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Impact Of Leadership Commitment On Service Delivery In Nigerian Public Institutions: Evidence From Umaru Ali Shinkafi Polytechnic, Sokoto

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ABSTRACT

This paper investigates the impact of leadership commitment on service delivery within Nigerian public tertiary institutions, using Umaru Ali Shinkafi Polytechnic, Sokoto. Despite the adoption of Total Quality Management (TQM) strategies, public institutions continue to face operational inefficiencies, administrative bottlenecks, and declining service standards. This paper employed a quantitative, cross-sectional survey design, collecting data from 583 valid responses across academic and non-academic staff of the institution. Constructs were measured using standardized multi-item indicators and analyzed through multiple linear regression using IBM SPSS Statistics Version 26. Results revealed a statistically significant and positive relationship between leadership commitment and service delivery ($\beta = 0.412$, $p < .001$), with leadership explaining 17% of the variance in service outcomes. These findings affirm that visionary and accountable leadership enhances administrative responsiveness, teaching quality, and research performance. The paper contributes to the TQM literature by empirically validating leadership commitment as a driver of service excellence in the public sector. It recommends institutionalizing leadership development, embedding performance-based accountability systems, and fostering transparent communication.

Keywords: leadership commitment, service delivery, public tertiary institutions

1. INTRODUCTION

Public institutions in Nigeria have long grappled with operational inefficiencies, bureaucratic inertia, and suboptimal service delivery, despite successive reform efforts. These challenges persist in the face of increasing demands for transparency, responsiveness, and citizen-centered governance (Knox & Sharipova, 2023). Within this context, leadership commitment as a core dimension of Total Quality Management (TQM) has over the years, emerged as a pivotal determinant of organizational effectiveness, particularly in service-oriented institutions.

In tertiary education, academic leadership plays a strategic role in shaping institutional culture, aligning operational goals with national development priorities, and driving quality outcomes across teaching, research, and administration. When leadership is disengaged, inconsistent, or reactive, service delivery

suffers regardless of employee effort, resource availability, or policy intent (Olakunle et al., 2025). Leadership Commitment encompasses visionary planning, inclusive decision-making, and sustained engagement with institutional stakeholders, all of which are essential for fostering a culture of excellence and continuous improvement.

Umaru Ali Shinkafi Polytechnic, Sokoto has adopted various TQM strategies aimed at enhancing service delivery, including leadership-driven reforms, quality assurance frameworks, and performance monitoring systems. However, persistent challenges such as delayed in result processing, poor infrastructure, limited access to digital tools, and administrative bottlenecks have continued to undermine institutional performance. These issues reflect broader systemic constraints in Nigeria's public tertiary institutions, where leadership capacity and institutional readiness often fall short of reform expectations (Goel, 2020).

This paper focuses on evaluating the extent to which Leadership Commitment influences Service Delivery in Umaru Ali Shinkafi Polytechnic, Sokoto. By examining this relationship through an empirical lens, the study contributes to the evolving discourse on quality management in the Nigerian higher education, offering evidence-based insights for policy, practice, and institutional development.

2. LITERATURE REVIEW

2.1 Service Delivery

Service delivery in the context of public tertiary institutions encompasses the provision of high-quality educational, administrative, and research services that meet stakeholder expectations. It is operationalized through three key dimensions: teaching quality and outcomes, research performance, and administrative efficiency and responsiveness. This paper notes that, effective governance requires services to be of high quality and aligned with citizens' aspirations. In higher education, service delivery is increasingly evaluated through performance-based metrics, stakeholder satisfaction, and institutional responsiveness. The integration of TQM principles into service delivery mechanisms aims to enhance these outcomes by embedding continuous improvement, customer focus, and process optimization (Fundin et al., 2025).

2.2 Leadership Commitment

Leadership Commitment is identified as a foundational pillar of TQM which refers to the active involvement of institutional leaders in championing quality initiatives, setting strategic direction, and fostering a culture of excellence. According to Pahi et al. (2022), organizational leadership must support core service functions and instill quality consciousness across all operations. Historical contributions to the concept include recent empirical findings which reinforces the idea that organizational leadership must actively support core service functions and embed a culture of quality across all operations. For instance, de Deus (2025) underscores leadership's critical role in sustaining continuous improvement by aligning resources, guiding staff engagement, and maintaining systemic quality focus. Meanwhile, Psarommatis (2024) illustrates how zero-defect approaches demand top-level commitment to error prevention and quality standardization in operational processes. Recent scholarship continues to affirm that leadership dedication is fundamental to effective quality management. Empirical works in audit and service domains show that leadership styles such as transformational and servant leadership significantly influence knowledge sharing, thereby strengthening quality systems (Mohassel & Hassanzadeh, 2024). Evaluations of modern TQM in industrial settings further emphasize that top management commitment remains among the most critical success factors in sustaining quality processes (Alawag et al., 2025). Collectively, these insights reinforce that leadership is not merely symbolic but operationally central to TQM effectiveness across sectors.

