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Cost of Governance and Public Sector Performance in Nigeria: An Empirical Analysis

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ABSTRACT

The growing demand for public goods and services such as education, healthcare, infrastructure, and security; as well as expanding scope of public sector operations has led to increased cost of governance globally including Nigeria. However, the performance of the Nigerian public sector remains alarmingly poor over the years, primarily due to issues like inadequate budgetary implementation. This motivated this study to investigate the effect of cost of governance on public sector performance in Nigeria. Secondary data were sourced from CBN Statistical Bulletin and National Bureau of Statistics NBS. The study employed robust least square (RLS) estimation method. The results showed that capital expenditure with (β = 7.543; p-value = 0.000); and debt service cost with (β = 6.662; p-value = 0.000) have significant positive effect on public sector performance, while recurrent expenditure with (β = -5.503; p-value = 0.000) has significant negative effect on public sector performance in Nigeria. The study concluded that cost of governance affects public sector performance in Nigeria. The study therefore recommended that government should monitor adherence to budget allocations, especially for capital projects, to ensure resources are used effectively in line with Sustainable Development Goal (SDG) 12 of Responsible Consumption and Production.

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1. Introduction

The performance of the public sector is crucial for the social and economic development of any nation. The public sector plays a crucial role in global economies by providing essential services such as education, healthcare, infrastructure, and security, serving as the largest spender and setting the tone for activities in the private sector. In both developed and developing nations, including Nigeria, the government remains the dominant economic force, managing extensive economic activities through its ministries, agencies, departments and parastatals. These activities involve the allocation of funds for the operation of governmental institutions, the implementation of policies, the disbursement of salaries and employee benefits, pensions, infrastructure maintenance, and other expenses related to the administration of government affairs, serving as the tools employed by governments to fulfill their responsibilities to the public (Akinadewo et al., 2023; Awusa, 2023).

As an organization established, owned, run, and funded by the government on behalf of the public, public sector entities provide services that benefit the populace through the

various ministries, departments, agencies (MDAs), and parastatals with the primary goal of ensuring the equitable distribution of welfare, adequate service delivery, security of publicly-owned enterprises, and the protection of government corporations (Evans et al.; Igbokwe-Ibeto et al., 2020; Nwafor, 2023). Consequently, governments administer resource allocation and distribution, while managing the overall governance cost which comprises both recurrent expenses such as personnel and overhead costs, as well as capital expenditure incurred on fixed assets and long-term investments (Negri & Dincă, 2023; Olonite et al., 2021).

Governments invest in capital and recurrent items to ensure efficient public sector performance, socioeconomic development, as well as the welfare of the citizens. For instance, investments in healthcare facilities, schools, and transportation networks can enhance the public sector's ability to deliver critical services to citizens. Thus, governance costs, which encompass the total funds expended by the government for public goods and services, are vital for the public sector's operation and the developmental processes of nations. Services such as security, transportation infrastructure, healthcare, and education are typically provided without direct payment from citizens, with the government emphasizing transparency, accountability, and equitable income distribution (Igbokwe-ibeto, 2021; Ozordi et al., 2022).

Despite significant government spending, the performance of the Nigerian public sector remains alarmingly poor over the years, primarily due to issues like budget mismanagement and inadequate budgetary implementation. Challenges in the budget implementation phase, characterized by delays, non-release, and partial release of approved funds hinder budget execution and public sector performance. In 2012 and 2013 for instance, 51% and 47.54% of the capital expenditure were implemented respectively, with marginal improvements in 2018 and 2019, where capital budget performance reached 67% and later increased to 83.95% by the end of 2019. Thus, the performance of capital expenditures remained subpar, with only 56.1% of the capital budget executed. Conversely, recurrent budget performance, particularly statutory transfers, consistently ranged between 88% and 100% (Promise Akor ORDU, 2023).

Excessive recurrent spending, particularly on wages and allowances, often reduce the funds available for capital investment and hinder public sector performance. This has led to shortages in public goods and services, resulting in economic challenges such as poverty, unemployment, low per capita income, mounting external debt, corruption, and limited investment (Hijal-Moghrabi et al., 2020).

