

LEADERSHIP EFFECTIVENESS AND THE IMPLEMENTATION OF SUSTAINABLE DEVELOPMENT GOALS: A STUDY OF SELECTED PUBLIC INSTITUTIONS IN NIGERIA

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Abstract

The implementation of the Sustainable Development Goals (SDGs) remains a major challenge for many developing countries, largely due to institutional weaknesses, governance deficiencies, and ineffective policy coordination. Recognizing the importance of leadership in addressing these challenges, this study examined the influence of leadership effectiveness on the implementation of the Sustainable Development Goals in selected public institutions in Nigeria. Specifically, the study investigated the effects of transformational leadership, strategic leadership, ethical leadership, and leadership communication on SDG implementation. A quantitative survey research design was adopted. Data were collected from employees and management personnel involved in SDG planning, coordination, monitoring, and implementation across selected federal and state public institutions. Using a multi-stage sampling technique, 434 questionnaires were administered, of which 392 valid responses were retrieved and analyzed, representing a response rate of 90.3%. The data were analyzed using descriptive statistics, Pearson's correlation, and multiple regression analysis with SPSS Version 29. The findings revealed that leadership effectiveness had a significant positive influence on Sustainable Development Goal implementation. Among the leadership dimensions examined, transformational leadership emerged as the strongest predictor of SDG implementation ($\beta = 0.44$, $p < 0.001$), followed by strategic leadership ($\beta = 0.38$, $p < 0.001$), leadership communication ($\beta = 0.33$, $p < 0.001$), and ethical leadership ($\beta = 0.27$, $p < 0.001$). The regression model explained 71% of the variation in SDG implementation ($R^2 = 0.71$), indicating that leadership effectiveness plays a substantial role in improving development outcomes within public institutions. The study concludes that effective leadership is fundamental to strengthening institutional capacity, enhancing stakeholder engagement, improving policy implementation, and accelerating progress toward the Sustainable

Development Goals in Nigeria. It recommends sustained investment in leadership development, strategic governance practices, ethical standards, and effective communication systems to improve public-sector performance and support the achievement of national sustainable development objectives.

Keywords: Leadership Effectiveness, Transformational Leadership, Strategic Leadership, Ethical Leadership, Leadership Communication, Sustainable Development Goals, Public Institutions, Nigeria.

Introduction

Leadership is widely acknowledged as one of the most influential determinants of organizational effectiveness, institutional performance, and sustainable development in both the public and private sectors. The quality of leadership shapes an organization's ability to formulate strategic direction, mobilize resources, motivate employees, strengthen accountability, and achieve its objectives in increasingly complex and dynamic environments. Contemporary leadership scholarship emphasizes that leadership effectiveness extends beyond occupying a formal managerial position; rather, it reflects a leader's ability to inspire, influence, and guide individuals and groups toward the achievement of shared organizational and societal goals. Consequently, effective leadership has consistently been associated with improved organizational performance, innovation, employee commitment, knowledge sharing, and institutional resilience, making it an essential driver of long-term development.

The global commitment to sustainable development has further highlighted the strategic importance of effective leadership. In 2015, the United Nations adopted the 2030 Agenda for Sustainable Development, introducing seventeen Sustainable Development Goals (SDGs) designed to address pressing economic, social, and environmental challenges worldwide (United Nations, 2015). These goals provide a comprehensive framework for reducing poverty, improving educational and health outcomes, promoting gender equality, protecting the environment, strengthening institutions, and fostering inclusive economic growth. Although countries have demonstrated widespread commitment to achieving these goals, their successful implementation depends largely on the quality of leadership and governance within the institutions responsible for translating global aspirations into practical policies, programmes, and measurable development outcomes (Mio, Panfilo, & Blundo, 2020; UNDP, 2022).

Achieving the SDGs requires more than policy formulation; it demands effective coordination, institutional capacity, stakeholder collaboration, efficient resource management, and continuous monitoring and evaluation. Public-sector leaders play a central role in integrating these elements by promoting policy coherence, encouraging inter-agency collaboration, strengthening institutional accountability, and ensuring that development initiatives are implemented effectively. Previous studies have shown that effective leadership facilitates policy integration, enhances institutional performance, and supports sustainable governance practices (Getha-Taylor, Grayer, Kempf, & O'Leary, 2019). Similarly, governance scholars argue that leadership quality significantly influences the ability of public institutions to design, implement, and sustain development programmes (Mio et al., 2020; UNDP, 2022). Leaders who demonstrate strategic vision, adaptability, and accountability are therefore better positioned to address bureaucratic

challenges, align institutional priorities with national development objectives, and mobilize stakeholders in support of sustainable development initiatives (Antonakis & Day, 2018).

In Nigeria, the implementation of the Sustainable Development Goals presents both significant opportunities and persistent challenges. As Africa's most populous country and one of its largest economies, Nigeria occupies a strategic position in advancing the global sustainable development agenda (World Bank, 2024; OECD, 2023). Since adopting the SDGs in 2015, the Federal Government has introduced several policy frameworks, institutional arrangements, and implementation strategies aimed at accelerating progress towards achieving the goals (United Nations, 2023). Despite these efforts, progress across several SDG indicators has remained uneven. Challenges such as widespread poverty, unemployment, inadequate healthcare, declining educational outcomes, environmental degradation, weak infrastructure, and institutional inefficiencies continue to hinder sustainable development (United Nations, 2025; World Bank, 2024). These persistent challenges suggest that policy initiatives alone are insufficient without effective leadership to drive implementation.