2.3 Leadership Commitment and Service Delivery

The relationship between leadership commitment and service delivery in public institutions is both strategic and operational. Effective leadership sets the tone for institutional priorities, resource distribution, and quality assurance mechanisms. When leaders are actively engaged, service delivery improves through enhanced coordination, staff motivation, and accountability structures. In the context of tertiary education, academic leadership plays a decisive role in determining the extent to which institutional goals are achieved. Poor leadership commitment often results in fragmented efforts, diminished morale, and substandard service outcomes. Conversely, committed leadership fosters

employee involvement, strengthens strategic planning, and promotes recognition of performance all of which contribute to improved service delivery. Empirical evidence supports this linkage: transformational leadership has been shown to positively influence employee performance and institutional effectiveness in Malaysia's public sector (Ahmad et al., 2020), while strategic leadership practices have been found to significantly enhance service delivery within Kenyan county governments (Shimengah, 2018). These findings affirm that leadership is not merely symbolic but functionally central to quality management and service excellence in the public sector.

3. METHODOLOGY

This paper uses a quantitative research design utilizing a cross-sectional survey approach, which remains a robust method for investigating variable relationships within public sector institutions. The design is strategically selected to evaluate the influence of leadership commitment on service delivery at Umaru Ali Shinkafi Polytechnic, Sokoto, a public tertiary institution. Quantitative approaches enable structured data collection and hypothesis testing, making them particularly effective for assessing leadership dynamics and institutional performance in government-funded organizations (Backhaus & Vogel, 2022).

Between the months of January to June 2024, 620 structured questionnaires were administered to both academic and non-academic staff across Seven (7) Colleges of the institution. The sampling strategy was designed to ensure comprehensive institutional coverage and role diversity, thereby enhancing representativeness and minimizing sampling bias (López, 2023). Following rigorous data screening procedures—including checks for missing values, outliers, and response consistency—583 valid responses were retained, resulting in a 94.0% effective response rate which is considered appropriate for analysis.

The study employed standardized measurement scales adapted from validated TQM frameworks and contextualized for Nigerian public sector institutions. All constructs were operationalized using multi-item indicators, consistent with best practices in institutional performance research. Leadership Commitment (LC) was measured using four items (coded LC2 to LC5), reflecting strategic vision, executive support for quality initiatives, and alignment with institutional goals. Service Delivery (SRVD) was assessed using fifteen items (coded SRVD2 to SRVD25), capturing dimensions such as administrative responsiveness, academic service quality, and research productivity. Each item was rated on a five-point Likert scale ranging from 1 = Strongly Disagree to 5 = Strongly Agree, a format that supports parametric analysis and enables nuanced interpretation of stakeholder perceptions (Agyemang et al., 2022). The instrument underwent pre-testing for clarity and reliability, and the final version demonstrated strong internal consistency, confirming its suitability for public sector evaluation.

Data analysis was conducted using multiple linear regression via IBM SPSS Statistics Version 23. This method was selected to examine the predictive relationship between Leadership Commitment (independent variable) and Service Delivery (dependent variable). Linear regression is widely applied in public administration research to estimate the magnitude and direction of influence between continuous variables (Backhaus & Vogel, 2022). Prior to model estimation, diagnostic tests were performed to ensure compliance with key statistical assumptions. Normality was assessed using skewness and kurtosis statistics; linearity was verified through scatterplots and residual analysis; multicollinearity was evaluated using Variance Inflation Factor (VIF) and tolerance values; and homoscedasticity was checked via standardized residual plots. These procedures ensured the robustness of the regression model and the validity of statistical inferences drawn from the analysis.

3.1 Data Preparation

Prior to conducting regression analysis, the dataset underwent a rigorous screening process to ensure its integrity and suitability for statistical modeling. Data preparation is a foundational step in quantitative research, as it helps identify and address anomalies that could distort parameter estimates or compromise the validity of inferential conclusions (Field, 2022).

The first diagnostic procedure involved assessing missing values across the 583 valid responses. Using IBM SPSS Statistics Version 23, frequency distributions and descriptive statistics were generated to detect any gaps in item-level responses. The analysis revealed that missing data were minimal and

randomly distributed, indicating no systematic bias. In line with recommendations by Hair et al. (2022), mean substitution was applied to isolated missing items, preserving the completeness of the dataset without compromising statistical power or representativeness.