Costs of governance continued to rise across the globe, particularly developing countries like Nigeria, due to the expanding scope of public sector activities and growing demand for public goods and services which can be largely attributed to factors like population size, public sector size, economic development, and spending priorities. In Nigeria, deficit budgeting, where expenditure exceeds revenue, has become the norm, adversely affecting public sector performance (Onwuka, 2022). Ogunsola (2023) argues that a large portion of Nigeria's government spending is unproductive, driven by factors like shortfall in revenue, oversize executive office, corruption, infrastructure demand, and high debt servicing costs.

Despite trillions of Naira allocated to public expenditure over the decades, the expected public sector productivity has not been realized. High debt servicing costs has constrained government's ability to allocate resources to critical sectors, thereby negatively affecting public sector performance. The trade-off between debt servicing and other expenditures raises concerns about the sustainability of Nigeria's debt burden and its long-term impact on public sector efficiency. This situation prompts the need for an investigation into whether the cost of governance boost public sector performance, particularly in Nigeria. The impact of cost of governance on public sector performance has been largely ignored in existing literature. In response to these considerations, this study aims at investigating the effect of cost of governance on public sector performance in Nigeria.

This study is unique as it employs a disaggregated approach to cost of governance by analyzing its components capital expenditure, recurrent expenditure, and debt service cost to provide more credible and reliable findings on their effects on public sector performance. Unlike past studies that primarily focused on total government expenditure, this approach

allows for a more granular assessment of how different expenditure categories affect public sector performance.

Existing literature on the cost of governance has largely examined government spending by sector, such as education, agriculture, healthcare, environment, and transport. For instance, Mbiakop et al. (2023) analyzed public spending in relation to agriculture, while Cubi-Molla et al. (2023) examined expenditure across health, social care, environment, and transport sectors in Australia, Canada, Japan, New Zealand, the Netherlands, and the United Kingdom. However, sector-specific studies may not fully capture the broader implications of public spending across economic sectors or its impact on overall public sector performance. Their findings may also have limited applicability to developing economies like Nigeria, which operate under distinct fiscal policies, institutional frameworks, and economic structures.

In Nigeria, studies such as Alade et al. (2020) primarily examined aggregate government spending, while Umeh et al. (2021) focused on the health sector. Ajayi et al. (2024) explored the role of technology in public sector performance but did not account for expenditure composition. None of these studies have examined the disaggregated components of the cost of governance or their direct impacts on public sector performance, leaving a crucial gap in understanding how different spending categories affect governance efficiency.

Hence, there is paucity of literature specifically addressing the relationship between cost of governance and public sector performance in Nigeria. The only notable exception is Oladeji (2022), which focused on how excessive executive spending inflates governance costs and slows economic and social progress. However, this study did not empirically analyze capital expenditure, recurrent expenditure, and debt servicing costs as distinct variables affecting public sector performance. Thus, this study aims to fill this gap by adopting a disaggregated approach, providing a more comprehensive understanding of how different components of government spending affect public sector performance in Nigeria from 1990 to 2023.

2. Literature Review

The cost of governance, often synonymous with government expenditure, comprises the anticipated expenses that a government is expected to bear in order to sustain itself, its economy, and society at large. This includes funds allocated for the functioning of government institutions, policy implementation, salaries for public officials, infrastructure maintenance, and other expenditures associated with managing government affairs. Liston (2020) characterizes the cost of governance as the obligatory expenses incurred by the government in carrying out its functions. Bakkihs and Terkura (2021) describe it as the government budget designated for both capital and recurrent expenditures to maintain administrative structures. The pivotal concern in governance efficiency is ensuring the judicious allocation of public funds and the adequate provision of public goods and services (Alsharari, 2022; Igbokwe-Ibeto et al., 2020).