Among the numerous factors affecting SDG implementation, leadership effectiveness has emerged as one of the most critical. Public institutions are the primary vehicles through which government policies and development programmes are formulated, coordinated, implemented, and evaluated. Consequently, the quality of leadership within these institutions directly influences policy execution, resource utilization, stakeholder engagement, service delivery, and institutional performance (Boyne, James, John, & Petrovsky, 2010). Leadership that promotes innovation, strategic thinking, ethical conduct, and effective communication is more likely to create an environment that supports the successful implementation of sustainable development initiatives. Previous studies conducted in Nigeria have also highlighted the positive contributions of transformational, strategic, and ethical leadership to governance quality, accountability, and organizational performance (Van Wart, 2013; Boyne et al., 2010). Nevertheless, empirical evidence specifically linking leadership effectiveness to SDG implementation within Nigerian public institutions remains limited (OECD, 2023; UNDP, 2022).

Although a substantial body of literature has examined leadership effectiveness and organizational performance, much of the existing research has focused on private-sector organizations, educational institutions, healthcare systems, and general administrative performance (Judge & Piccolo, 2004; Antonakis & Day, 2018). Likewise, studies on Sustainable Development Goal implementation have primarily emphasized governance structures, financing mechanisms, policy integration, and institutional capacity, often paying limited attention to leadership effectiveness as a multidimensional construct influencing implementation outcomes (Mio et al., 2020). In particular, relatively few studies have simultaneously examined transformational leadership, strategic leadership, ethical leadership, and leadership communication within a single framework to explain SDG implementation in public institutions. This gap has limited understanding of the mechanisms through which leadership contributes to sustainable development, particularly in developing countries such as Nigeria.

The Nigerian public sector operates within a complex institutional environment characterized by bureaucratic bottlenecks, resource constraints, political interference, institutional fragmentation, and accountability challenges (World Bank, 2024). These conditions increase the importance of

effective leadership in ensuring that development policies are implemented efficiently and produce meaningful outcomes. However, despite the acknowledged importance of leadership, empirical studies investigating its direct contribution to Sustainable Development Goal implementation within Nigerian public institutions remain scarce. The absence of comprehensive evidence limits the ability of policymakers, public administrators, and development partners to design leadership strategies capable of accelerating progress toward the SDGs.

Against this background, this study examines the influence of leadership effectiveness on the implementation of the Sustainable Development Goals in selected public institutions in Nigeria. Specifically, the study evaluates the effect of transformational leadership on SDG implementation, examines the influence of strategic leadership on policy execution, assesses the contribution of ethical leadership to accountability and transparency, investigates the role of leadership communication in stakeholder engagement and programme delivery, and determines the overall relationship between leadership effectiveness and Sustainable Development Goal implementation within Nigerian public institutions. The findings are expected to contribute to leadership and sustainable development literature while providing practical evidence to guide policymakers and public-sector managers in strengthening institutional capacity and improving the implementation of sustainable development initiatives.

Literature Review

Conceptual Review

Leadership effectiveness refers to a leader's ability to influence individuals and organizations in ways that promote the achievement of organizational objectives while ensuring long-term sustainability, employee commitment, and stakeholder satisfaction. It encompasses the capacity to formulate strategic direction, make sound decisions, communicate clearly, inspire employees, manage organizational change, and improve institutional performance. Rather than being viewed solely as the exercise of authority, contemporary leadership scholarship recognizes leadership effectiveness as a multidimensional construct that integrates transformational, strategic, ethical, and communicative competencies, all of which contribute to organizational success and sustainable development (Fiedler, 1967; Judge & Piccolo, 2004). Modern organizations operate in environments characterized by rapid technological change, globalization, increasing stakeholder expectations, and growing institutional complexity. Consequently, effective leadership extends beyond routine administrative functions to include the ability to create a shared vision, foster innovation, encourage collaboration, and enhance organizational adaptability. Research consistently demonstrates that organizations led by effective leaders tend to achieve higher levels of employee productivity, organizational commitment, innovation, knowledge sharing, and service quality. Effective leadership has therefore become an indispensable resource for improving institutional performance and ensuring organizational resilience in both public and private sectors. Within public institutions, leadership effectiveness assumes even greater significance because leaders must balance administrative efficiency with public accountability, policy implementation, and the delivery of essential services. Public-sector leaders operate within environments shaped by political influence, bureaucratic procedures, limited resources, and diverse stakeholder interests. Their ability to coordinate these competing demands while maintaining transparency and accountability largely determines the effectiveness of governance and the success of development programmes. Consequently, leadership effectiveness is increasingly recognized as a critical

determinant of institutional performance, governance quality, and sustainable national development.

The Sustainable Development Goals (SDGs) constitute a global development framework adopted by the United Nations in 2015 to promote economic prosperity, social inclusion, environmental sustainability, and institutional development by the year 2030 (United Nations, 2015). The framework consists of seventeen interrelated goals designed to address pressing global challenges such as poverty, hunger, inequality, poor healthcare, inadequate education, climate change, environmental degradation, and weak governance. Implementing the SDGs involves translating these global aspirations into practical policies, programmes, projects, and measurable outcomes at national and institutional levels. Successful implementation requires effective governance, policy coherence, institutional capacity, stakeholder collaboration, adequate financing, and robust monitoring and evaluation systems (Biermann, Kanie, & Kim, 2017; OECD, 2023). These requirements become particularly demanding in developing countries where financial limitations, institutional weaknesses, governance challenges, and inadequate technical capacity often constrain development efforts. Because public institutions serve as the principal mechanisms through which development policies are formulated and executed, the quality of leadership within these institutions becomes central to SDG implementation. Effective leadership facilitates resource mobilization, policy coordination, stakeholder engagement, and institutional accountability, thereby increasing the likelihood of achieving sustainable development objectives.

