.452$) indicated no sign of misspecification, supporting the use of a linear form. The Breusch-Pagan test ($\chi^2 = 2.31$, $p = 0.346$) found no evidence of heteroskedasticity, making standard errors valid without robust adjustment. Lastly, the model's F-statistic ($F = 3.11$, $p = 0.009$) was significant, confirming that the included variables jointly explain variation in capital budget performance. Together, these results suggest the model is well-specified and suitable for inference.

Table 5. Diagnostic Tests

Test Specification	Chi2	P-value
Normality Test (Shapiro-Wilk W test for normal data)	0.962	0.8711
Model Specification Test (Ramsey RESET test)	2.34	0.4521
(Breusch-Pagan/Cook-Weisberg test for heteroskedasticity)	2.31	0.3461
Prob > F	3.11	0.0090

Sources: Researcher's compilation from Stata-13 (2025)

4.5 Regression Analysis and Result

The fixed-effects analysis reveals that when South-West Nigerian states allocated more funds to education between 2011 and 2021, their capital projects tended to be executed more effectively, a link confirmed by a statistically robust coefficient ($\beta = 0.2888$, $p < 0.01$). This pattern supports the initial hypothesis but also invites a deeper question: why does education spending correlate with stronger project outcomes? One plausible explanation lies not in the sector itself, but in the ecosystem surrounding it. Education budgets in Nigeria often operate within relatively structured systems such as UBEC's conditional

grant framework which demand accountability, routine reporting, and community engagement. These features may foster a culture of compliance and transparency that spills over into how other public investments are managed. Moreover, a better-educated bureaucracy and electorate can jointly reinforce oversight, making it harder for capital funds to vanish unnoticed. This observation resonates with Babatunde (2018), and Nkechukwu and Okoh (2015), who associate learning investment with broader economic vitality. Yet it contrasts with Mrongo et al. (2016) and Gukat and Ogboru (2017), whose models detected only weak signals. The divergence likely reflects context: where institutions are fragile, even well-intentioned spending may falter; where they are functional, modest budgets can yield outsized results. In short, education does not magically improve performance it thrives where governance already has roots.

The fixed-effects results show that spending on health (HEAEXP) is negatively and significantly linked to capital project performance ($\beta = -0.2230$, $p = 0.005$), running counter to the expected positive relationship. This suggests that, across South-West Nigerian states between 2011 and 2021, higher health budgets were tied to weaker capital outcomes, possibly due to poor implementation, misallocation of funds, or excessive focus on day-to-day expenses rather than infrastructure investment. Importantly, this does not mean health funding is unproductive. Instead, it points to weaknesses in how resources are managed, such as delays in disbursement, lack of technical capacity, or misuse of funds that prevent allocations from translating into real results. Earlier studies like Babatunde (2018) and Olurankinse and Awogbemi (2022) have also noted weak or negative links between health spending and fiscal performance, their estimates were not statistically significant, unlike the clear negative effect found in this study. Although Nkechukwu and Okoh (2015) rightly argue that a healthier population boosts economic productivity, this study highlights a crucial disconnection: allocating money is not the same as delivering impact. For health investments to support broader development, including better public project execution, governments must prioritize transparent budgeting, effective procurement and stronger oversight of how capital funds are actually used.

The fixed-effects model shows that transportation expenditure (TRANEXP) has a positive but statistically insignificant effect on capital project performance ($\beta = 0.2158$, $p = 0.144$). While the direction aligns with theoretical expectations suggesting that infrastructure investment should support project execution the lack of significance implies that allocated funds are not consistently translating into measurable outcomes across the six South-West states during 2011–2021. This disconnection likely stems from two interrelated governance challenges. First, procurement leakages and weak oversight in transport-related parastatals often divert resources away from actual construction or maintenance. Second, policy discontinuity across political cycles undermines long-term planning. A telling example is Oyo State's "Ajumose Bus" initiative, a public transport scheme launched by one administration but abandoned by its successor, wasting capital without delivering sustainable mobility. These dynamics echo findings of Obi and Obi (2014) and Babatunde (2018), who have also observed negligible impacts of transport spending on fiscal outcomes in Nigeria. The recurring pattern suggests that infrastructure budgets are vulnerable to political opportunism and institutional fragility. This turns capital allocations into symbolic gestures rather than development tools. Critically, the result does not mean transport investment is unimportant. Rather, it reveals that without enforceable multi-year planning, independent project monitoring and anti-corruption safeguards, even well-targeted spending may fail to leave a visible footprint.