The cost of governance represents the overall funds expended by the government to fulfill collective needs and provide public goods. These include, but are not limited to, social, economic, and environmental expenditures, infrastructure development, administrative services, security, public debt repayment, and other essential areas (Alsharari, 2022; Udoh et al., 2023). Capital expenditures involve allocating funds towards permanent projects, including government expenditures on constructing infrastructure such as roads, schools, power generation facilities, communication networks, water conservation initiatives, airports, dams, bridges, hospitals, and other enduring assets with benefits spanning multiple years. The intention behind investing in these capital projects is to elevate the standard of living and overall welfare, while concurrently enhancing public services (Ahuja & Pandit, 2020).

On the other hand, recurrent expenditure pertains to the costs borne by the government in the ongoing management of its day-to-day operations. This comprises various expenses such as employee wages and salaries, pensions, general administration, vehicle maintenance, payment of utility bills (electricity and telephone), administrative overheads, water rates, road and bridge maintenance, port upkeep, insurance premiums, and the

provision of essential services (Efenyumi et al., 2022). As described by Ogunsola (2023), recurrent expenditure encapsulates the costs associated with running the government, fulfilling political responsibilities, and delivering civil services to the public. Hence, recurrent administrative expenses manifest repeatedly on a daily, weekly, or monthly basis, without yielding or leading to the creation of fixed assets.

Debt servicing cost refers to the total amount of money a government, corporation, or individual must pay within a given period to cover interest and principal payments on outstanding debt. It includes both interest payments and principal repayments due during that period. According to Imoisi (2021), public debt serves as a crucial source of funding when internally generated revenue falls short, enabling the government to implement its budget. However, this borrowing comes with repayment obligations, which may include interest payments depending on the terms of the contract. Interest payments are the regular payments made to creditors as agreed, while principal payments are those made to reduce the outstanding debt amount (Akinadewo et al., 2023; Udoh et al., 2023).

On a global scale, governments bear the responsibility of providing essential infrastructure to the citizens, encompassing tasks such as income redistribution, economic stabilization, and the provision of basic services in the form of public goods. This responsibility holds true for Nigeria as well. A notable trend in government expenditure, observed in both developed and developing countries worldwide, is that the increase in expenditure tends to surpass the increase in income over time (Awusa, 2023; Gosai & Devi, 2023; Umeh et al., 2021).

The public sector refers to the segment of the economy under the control and direction of federal, state, or local governments. It comprises independent public institutions tasked with overseeing government actions, activities, and holding authorities accountable for their decisions. In Nigeria, the public sector consists of a wide range of organizations, including the core government, ministries, agencies, departments, and parastatals. These entities are responsible for providing essential services that enhance societal welfare and development. Key services include security to safeguard citizens; transportation infrastructure, to facilitate the movement of people and goods; healthcare, and free education. Public sector organizations operate with objectives that prioritize service delivery over profit-making motives (Felix et al., 2022).

Typically, services are provided to citizens without direct payment from the end-users, and the government ensures that there is minimal room for inefficiency, corruption, or misuse of resources, with emphasis placed on maintaining transparency, probity, accountability, and the equitable distribution of income to serve the best interests of the public (Igbokwe-ibeto, 2021; Ozordi et al., 2022). In this study, public sector performance was measured by the difference between government revenue and expenditure as a measure of public sector efficiency. Difference between government revenue and expenditure reflects fiscal balance and the government's ability to manage resources without excessive deficits, directly influencing public sector performance.

2.1. Theoretical Framework

The pure theory of public expenditure, propounded by an American economist Professor Paul Samuelson in his seminal work *"The Pure Theory of Public Expenditure"* in 1954, is a foundational theory in public finance. This theory aims to analyze the economic rationale for government intervention in the economy, particularly in the provision of public goods. According to Samuelson, the pure theory of public spending maintains the classification of government services while placing emphasis on the particular modes of consumption associated with these services, reiterating the necessity of government intervention in instances where markets are unable to effectively distribute resources.