Transformational leadership describes a leadership style through which leaders inspire employees to transcend personal interests in pursuit of shared organizational and societal goals. According to Bass and Riggio (2006), transformational leaders influence followers through four core dimensions: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. These behaviours encourage employees to embrace organizational change, develop innovative solutions, and remain committed to achieving collective objectives. Within the context of sustainable development, transformational leadership is particularly valuable because the implementation of the SDGs requires institutional transformation, innovation, and long-term strategic commitment. Leaders who articulate a compelling vision, encourage creativity, and empower employees are better positioned to overcome resistance to change and foster institutional reform. Numerous empirical studies have reported positive relationships between transformational leadership and organizational effectiveness, innovation, employee engagement, and public-sector performance. Consequently, transformational leadership provides a strong foundation for improving the implementation of sustainable development initiatives within public institutions.

Strategic leadership refers to a leader's ability to anticipate future challenges, formulate long-term objectives, allocate resources efficiently, and align organizational activities with changing environmental conditions. Strategic leaders create direction by integrating organizational capabilities with broader developmental priorities while ensuring that available resources are utilized effectively. The implementation of the Sustainable Development Goals requires coordinated action across multiple sectors, long-term planning, continuous policy integration, and effective institutional collaboration. These requirements make strategic leadership particularly important within public institutions. Leaders who demonstrate strategic thinking are better able to align organizational priorities with national development agendas, strengthen institutional

performance, and improve policy implementation. By promoting proactive planning and effective resource management, strategic leadership contributes significantly to the successful realization of sustainable development objectives.

Ethical leadership emphasizes integrity, fairness, accountability, transparency, and responsible decision-making. Brown and Treviño (2006) describe ethical leaders as individuals who influence followers through both personal conduct and the establishment of ethical standards that guide organizational behaviour. Such leaders promote trust, fairness, and responsible governance by consistently demonstrating honesty and accountability in their actions. Ethical leadership plays an especially important role within public institutions because development programmes frequently involve the management of public resources and the coordination of multiple stakeholders. Transparent and accountable leadership reduces opportunities for corruption, strengthens public confidence, and enhances the credibility of government institutions. Since sustainable development depends on responsible governance and equitable resource utilization, ethical leadership provides an essential foundation for achieving successful SDG implementation.

Leadership communication refers to the processes through which leaders share information, articulate strategic direction, coordinate organizational activities, and influence stakeholders. Effective communication promotes mutual understanding, facilitates collaboration, strengthens trust, and encourages employee participation in organizational decision-making. The implementation of the Sustainable Development Goals requires continuous interaction among government agencies, development partners, civil society organizations, private-sector actors, and local communities. Under such conditions, effective communication becomes indispensable for coordinating activities, resolving conflicts, disseminating policy information, and encouraging stakeholder participation. Leaders who communicate openly and consistently are more likely to build consensus, strengthen institutional coordination, and enhance the successful implementation of sustainable development programmes.

The concepts examined in this study demonstrated that leadership effectiveness is a multidimensional capability comprising transformational leadership, strategic leadership, ethical leadership, and leadership communication. These dimensions collectively influence the capacity of public institutions to formulate effective policies, mobilize resources, engage stakeholders, strengthen governance, and achieve the Sustainable Development Goals. Understanding these interrelationships provides a solid conceptual foundation for examining how leadership contributes to sustainable development within the Nigerian public sector.

Theoretical Review

This study is anchored primarily on Transformational Leadership Theory and supported by Institutional Theory and the Resource-Based View (RBV) Theory. Together, these theories provide a comprehensive explanation of how leadership effectiveness influences the implementation of the Sustainable Development Goals (SDGs) within public institutions. While each theory offers a distinct perspective, their integration provides a more robust understanding of the leadership behaviours, institutional dynamics, and organizational capabilities required for effective sustainable development.

Transformational Leadership Theory

Transformational Leadership Theory was first introduced by Burns (1978) and subsequently expanded by Bass (1985), who developed it into one of the most influential leadership theories in contemporary organizational research. The theory proposes that effective leaders inspire followers to move beyond personal interests and commit themselves to a shared organizational vision. Rather than relying solely on authority or rewards, transformational leaders motivate employees by fostering trust, encouraging innovation, stimulating intellectual growth, and supporting individual development. Bass (1985) identified four interrelated dimensions of transformational leadership: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. Idealized influence refers to leaders serving as role models who demonstrate integrity and earn the confidence of their followers. Inspirational motivation involves communicating a compelling vision that inspires commitment and collective action. Intellectual stimulation encourages employees to question conventional approaches, embrace innovation, and develop creative solutions to organizational challenges. Individualized consideration reflects the leader's commitment to mentoring, coaching, and addressing the unique developmental needs of followers. The relevance of Transformational Leadership Theory to sustainable development is evident in the complex nature of SDG implementation. Achieving the Sustainable Development Goals requires institutional transformation, policy innovation, stakeholder collaboration, and long-term commitment. These demands extend beyond routine administrative responsibilities and require leaders who can inspire change, build commitment, and encourage innovative problem-solving. Public institutions responsible for implementing the SDGs must also adapt continuously to evolving social, economic, and environmental conditions while maintaining effective service delivery and accountability. Empirical studies consistently demonstrate that transformational leadership contributes positively to organizational effectiveness, innovation, employee engagement, governance quality, and public-sector performance (Bass & Riggio, 2006; Van Wart, 2013). Within developing countries, where institutional challenges often hinder policy implementation, transformational leadership has been identified as a critical factor in strengthening governance and improving development outcomes. Accordingly, this theory provides the principal theoretical foundation for the present study because it explains how visionary and inspirational leadership can enhance institutional capacity and accelerate the implementation of the Sustainable Development Goals.