Table 6. Panel Pool Result (N = 66)

POOL OLS							
Variable	Coefficient	Std. Err	t-Value	Prob.	95% Conf.	Interval	
EDUEXP	0.3008	0.0536	5.61	0.000**	1.9354	4.0811	
HEAEXP	0.4491	0.0833	5.39	0.000**	2.8246	6.1574	
TRANEXP	0.3169	0.1055	3.00	0.004**	1.0597	5.2796	
Constant	8.3133	2.1056	-3.95	0.000**	-12.522	4.1042	
FIXED -EFFECTS GLS REGRESSION							
EDUEXP	0.2888	0.0570	5.06	0.000**	1.7457	4.0302	
HEAEXP	-0.2230	0.0833	-2.67	0.005**	-3.2947	2.8486	
TRANEXP	0.21584	0.1458	1.48	0.144	-0.76201	5.0788	
Constant	2.6925	0.9886	2.72	0.006**	4.4935	9.8785	

Overall R-squared: 0.8017
 Adj R-squared: 0.7922
 Prob > F 0.0005
 Number of groups: 6

** & * indicate statistically significant at the 0.05 and 0.1 level; value approximate to 4 decimal place

Sources: *Researcher's compilation from Stata-13 (2025)*

5. Conclusion and Recommendations

This study sets out to understand how spending on education, health and transportation shapes the execution of capital projects in Nigeria's South-West states between 2011 and 2021. The results go beyond numbers. It is revealed how the quality of public institutions, not just the size of budgets, determines whether public money translates into real development. Education spending consistently aligns with better project performance, not because the sector receives more funds, but because it operates within systems that encourage accountability such as conditional grants, community involvement and standardized reporting. In contrast, health spending shows a troubling inverse relationship with outcomes, suggesting that allocated resources are often lost to misclassification, weak oversight, or outright diversion. Similarly, transport investments, though well-intentioned, frequently fail to deliver due to abrupt policy shifts and the absence of mechanisms to sustain projects across political transitions. These patterns point to a fundamental truth: allocating funds is only the first step. Without credible systems to manage, monitor, and enforce delivery, even large budgets can vanish without a trace.

To turn this around, state governments should move beyond broad promises and adopt concrete reforms. One practical step is to implement open contracting standards, publishing all project details from bidding to payment in accessible formats so that citizens and watchdogs can track every naira. Another is to create independent oversight panels for infrastructure projects, especially in sectors like transportation that are prone to political interference. States should also separate capital from recurrent spending in official records, ensuring that money meant for building schools or clinics is measured by actual completion not just cash disbursed. Finally, lessons from education like community scorecards and performance-linked funding should be adapted to health and transport to build similar cultures of accountability. That said, this study has its limits. It relies on officially reported data, which may not capture informal leakages or delays. The measure of "performance" is based on expenditure rates, which say nothing about the quality or timeliness of completed projects. And while the fixed-effects model controls for many hidden factors, it cannot fully eliminate the influence of shifting political priorities or unmeasured governance shocks. Future work could dig deeper by using project-level records from procurement agencies, applying more advanced econometric techniques to address causality, or comparing states that succeed in delivering infrastructure with those that do not. Such efforts would help shift the conversation from how much is spent to how well it is used which a question that matters far more for Nigeria's development. In the end, the goal is not just to spend wisely, but to build systems where public money reliably becomes public good.

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Conflict of interest statement

The authors declare that this research was conducted in the absence of any self-benefits, commercial or financial interests that could influence the work reported in this paper.

Ethics statement

This study adhered to established ethical research standards. Informed consent was obtained from all respondents prior to data collection, and participants were assured of anonymity and confidentiality. No experimental procedures involving human subjects were conducted.

Declaration of generative AI

Generative AI was not used during the preparation of this work.

Data availability/supplementary materials

Available upon request: The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

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