Samuelson explained that there are two types of goods: public goods and private goods. Public goods are things that everyone can use without reducing their availability for others. For example, a city park can be enjoyed by one person without stopping others from enjoying it too. Public goods are also non-excludable, meaning it’s hard or too costly to stop people from using them, even if they didn’t pay for them. A common example is national

defense, which protects everyone, whether they contributed to its cost or not (Alsharari, 2022).

However, private goods are used up when one person uses them. This means that the consumption of a private good by one individual diminishes the quantity or quality available for others. For example, if someone eats a chocolate bar, that chocolate is no longer available for someone else to consume. Private goods can also be kept from people who do not pay. As such, it is feasible not to allow individuals who have not paid for the good from using or consuming it. For instance, a movie theater can exclude people who have not bought tickets. Hence, the characteristics of private and public goods have significant implications for how they are provided in the market. Therefore, government intervention in the provision of public goods is, in a sense, a response to the positive externalities associated with these goods (Hijal-Moghrabi et al., 2020).

In accordance with the pure theory of public expenditure, public health, education, and other capital investments fall under the category of public goods. Ensuring the accessibility of these goods to the entire Nigerian population necessitates significant government intervention. Allocating resources effectively in these areas holds the potential to reduce disparities in access. The presence of a healthy and educated population is crucial for fostering healthy public sector. Individuals tend to be more productive when in good health, and directing resources toward healthcare can mitigate the economic impact of illnesses and diseases (Nwafor, 2023).

This theory holds particular significance for this study as it highlights the necessity of public expenditure for the creation and dissemination of public goods. Consequently, this study is anchored on the fundamental principles outlined by the theory of public expenditure. Studies such as Gosai and Devi (2023); Iliopoulos and De Witte (2024), and Akinadewo et al. (2023), provided strong support for the relevance of this theory for this study.

2.2. Empirical Review

Alade et al. (2020) examined the relationship between government total revenue, public expenditure and debts in Nigeria from 1984 to 2019, using Vector error correction (VEC) model. Findings showed causality betwixt the government income, expenditure and public debt, with two-way directional relationship between government income and national debt. Foreign debt written agreement was discovered to have tendency to obstruct investment in public goods and delay growth in public revenue. Government inability to carry out its social responsibilities to the citizenry due to scarcity of funds, and increasing debts could aggravate current cause of economic condition and criminality in Nigeria.

Onwuka (2022) investigated the relationship between external debt burden and infrastructural development nexus in Nigeria between 1981 and 2020, using an Augmented Dickey Fuller Tests, ARDL Approach and granger causality techniques. The study found that external debt; domestic debt and inflation rate have a negative effect on the development of infrastructure on the long run while the exchange rate and interest rate variables had a positive effect on infrastructural development in the long run. Also, the study also found no causality between the variables.

Success Ikechi et al. (2021) explored the apparent mismatch between resource creation, resource distribution, and expenditure management in Nigeria, using least square regression analysis. The findings revealed that the nation's financial strategy is tilted toward paying wages and emoluments to employees (recurrent expenditures) rather than investing in growth-oriented infrastructure (capital expenditures).

Umeh et al. (2021) examined how government budget deficits affect the public health sector in Nigeria between 1980 and 2018, using the error correction method. The main findings were: (i) budget deficits have a small positive effect on public health output; (ii) external borrowing to cover deficits has a small negative effect on health output; and (iii) domestic borrowing to cover deficits has a significant positive effect on health output. The study concluded that while budget deficits have a small positive impact on health output,

more funds are allocated to health's running costs rather than capital projects, even though capital spending is more important for improving the health sector.

DEMEHIN looked at how government revenue affects government spending in Nigeria using Granger pairwise causality. They found that total government revenue has a positive and significant impact on government spending both in the short and long run. The study also showed that government spending leads to an increase in government revenue. It concluded that government revenue is crucial in determining government spending, and recommended that Nigeria focus more on sectors like agriculture and solid minerals to raise revenue and shift spending toward capital projects for long-term economic growth.

Gadbade and Kokate (2021) examined the recent trends of public expenditure on education, health and social sector and its composition in India. The study found that in recent years the public expenditure in social sector and health has increased gradually, but decreased in sector. It reveals that the Indian states are incurring highest spending on revenue account and the capital expenditure constitutes very small portion of total expenditure on education, health and social sectors.