Institutional Theory

Institutional Theory provides a complementary explanation by emphasizing the influence of organizational rules, norms, regulations, and societal expectations on institutional behaviour. Scott (2014) argues that organizations operate within institutional environments that shape their structures, decision-making processes, and patterns of behaviour. To maintain legitimacy and public confidence, organizations are expected to comply with accepted governance standards, legal requirements, and societal expectations. Within the context of Sustainable Development Goal implementation, public institutions operate under both national and international obligations to achieve sustainable development objectives. Governments are expected to incorporate the SDGs into national policies, allocate appropriate resources, establish effective implementation frameworks, and monitor progress toward internationally agreed targets. Consequently, institutional effectiveness depends not only on formal structures but also on the quality of leadership responsible for translating policy commitments into measurable development

outcomes. Institutional Theory therefore explains how effective leadership enables organizations to respond to external pressures, comply with governance requirements, strengthen accountability, and improve institutional legitimacy. Leaders who understand institutional expectations are more capable of aligning organizational policies with national development priorities while fostering collaboration among government agencies, development partners, civil society organizations, and other stakeholders. The theory is particularly relevant to this study because SDG implementation requires institutions to operate within established governance frameworks while adapting to changing developmental priorities.

Resource-Based View (RBV) Theory

The Resource-Based View (RBV), developed by Barney (1991), offers another important perspective for understanding leadership effectiveness. Unlike Institutional Theory, which focuses on external influences, the RBV emphasizes the strategic value of an organization's internal resources and capabilities. According to the theory, organizations achieve superior performance when they possess valuable, rare, inimitable, and non-substitutable resources that competitors cannot easily replicate. Although originally developed within the field of strategic management, the RBV has increasingly been applied to public-sector organizations because leadership itself can be regarded as a strategic organizational capability. Effective leaders possess specialized knowledge, decision-making skills, strategic thinking, communication abilities, and relationship-management competencies that enable institutions to mobilize resources, coordinate stakeholders, and improve organizational performance. The implementation of the Sustainable Development Goals requires efficient utilization of financial, human, technological, and institutional resources. Leaders who effectively coordinate these resources are better positioned to improve service delivery, strengthen governance systems, enhance policy implementation, and achieve sustainable development objectives. From the RBV perspective, leadership effectiveness represents a valuable institutional asset that contributes directly to organizational effectiveness and long-term development success.

Integration of the Theories

Although each theory explains leadership from a different perspective, they complement one another in explaining the implementation of Sustainable Development Goals within public institutions. Transformational Leadership Theory explains how leaders inspire individuals, promote innovation, and mobilize collective commitment toward sustainable development objectives. Institutional Theory explains how governance structures, policies, regulations, and societal expectations shape organizational behaviour and influence policy implementation. The Resource-Based View emphasizes leadership as a strategic organizational capability that enables institutions to utilize resources efficiently, strengthen institutional capacity, and improve development outcomes. The integration of these theories therefore provides a comprehensive framework for understanding the relationship between leadership effectiveness and Sustainable Development Goal implementation. Together, they suggest that effective leadership strengthens governance systems, enhances institutional legitimacy, promotes innovation, improves stakeholder collaboration, mobilizes organizational resources, and ultimately increases the likelihood of achieving sustainable development objectives within Nigerian public institutions.

Accordingly, this study adopts Transformational Leadership Theory as its primary theoretical foundation while drawing complementary insights from Institutional Theory and the Resource-

Based View. Collectively, these theories provide a robust conceptual lens through which the influence of leadership effectiveness on Sustainable Development Goal implementation can be examined and interpreted.

Methodology

This study adopted a quantitative survey research design to examine the influence of leadership effectiveness on the implementation of the Sustainable Development Goals (SDGs) within selected public institutions in Nigeria. The survey design was considered appropriate because it facilitated the systematic collection of quantitative data from a relatively large population and enabled the empirical examination of relationships among the study variables within their natural organizational settings (Creswell & Creswell, 2018). The design also provided an appropriate framework for testing the study hypotheses using established statistical techniques. The study focused on selected federal and state public institutions directly involved in the planning, coordination, implementation, monitoring, and evaluation of Sustainable Development Goal programmes. These institutions included ministries, departments, and agencies responsible for development planning, public service delivery, education, healthcare, environmental management, and economic development. Their inclusion ensured that responses were obtained from personnel with practical experience in SDG implementation and public-sector leadership.