Oladeji (2022) looked at the features of Nigeria's 'imperial executive' and how their excessive spending increases the cost of governance and slows down social and economic progress. Using secondary data, the study found that high recurrent spending makes it difficult to set aside enough funds for capital expenditure. This leads to too much money being spent on the political elite, leaving less for important sectors like health, education, and infrastructure. The study recommends reforms to the executive system and suggests implementing controls to limit the executive's excessive spending in Nigeria.

O'hare and Hall (2022) looked at data from 32 interviews with current and past government and agency leaders to explore why agencies are created, how government works with these organizations, and how it impacts public sector governance in two Canadian regions. Findings showed that there is a statistically significant increase in the overall number of arms-length entities in both jurisdictions over time. Although many provinces in Canada have rules for managing and removing Crown agencies, in reality, political or stakeholder influence still plays a role in how these agencies are formed, which does not always follow the rules.

Andhini et al. (2023) looked at how capital spending, special allocation funds, and general allocation funds influence government financial performance in 33 districts and cities of North Sumatra Province from 2017 to 2022, using panel data regression. They found that general allocation funds strongly improve financial performance. Capital spending also helps, particularly when used for local infrastructure, which can increase local income and improve finances. The status of the local government was also found to significantly affect financial performance. However, special allocation funds negatively affect financial performance.

Kumar De and Shafuda (2023) looked at how well the Namibian government performed and how efficient its actions were from 1990 to 2015. They used a method by Afonso (2007) and Stochastic Frontier Analysis (SFA) to evaluate this. The study showed that the public sector's efficiency in Namibia improved slowly. Some areas showed progress, but others didn't change much. The government made some progress in reducing poverty and inequality, but it was slow. Efforts to lower unemployment did not meet expectations, and technical progress was also very slow. The study suggests that Namibia needs to improve public sector performance and efficiency to stabilize and boost growth.

Negri and Dincă (2023) analyzed the efficiency of the European Union's public sector based on the quality of governance, using a two-step approach. First, they measured the efficiency of EU countries with Data Envelopment Analysis. Then, they explored the factors that influence this efficiency using quantile regression. The study found that governance quality plays a key role in public sector performance. It also highlighted that factors such as human resources, freedom, democracy, corruption, and digitalization impact efficiency. The study recommends that reforms should aim to improve both the technical and democratic aspects of public institutions to use public resources more efficiently and transparently, while taking into account local and national differences.

Mitu and Stanciu (2023) researched public sector performance and efficiency, including data envelopment analysis scores, for 11 CEE countries using a method from Afonso (2007). They calculated scores based on seven public sector components, with 12 opportunity indicators and six Musgravian indicators. They also improved the Afonso, Schuknecht and Tanzi method to calculate annual scores for public sector performance and public sector efficiency. The findings showed that medium-sized governments performed best in terms of expenditure and had the highest efficiency scores.

Cubi-Molla et al. (2023) provided evidence to help improve political decisions and address important issues when evaluating public spending in different sectors. They used document analysis to find thresholds, both clear and unclear, in government publications from health, social care, environment, and transport sectors in Australia, Canada, Japan, New Zealand, the Netherlands, and the United Kingdom. The study showed that comparing the value of life in different public sector activities is valuable. The best way to allocate resources across sectors depends on how society values the benefits in each area.

Akinadewo et al. (2023) studied how public debt impacts the budget spending performance of 18 oil-producing African countries using panel regression analysis. They found that public debt has a positive but not strong effect on government spending in these countries. They also examined how controlling corruption might influence the relationship between public debt and budget performance. The study showed that controlling corruption had a positive but not significant effect on this relationship.

Ajayi et al. (2024) researched how technology influences public sector performance in Nigeria from 2010 to 2022 using the ARDL model. The findings showed that technology has a positive and strong effect on public sector performance over time. The study suggests that the government should prioritize acquiring and using technology in the public sector to boost revenue and improve performance.

3. Methodology

The study integrates the pure theory of public expenditure and robust least squares (RLS) estimation method to provide a solid theoretical and methodological foundation for analyzing public sector performance. This framework combines the economic rationale for public expenditure with a robust statistical approach for accurate analysis. Robust Least Squares estimation addresses potential data irregularities that could undermine the validity of findings, and provides reliable parameter estimates in the presence of outliers, heteroscedasticity, or violations of normality.

The functional model for this study is specified as follows:

$$PUBLIC\ SECTOR\ PERFORMANCE\ =\ f(COST\ OF\ GOVERNANCE) \quad (1)$$

$$PSP\ =\ f(CEXP, REXP, DSCO) \quad (2)$$

Therefore, the RLS model is stated in econometric form as:

$$PSP_t = \beta_0 + \beta_1 \ln(CEXP_t) + \beta_2 \ln(REXP_t) + \beta_3 \ln(DSCO_t) + \varepsilon_t \quad (3)$$

Where: PSP **=** Public sector performance measured by difference between government revenue and expenditure; CEXP = Capital expenditure measured by natural logarithm of total capital expenditure; REXP = Recurrent expenditure measured by natural logarithm of total recurrent expenditure; and DSCO = Debt servicing cost measured by total costs of servicing domestic and foreign debt.

Ex post facto research design was employed for this study, which is suitable for analyzing historical data. Annual data covering the period 1990 and 2023 were used for this study. The data were sourced from CBN Statistical Bulletin.

4. Data Presentation and Discussion of Results

4.1. Summary statistics

Summary statistics provide a quick way to understand the general properties of a dataset. Summary statistics used in this study include measures like mean, standard deviation, minimum and maximum.

Table 1
Summary Statistics

	Mean	St. Dev.	Max	Min
Public Sector Performance	6.4161	2.3057	7.6695	-2.4220
Capital Expenditure	26.876	1.3197	29.132	23.903
Recurrent Expenditure	27.690	1.7469	30.290	24.313
Debt Servicing	9.5980	6.2046	22.596	0.6286

Source: Author (2025)

The result indicated that public sector performance has a positive mean value of 6.42, a minimum of -2.42, maximum of 7.67 and standard deviation of 2.31. This means, on average, performance of public sector across the observations is relatively stable and efficient. The minimum value reflects inefficiency or fiscal imbalance in certain years, possibly due to fiscal mismanagement, high administrative costs, or increased debt burdens. The maximum value suggests that there were years of notable efficiency or fiscal balance, likely driven by specific policies or favourable conditions. The standard deviation indicates a moderate level of variability in public sector performance.

Capital expenditure has a mean of 26.88, a minimum of 23.90, maximum of 29.13 and standard deviation of 1.32. The mean value reflects level of government investment in infrastructure and other capital projects. The minimum value suggests periods of reduced investment in capital projects possibly due to budget constraints, economic downturns, or shifts in governance priorities. The maximum value reflects years of robust investment in capital projects, possibly driven by higher revenues or increased borrowing for development purposes. The standard deviation indicates low variability which suggests consistent spending patterns level.

Recurrent expenditure has a mean of 27.69, minimum of 24.31, maximum of 30.29 and standard deviation of 1.75. The mean value indicates the average recurrent spending on regular and operational expenses, such as salaries, pensions, and administrative costs. The minimum value reflects years when operational costs were relatively low which could be attributed to austerity measures, lower public service size, or constrained budgets. The maximum value reflects periods of elevated operational spending, possibly due to expanded public services, higher wage bills, or inflationary pressures. The standard deviation indicates moderate variability in recurrent expenditure over the years.

Debt servicing has a mean of 9.59, minimum of 0.628, maximum of 22.596 and standard deviation of 6.20. The mean value indicates the average level of resources allocated to repaying both domestic and foreign debts during the period. The minimum value reflects years when the debt repayment burden was minimal possibly due to lower borrowing, temporary debt relief, or restructuring agreements. The maximum value reflects years with huge repayment burden, likely due to high borrowing, unfavourable loan terms, or an accumulation of debt obligations. The standard deviation indicates high variability in debt servicing costs which may be driven by variations in interest rates, exchange rates, and debt profiles.