The target population comprised approximately 3,800 employees and management personnel drawn from the selected public institutions. The population included directors, programme managers, planning officers, monitoring and evaluation officers, administrative officers, and other staff directly involved in policy implementation and sustainable development initiatives. These categories of personnel were considered suitable because of their active participation in planning, implementing, and monitoring government programmes related to the Sustainable Development Goals. The sample size was determined using the Yamane (1967) sample size determination formula, which produced a minimum sample of 362 respondents. To minimize the potential effects of non-response and incomplete questionnaires, an additional 20% was added, resulting in a final sample size of 434 respondents.

A multi-stage sampling technique was employed to ensure adequate representation of the study population. In the first stage, purposive sampling was used to select public institutions actively engaged in Sustainable Development Goal implementation. In the second stage, respondents were stratified into management, planning, monitoring and evaluation, administrative, and technical departments. Finally, simple random sampling was applied within each stratum to select participants, thereby reducing sampling bias and ensuring that all eligible respondents had an equal opportunity to participate in the study. The study relied primarily on primary data, which were collected through a structured questionnaire. The instrument was developed by adapting validated measurement scales on leadership effectiveness and Sustainable Development Goal implementation from previous empirical studies. The questionnaire was modified to reflect the realities of the Nigerian public sector while remaining consistent with the objectives of the study. The questionnaire consisted of two sections. Section A collected demographic information, including respondents' gender, age, educational qualification, years of work experience, and organizational position. Section B contained items measuring the study variables. Leadership effectiveness was assessed through four dimensions: transformational leadership, strategic leadership, ethical leadership, and leadership communication. Sustainable Development Goal

implementation was measured using indicators relating to policy execution, stakeholder engagement, institutional performance, and sustainable development outcomes. Responses were measured using a five-point Likert scale, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

Validity and Reliability of the Instrument

Before the main survey, the questionnaire underwent expert review and pilot testing to establish its validity and reliability. Content validity was assessed by three academics with expertise in leadership and public administration, together with two experienced practitioners involved in Sustainable Development Goal implementation. Their observations resulted in minor revisions that improved the clarity, relevance, and contextual suitability of the instrument. The Content Validity Index (CVI) was 0.88, exceeding the recommended benchmark of **0.70** (Polit & Beck, 2006), thereby confirming that the instrument adequately measured the constructs under investigation. Construct validity was evaluated using Exploratory Factor Analysis (EFA) based on Principal Component Analysis with Varimax Rotation. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy yielded a value of 0.91, indicating excellent suitability for factor analysis, while Bartlett's Test of Sphericity was statistically significant ($\chi^2 = 2984.51$, $df = 276$, $p < 0.001$). These results confirmed that the data were appropriate for factor analysis. All factor loadings exceeded the recommended threshold of **0.70**, and the Average Variance Extracted (AVE) values for all constructs were above 0.50, confirming satisfactory convergent validity. Composite Reliability (CR) values also exceeded **0.70**, indicating strong internal consistency. Discriminant validity was assessed using the Fornell-Larcker criterion, which showed that the square roots of the AVE values exceeded the corresponding inter-construct correlations. In addition, all correlation coefficients were below 0.80, indicating adequate discriminant validity and the absence of multicollinearity concerns. Reliability was evaluated using Cronbach's Alpha and Composite Reliability. Cronbach's Alpha values ranged from 0.82 to 0.89, exceeding the minimum acceptable threshold of **0.70**, thereby confirming that the measurement instrument possessed satisfactory internal consistency.

Following the validation of the instrument, questionnaires were administered to employees and management personnel across the selected public institutions. Respondents were informed about the purpose of the study and assured that participation was entirely voluntary. Confidentiality and anonymity were maintained throughout the data collection process, and informed consent was obtained before questionnaires were completed. Of the 434 questionnaires distributed, 392 were properly completed and returned, representing a response rate of 90.3%. The high response rate enhanced the reliability and representativeness of the study findings.

Data were analyzed using the Statistical Package for the Social Sciences (SPSS Version 29). Both descriptive and inferential statistical techniques were employed. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were used to summarize respondents' demographic characteristics and describe perceptions of leadership effectiveness and Sustainable Development Goal implementation. Pearson's Product-Moment Correlation analysis was conducted to determine the strength and direction of the relationships between the study variables. Multiple regression analysis was subsequently employed to examine the influence of transformational leadership, strategic leadership, ethical leadership, and leadership communication on Sustainable Development Goal implementation.

The regression model was specified as follows:

$$\text{SDGI} = \beta_0 + \beta_1\text{TL} + \beta_2\text{SL} + \beta_3\text{EL} + \beta_4\text{LC} + \varepsilon$$

Where:

SDGI = Sustainable Development Goal Implementation

TL = Transformational Leadership

SL = Strategic Leadership

EL = Ethical Leadership

LC = Leadership Communication

β_0 = Constant

β_1 – β_4 = Regression Coefficients

ε = Error Term

The regression results were interpreted using beta coefficients, *t*-values, significance levels (*p*-values), *F*-statistics, and the coefficient of determination (*R*²). All hypotheses were tested at the 5% level of significance, with null hypotheses rejected whenever the associated *p*-value was less than 0.05.

Prior to the regression analysis, diagnostic tests were conducted to verify the assumptions underlying parametric analysis. Normality was assessed using skewness, kurtosis, and the Shapiro-Wilk test, while multicollinearity was evaluated through Variance Inflation Factor (VIF) statistics. The diagnostic results confirmed that the assumptions of normality and multicollinearity were satisfactorily met, indicating that the data were suitable for regression analysis.

Results and Discussion

A total of 434 structured questionnaires were administered to employees and management personnel drawn from selected public institutions involved in the implementation of the Sustainable Development Goals (SDGs) in Nigeria. Of these, 392 questionnaires were correctly completed and returned, representing a response rate of 90.3%. This response rate was considered highly satisfactory because it exceeded the minimum threshold generally regarded as acceptable for survey research. The high retrieval rate enhanced the representativeness of the sample and increased confidence in the reliability of the findings.

1. Response Rate

Table 1: Questionnaire Administration and Retrieval

Questionnaire Status	Frequency	Percentage (%)
Questionnaires administered	434	100.0
Questionnaires correctly completed and returned	392	90.3
Questionnaires not returned/invalid	42	9.7
Total	434	100.0

Source: Field Survey, 2026.

The table shows that 392 out of the 434 questionnaires administered were correctly completed and returned, representing a response rate of 90.3%. This high response rate provides an adequate basis for the statistical analysis.

2. Demographic Descriptive Results

Table 2: Demographic Characteristics of Respondents (N = 392)

Variable	Category	Frequency	Percentage (%)
Gender	Male	224	57.1
	Female	168	42.9
	Total	392	100.0
Age	21–30 years	74	18.9
	31–40 years	146	37.2
	41–50 years	112	28.6
	51 years and above	60	15.3
	Total	392	100.0
Occupational Position	Management staff	118	30.1
	Planning officers	96	24.5
	Monitoring & Evaluation officers	74	18.9
	Administrative officers	58	14.8
	Technical officers	46	11.7
	Total	392	100.0
Work Experience	1–5 years	62	15.8
	6–10 years	124	31.6
	11–15 years	118	30.1
	16 years and above	88	22.5
	Total	392	100.0

Source: Field Survey, 2026.

Table 2 indicates that male respondents constituted 57.1% of the sample, while females accounted for 42.9%. Respondents aged 31–40 years constituted the largest age group at 37.2%, followed by those aged 41–50 years at 28.6%. Management staff represented the largest occupational category, accounting for 30.1%, while planning officers constituted 24.5%. With respect to work experience, respondents with 6–10 years of experience constituted the largest group at 31.6%, followed by those with 11–15 years at 30.1%. Overall, the demographic distribution indicates that the respondents possessed substantial professional exposure and were appropriately positioned to provide informed assessments of leadership effectiveness and SDG implementation.

3. Descriptive Statistics

Table 3: Descriptive Statistics of Study Variables (N = 392)

Variables	Mean (M)	Standard Deviation (SD)	Rank	Interpretation
Transformational Leadership	4.41	0.57	2nd	High
Strategic Leadership	4.34	0.60	4th	High
Ethical Leadership	4.29	0.63	5th	High
Leadership Communication	4.37	0.59	3rd	High
SDG Implementation	4.45	0.55	1st	High

Source: Field Survey, 2026.

Interpretation

Table 3 shows that **SDG Implementation** recorded the highest mean score of 4.45 with a standard deviation of 0.55. This was followed by Transformational Leadership, which recorded a mean of 4.41 (SD = 0.57). Leadership Communication had a mean of 4.37 (SD = 0.59), while Strategic Leadership recorded a mean of 4.34 (SD = 0.60). Ethical Leadership had the lowest mean score of 4.29 (SD = 0.63). Despite being the lowest among the leadership dimensions, the mean remains relatively high, indicating generally favourable perceptions of ethical leadership.

The standard deviations, ranging from 0.55 to 0.63, indicate relatively low dispersion around the respective mean scores. This suggests that respondents' assessments were reasonably consistent across the study variables.

4. Pearson Correlation Results

Since the information supplied gives only the correlations between each leadership dimension and SDG Implementation, the following table reports those relationships without fabricating correlations among the independent variables.

Table 4: Pearson Product-Moment Correlation between Leadership Dimensions and SDG Implementation

Variables	Transformational Leadership	Strategic Leadership	Ethical Leadership	Leadership Communication	SDG Implementation
Transformational Leadership	1.00	—	—	—	0.76*
Strategic Leadership	—	1.00	—	—	0.72*
Ethical Leadership	—	—	1.00	—	0.69*
Leadership Communication	—	—	—	1.00	0.73*

SDG Implementation	0.76*	0.72*	0.69*	0.73*	1.00
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Note: $p < 0.001$; $N = 392$. Dashes (—) indicate correlations among the independent variables were not reported in the supplied results.

Source: Field Survey, 2026.

Interpretation

Table 4 demonstrates that all four dimensions of leadership effectiveness have statistically significant and positive relationships with SDG Implementation. Transformational Leadership has the strongest association with SDG Implementation ($r = 0.76$, $p < 0.001$), followed by Leadership Communication ($r = 0.73$, $p < 0.001$) and Strategic Leadership ($r = 0.72$, $p < 0.001$). Ethical Leadership has the comparatively weakest, although still strong, relationship ($r = 0.69$, $p < 0.001$).

The results imply that improvements in the various dimensions of leadership effectiveness are associated with corresponding improvements in SDG implementation. The statistical significance of all the coefficients indicates that these relationships are unlikely to have occurred by chance.