4.2. Stationarity Test

Stationarity test is used to determine whether a time series dataset is stationary or non-stationary. In this study, the Augmented Dickey-Fuller (ADF) unit root test was done to ascertain whether the variables are stationary or non-stationary.

To mitigate the risk of biased estimated parameters and spurious regression caused by nonstationary data, this study employed Augmented Dickey–Fuller (ADF) test. The results from Table 2 showed that public sector performance, capital expenditure, recurrent expenditure, and debt servicing were only stationary at first difference I (1).

Table 2
Unit Root Test

Augmented Dickey-Fuller (ADF) Unit Root Test						
Level				**First Difference**		
Variables	**t-stat**	**p-value**	**Status**	**t-stat**	**p-value**	**Status**
Public Sector Performance	1.6721	0.4598	-	-5.0136	0.004	I(1)
Capital Expenditure	-1.5762	0.4832	-	-6.6753	0.0000	I(1)
Recurrent Expenditure	-2.1951	0.2118	-	-8.0057	0.0000	I(1)
Debt Servicing	-2.6531	0.0930	-	-6.8224	0.0000	I(1)

Source: Author (2025)

4.3. Cointegration Test

In time series analysis, when variables are non-stationary, they might exhibit spurious correlations, which could lead to misleading conclusions. Cointegration helps address this issue by identifying whether there exists a stable, long-run relationship among the variables despite them individually being non-stationary.

Table 3
Test for Cointegration

Series: PSP, CEX, REX, DSC				
Lags interval (in first differences): No lags				
Unrestricted Cointegration Rank Test (Trace)				
Hypothesized No. of CE(s)	**Eigenvalue**	**Trace Stat**	**5% Critical Value**	**p-values**
None *	0.5278	157.7798	67.8561	0.0000
At most 1 *	0.3794	57.7659	42.7971	0.0000
Unrestricted Cointegration Rank Test (Maximum Eigenvalue)				
Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Stat	5% Critical Value	p-values
None *	0.5278	53.5843	36.8415	0.0000
At most 1 *	0.3794	30.2712	21.4463	0.0000

Source: Author (2025)

4.4. Robust Least Squares (RLS) Regression Method

To analyze the data, the Robust Least Squares (RLS) regression method was employed. The RLS method (with Huber Type I Standard Errors and Covariance) is particularly suitable for this study owing to its built-in robustness which reduces the need for extensive diagnostics related to outliers. RLS Outperforms other regression-based methods such as Ordinary Least Squares (OLS) in the presence of heteroscedasticity, non-normal residuals or outliers.

Table 4
RLS Regression Results

Dependent Variable: Public Sector Performance			
Variable	**Coefficient**	**t-Stat**	**p-value**
CEXP	7.5426	6.9009	0.0000
REXP	-5.5031	-4.3601	0.0000
DSCO	6.6624	7.7582	0.0000
C	-11.911	-9.9655	0.0000
	R-squared = 0.8055		
	Rn-Stat = 82.1727		
	Prob (Rn-Stat) = 0.0000		
	Durbin-Watson stat = 1.9998		

Source: Author's Computation (2025)

The results of the RLS regression method were presented in Table 4.

4.4.1. Discussion of Findings

The results showed that capital expenditure has significant positive effect on public sector performance, suggesting that government spending on capital projects yields improvements in service delivery, economic efficiency, and public satisfaction after

implementation. This indicates that the benefits of capital investments, such as infrastructure development, healthcare facilities, and educational projects enhance public sector performance. For instance, newly built roads may enhance transportation efficiency, and upgraded schools or hospitals may improve social outcomes.