Important methodological point: For a complete correlation matrix in a thesis or journal article, the Pearson correlations among Transformational Leadership, Strategic Leadership, Ethical Leadership and Leadership Communication should also be reported. Those values were not contained in the results supplied and therefore should be obtained from the SPSS correlation output rather than estimated.

5. Multiple Regression Results

Table 5: Multiple Regression Analysis of Leadership Effectiveness and SDG Implementation

Dependent Variable: SDG Implementation

Predictor Variables	Standardised Beta (β)	t-value	Sig. (p-value)	Decision
Transformational Leadership	0.44	8.92	<0.001	Significant
Strategic Leadership	0.38	6.51	<0.001	Significant
Leadership Communication	0.33	5.83	<0.001	Significant
Ethical Leadership	0.27	4.00	<0.001	Significant

Model Summary

R	Adj. R ²	Interpretation
0.84	0.71	Leadership dimensions jointly explain 71% of the variance in SDG Implementation

N = 392; Dependent Variable = SDG Implementation; $p < 0.001$ for all predictors.

Source: Field Survey, 2026.

The multiple regression results presented in Table 5 indicate that leadership effectiveness has a substantial and statistically significant influence on SDG Implementation. The regression model produced an R-value of 0.84, indicating a strong overall relationship between the combined leadership dimensions and SDG Implementation. The Adjusted R^2 of 0.71 indicates that Transformational Leadership, Strategic Leadership, Ethical Leadership and Leadership Communication jointly explain approximately 71% of the variation in SDG Implementation, while the remaining 29% is attributable to other factors not included in the model.

Among the predictors, Transformational Leadership emerged as the strongest predictor of SDG Implementation ($\beta = 0.44$, $t = 8.92$, $p < 0.001$). Strategic Leadership was the second strongest predictor ($\beta = 0.38$, $t = 6.51$, $p < 0.001$), followed by Leadership Communication ($\beta = 0.33$, $t = 5.83$, $p < 0.001$). Ethical Leadership, although the weakest predictor among the four dimensions, also exerted a statistically significant positive influence ($\beta = 0.27$, $t = 4.00$, $p < 0.001$).

The ranking of the predictors is therefore:

Transformational Leadership → Strategic Leadership → Leadership Communication → Ethical Leadership.

Discussion of Findings

The findings provide strong empirical evidence that leadership effectiveness plays a central role in advancing Sustainable Development Goal implementation within public institutions in Nigeria. Collectively, the four dimensions of leadership effectiveness accounted for 71% of the observed variation in implementation outcomes, underscoring leadership as a strategic organizational capability rather than merely an administrative function. This finding suggests that improvements in leadership practices could substantially enhance institutional performance and accelerate progress toward national sustainable development objectives. Among the leadership dimensions, transformational leadership emerged as the most influential predictor of Sustainable Development Goal implementation. Leaders who inspire employees, articulate a compelling vision, encourage innovation, and support professional development appear better positioned to drive institutional transformation and achieve development goals. This result aligns with Transformational Leadership Theory (Burns, 1978; Bass, 1985) and supports previous empirical studies by Bass and Riggio (2006) and Van Wart (2013), which identified transformational leadership as a major determinant of organizational effectiveness and public-sector performance. Strategic leadership also demonstrated a significant positive influence on Sustainable Development Goal implementation. This finding reinforces the view that sustainable development requires leaders who can formulate long-term strategies, coordinate institutional activities, and allocate resources effectively. Given the complexity of the SDGs and the need for collaboration across multiple sectors, strategic leadership provides an important mechanism for improving policy coherence and institutional effectiveness. Leadership communication emerged as another critical determinant of Sustainable Development Goal implementation. Effective communication facilitates information

sharing, strengthens stakeholder engagement, reduces implementation challenges, and promotes collaboration among government agencies, development partners, and local communities. These findings highlight communication not merely as an administrative activity but as a strategic leadership function that enhances institutional coordination and development outcomes. Although ethical leadership recorded the smallest standardized coefficient, its contribution remained statistically significant. This suggests that integrity, accountability, fairness, and transparency continue to strengthen governance structures and reinforce public confidence in government programmes. In contexts where development initiatives involve substantial public resources, ethical leadership becomes particularly important in promoting responsible resource management and minimizing governance failures. From a theoretical perspective, the findings provide strong support for the three theories underpinning this study. Transformational Leadership Theory explains the motivational and innovative behaviours associated with successful policy implementation. Institutional Theory illustrates how effective leadership enables organizations to respond to governance expectations and institutional pressures, while the Resource-Based View reinforces the argument that leadership represents a valuable organizational capability capable of improving institutional performance and sustainable development outcomes.

The findings therefore demonstrated that leadership effectiveness extends beyond managerial responsibility and functions as a strategic driver of sustainable development. Public institutions that cultivate transformational, strategic, ethical, and communicative leadership capabilities are more likely to strengthen governance, improve stakeholder engagement, enhance policy implementation, and achieve meaningful progress toward the Sustainable Development Goals in Nigeria.

Conclusion and Recommendations

Conclusion

This study examined the influence of leadership effectiveness on the implementation of the Sustainable Development Goals (SDGs) within selected public institutions in Nigeria. Using empirical evidence obtained from employees and management personnel involved in policy planning, implementation, monitoring, and evaluation, the study established that leadership effectiveness is a significant determinant of successful SDG implementation. The findings demonstrated that transformational leadership, strategic leadership, ethical leadership, and leadership communication each exerted positive and statistically significant effects on Sustainable Development Goal implementation. Collectively, these leadership dimensions explained a substantial proportion of the variation in implementation outcomes, underscoring the importance of effective leadership in strengthening institutional performance and advancing sustainable development. Among the dimensions examined, transformational leadership emerged as the strongest predictor of Sustainable Development Goal implementation. This finding suggests that leaders who articulate a compelling vision, inspire innovation, motivate employees, and promote organizational commitment are better positioned to facilitate institutional transformation and achieve sustainable development objectives. Strategic leadership also proved to be a critical factor by enhancing long-term planning, policy coordination, and efficient resource allocation. Likewise, leadership communication strengthened stakeholder engagement and inter-agency collaboration, while ethical leadership promoted transparency, accountability, and responsible governance. The study then confirms that leadership effectiveness extends beyond routine administrative responsibilities. It represents a strategic institutional capability that enhances governance quality, improves policy implementation, strengthens stakeholder collaboration, and accelerates progress

toward achieving the Sustainable Development Goals in Nigeria. Consequently, strengthening leadership capacity within public institutions should remain a national priority for improving public-sector performance and promoting sustainable development.

Recommendations

Based on the empirical findings, the following recommendations are proposed:

- i. Public institutions should invest in continuous leadership development programmes that enhance visionary leadership, innovation, employee motivation, and change management. Such initiatives will improve institutional readiness for implementing Sustainable Development Goal programmes.
- ii. Government ministries, departments, and agencies should adopt strategic planning frameworks that emphasize long-term policy implementation, effective resource allocation, performance monitoring, and alignment with national development priorities.
- iii. Public-sector leaders should consistently uphold the principles of transparency, integrity, fairness, and accountability. Strengthening ethical leadership will improve public trust, reduce governance challenges, and enhance the effectiveness of Sustainable Development Goal interventions.
- iv. Public institutions should establish effective communication systems that promote information sharing, stakeholder participation, inter-agency collaboration, and citizen engagement. Open and timely communication will improve policy implementation and encourage broader ownership of Sustainable Development Goal initiatives.
- v. Regular professional development programmes should be organized for public administrators, programme managers, and policy implementers in areas such as strategic decision-making, stakeholder management, sustainable development governance, and organizational leadership.
- vi. Government institutions should deepen collaboration with the private sector, development partners, civil society organizations, academic institutions, and local communities. Such partnerships will facilitate knowledge sharing, resource mobilization, and more effective implementation of sustainable development programmes.

Contribution to Knowledge

This study makes several important contributions to the literature on leadership effectiveness and sustainable development.

First, it provides empirical evidence on the relationship between leadership effectiveness and Sustainable Development Goal implementation within Nigerian public institutions, thereby addressing a notable gap in the literature from developing-country contexts.

Second, the study adopts a multidimensional approach to leadership effectiveness by integrating transformational leadership, strategic leadership, ethical leadership, and leadership communication within a single analytical framework. This approach provides a more comprehensive understanding of how different leadership dimensions collectively influence sustainable development outcomes.

Third, the findings extend the application of Transformational Leadership Theory by demonstrating that transformational leadership exerts the strongest influence on Sustainable Development Goal implementation. This reinforces the proposition that visionary and inspirational leadership is fundamental to institutional transformation and sustainable development.

Fourth, the study enriches Institutional Theory by illustrating how effective leadership enables public institutions to respond more effectively to governance expectations, policy requirements, and institutional pressures associated with Sustainable Development Goal implementation.

Fifth, the study contributes to the Resource-Based View (RBV) by conceptualizing leadership effectiveness as a strategic organizational capability that strengthens institutional performance, enhances stakeholder collaboration, and improves sustainable development outcomes.

Finally, the study develops and empirically validates an integrated framework linking leadership effectiveness to Sustainable Development Goal implementation within the Nigerian public sector. This framework provides a useful foundation for future research, policy formulation, and leadership development initiatives aimed at advancing sustainable development.

Suggestions for Further Studies

Although this study provides important insights into the relationship between leadership effectiveness and Sustainable Development Goal implementation, several opportunities remain for future research.

Future studies should employ longitudinal research designs to examine how leadership effectiveness influences Sustainable Development Goal implementation over time. Such studies would provide a deeper understanding of the long-term impact of leadership on institutional performance and sustainable development.

Comparative investigations involving both public- and private-sector organizations could also provide valuable evidence regarding sectoral differences in leadership effectiveness and Sustainable Development Goal implementation.

Researchers may further examine the influence of other leadership approaches, including servant leadership, authentic leadership, adaptive leadership, distributed leadership, and inclusive leadership, to determine whether these styles produce similar or stronger effects on sustainable development outcomes.

Qualitative studies involving senior policymakers, public administrators, development partners, and community stakeholders would complement the present quantitative findings by providing richer insights into the leadership challenges associated with Sustainable Development Goal implementation.

Future research should also investigate the moderating or mediating roles of organizational culture, institutional capacity, governance quality, political stability, technological innovation, and digital transformation in shaping the relationship between leadership effectiveness and Sustainable Development Goal implementation.

Finally, comparative cross-national studies involving Nigeria and other developing economies would broaden understanding of how contextual factors influence leadership effectiveness and sustainable development outcomes across different governance environments. Such studies would support the development of context-sensitive leadership strategies capable of accelerating progress toward the Sustainable Development Goals.

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