This finding is in line with a priori expectation; and consistent with the finding of Ajayi et al. (2024); Andhini et al. (2023), which found capital expenditure to have a significant positive effect on public sector performance. Additionally, this finding aligns with pure theory of public expenditure which support the idea that while government spending, especially capital expenditure, is crucial for improving public sector performance, the timing, efficiency, and management of such expenditure are critical.

The results showed that recurrent expenditure has significant negative effect on public sector performance. This indicates that recurrent expenditure, such as salaries, overheads, and other operational costs, has a detrimental effect on public sector performance. When resources are not allocated effectively, it results in wasteful or non-productive expenditures. Excessive recurrent spending can crowd out resources that could have been used for capital investments, which typically have longer-term benefits. Likewise, high recurrent spending may lead to fiscal deficits, affecting the government's capacity to deliver quality public services.

This non-productive nature of excessive recurrent spending is fully expressed in the findings of Oladeji (2022) which found that excessive recurrent spending can only sustain operational costs rather than fostering development. Thus, prioritizing recurrent expenses creates inefficiencies with limited developmental impact of such expenditures. Overall, poorly managed recurrent expenditure, has the potential to harm public sector performance in the short term. This finding, though negative, can be linked to pure theory of public expenditure which suggests suggest that recurring costs that do not generate sufficient returns can negatively affect public sector performance. Thus, excessive recurrent spending may lead to inefficiencies.

The results showed that debt service cost has significant positive effect on public sector performance. This indicates that timely servicing of debt enhances government credibility, potentially attracting more investment and boosting public sector performance. This is because consistent debt repayment signals good fiscal discipline, enabling the government to access further borrowing for development projects, which can positively affect public sector performance. Thus, timely debt servicing reduces the accumulation of penalties or interest, thereby freeing up resources for productive use in public services. This finding is in line with a priori expectation; and consistent with the finding of Akinadewo et al. (2023) which found public debt to have insignificant positive effect on budget expenditure performance as a proxy for public sector performance. Similarly, Umaru et al. (2013) found that total debt positively influences capital expenditure, particularly domestic debt. However, Onwuka (2022) found adverse effect of external debt on infrastructure development, primarily because debt servicing diverts funds that could otherwise be invested in growth-oriented infrastructure projects.

Overall, debt servicing costs plays a crucial role in improving public sector performance in the short term, primarily through enhanced fiscal stability and credibility. However, literature has showed that as debt levels increase, the burden of debt servicing grows, reducing the funds available for productive investments in capital projects. This aligns with the observed significant negative effect of debt service cost on public sector performance, as high debt servicing obligations divert resources from essential developmental expenditures, undermining overall efficiency and effectiveness. Pure theory of public expenditure supports the idea that government spending, financed through borrowing, can positively influence public sector performance when efficiently allocated to public goods or aggregate demand stimulation. The theory underscores the importance of effectively allocating borrowed resources to projects that align with the principles of public goods. When loans finance infrastructure and social programs, they inject liquidity into the economy, boosting demand and public sector performance in the short term.

Lastly, the coefficient of determination (R^2) was 80.55%, showing that changes in cost of governance accounted for 80.55% of the changes in public sector performance. Moreover, the result also demonstrated that the model is statistically significant as shown by the probability value of 0.0000. In addition, the value of 1.9998 for the Durbin-Watson statistic shows that there is no serial correlation.

5. Conclusion and Recommendations

The study concluded that cost of governance has effect on public sector performance in Nigeria. Therefore, the study recommended that the government should monitor adherence to budget allocations, especially for capital projects, to ensure resources are used effectively according to Sustainable Development Goal (SDG) 12 of Responsible Consumption and Production. In line with Sustainable Development Goal (SDG) 8 of Decent Work and Economic Growth, government should streamline the public sector workforce by reducing redundant positions and merging overlapping functions in public institutions to cut costs and improve the efficiency of the public sector, thereby contributing to more effective governance.

Authors Contribution
Afolabi Amuda Adeoye: Supervision
Aminat Arike Ariyo-Edu: Conceptualization, and Data analysis.
Stephen Alaba John: Conceptualization, Methodology and Data analysis.

Conflict of Interests/Disclosures
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