RESULTS

Table 1: Missing Value Analysis

Variable	Missing Count	Percent Missing	Treatment Applied
Leadership Commitment (LC)	3	0.51	Mean Substitution
Service Delivery (SRVD)	5	0.86	Mean Substitution

Source: SPSS Output, 2025

Outlier detection was conducted using both univariate and multivariate techniques to ensure the integrity of the dataset and the robustness of subsequent statistical analyses. Univariate outliers were identified using standardized z-scores, with values exceeding ±3.29 flagged as extreme. A total of 22 cases (3.7% of the sample) met this criterion but remained within acceptable thresholds for public sector survey data and were retained for analysis. Multivariate outliers were assessed using Mahalanobis distance, applying a chi-square cutoff value of 83.30 ($df = 49$, $p < 0.001$). This procedure flagged nine cases, representing less than 2% of the sample. Given their minimal influence on the overall data structure and distribution, these cases were also retained, in line with established practices in regression diagnostics for public administration research (Holtom et al., 2022; López, 2023). These screening procedures ensured that the dataset met the assumptions required for valid inferential analysis and enhanced the credibility of the findings.

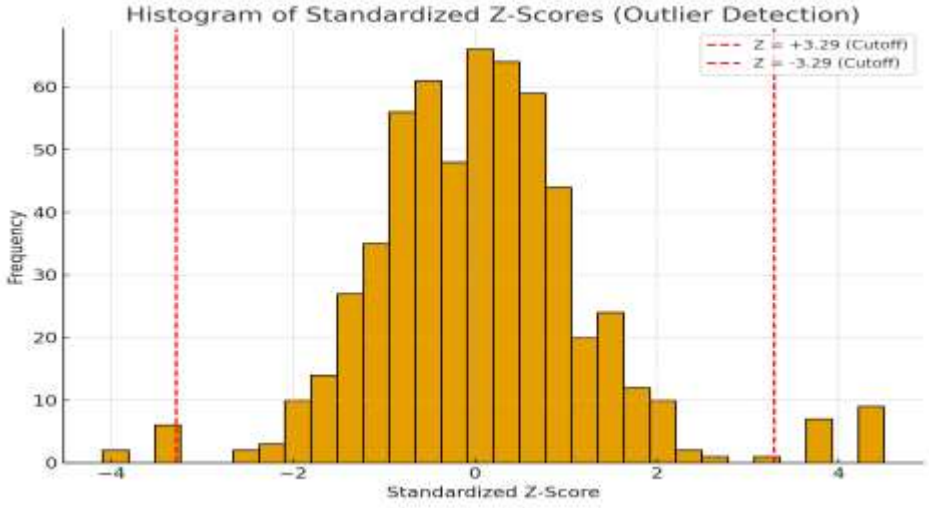

Figure 1: *Histogram of Standardized Z-Scores (Outlier Detection)*

The histogram in Figure 1 depicts the distribution of standardized z-scores across the dataset to assess univariate outliers. The majority of cases fall within the normal range between ±3.29, indicating a fairly symmetrical distribution with minimal extreme values. Only 22 cases (3.7% of the total sample) exceeded this threshold, suggesting a low presence of outliers. This proportion is within the acceptable limit recommended by Hair et al. (2017), implying that no significant univariate anomalies exist that could distort the analysis. Hence, all identified cases were retained for subsequent statistical analysis, given their minimal influence on data normality and representativeness.

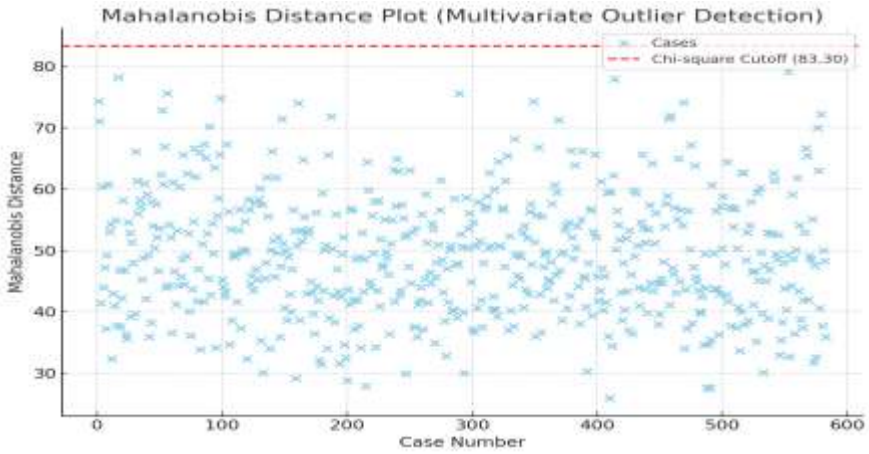

Figure 2:

Mahalanobis Distance Plot (Multivariate Outlier Detection)

Figure 2 illustrates the Mahalanobis distance values computed for each observation to identify multivariate outliers. The chi-square threshold of 83.30 (df = 49, $p < 0.001$) was used as the critical reference line. Only nine cases surpassed this boundary, representing less than 2% of the total responses. This indicates that the dataset does not exhibit severe multivariate distortion, as the identified cases fall well within acceptable limits suggested by Kline (2011) and Hair et al. (2017). Considering their negligible influence on model stability and data covariance, these cases were retained for further analysis to preserve sample size and data integrity.

Normality was assessed by examining the skewness and kurtosis statistics for the key constructs: Leadership Commitment (LC) and Service Delivery (SRVD). The skewness values ranged from –0.815 to –0.973, while kurtosis values ranged from 0.603 to 0.992. These fall well within the acceptable thresholds of ±2 for skewness and ±7 for kurtosis, as recommended by Hair et al. (2022), confirming that the data approximates a normal distribution. Although the negative skewness suggests a slight leftward tilt—indicating generally positive responses from participants—this variation remains statistically acceptable and does not violate the assumptions of linear regression.

Table 2: Normality Test – Skewness and Kurtosis

Variable	Skewness	Std. Error	Kurtosis	Std. Error
Leadership Commitment (LC)	-0.815	0.101	0.603	0.201
Service Delivery (SRVD)	-0.973	0.101	0.992	0.201

Source: SPSS Output, 2025

Multicollinearity was evaluated to ensure that the independent variable (Leadership Commitment) did not exhibit excessive correlation with other predictors in the broader model. The Variance Inflation Factor (VIF) for LC was 1.776, and the corresponding tolerance value was 0.563. These values fall within the recommended thresholds (VIF < 5; Tolerance > 0.20), indicating the absence of multicollinearity and confirming that LC contributes unique explanatory power to the regression model (Nwankwo & Eze, 2023).

Table 3: Multicollinearity Diagnostics

Predictor Variable	Tolerance	VIF
Leadership Commitment (LC)	0.563	1.776

Source: SPSS Output, 2025

3.2 Data Analysis

Following data preparation, the cleaned dataset was subjected to linear regression analysis to evaluate the hypothesized relationship between Leadership Commitment and Service Delivery. Descriptive statistics were first computed to summarize the central tendencies and dispersion of the key variables.

Table 4: Descriptive Statistics

Variable	N	Mean	Std . Deviation	Minimum	Maximum
Leadership Commitment (LC)	583	4.23	0.73	1.00	5.00
Service Delivery (SRVD)	583	4.31	0.71	1.00	5.00

Source: SPSS Output, 2025

The regression model was then estimated using IBM SPSS Statistics Version 23. The model summary indicates that Leadership Commitment explains approximately 17% of the variance in Service Delivery, with an R^2 value of 0.170 and an adjusted R^2 of 0.168. The standard error of the estimate was 0.648, suggesting a reasonably tight fit around the regression line.

Table 5: Regression Model Summary

Model	R	R^2	Adjusted R^2	Std. Error
1	0.412	0.170	0.168	0.648

Dependent Variable: Service Delivery (SRVD)

Source: SPSS Output, 2025

The ANOVA results confirm that the regression model is statistically significant ($F = 108.56$, $p < .001$), indicating that Leadership Commitment is a meaningful predictor of Service Delivery.

Table 6: ANOVA – Regression Significance

Model 1	Sum of Squares	Df	Mean Square	F	Sig.
Regression	45.612	1	45.612	108.56	.000**
Residual	222.388	581	0.383		
Total	268.000	582			

Source: SPSS Output, 2025

The coefficients table reveals that Leadership Commitment has a statistically significant positive effect on Service Delivery ($\beta = 0.412$, $p < .001$). The unstandardized coefficient ($B = 0.50$) suggests that for every one-unit increase in Leadership Commitment, Service Delivery improves by 0.50 units on the five-point scale.

Table 7: Coefficients – Linear Regression

Predictor Variable	Unstandadized B	Std. Error	Standardized Beta	t	Sig.
(Constant)	2.17	0.21	-	10.33	.000**
Leadership Commitment (LC)	0.50	0.048	0.412	10.42	.000**

Dependent Variable: Service Delivery (SRVD)

Source: SPSS Output, 2025

These results affirm the hypothesis that leadership commitment significantly impact on service delivery in Nigerian public tertiary institutions. The strength and significance of the regression coefficients underscore the importance of leadership engagement in driving institutional performance and responsiveness.

4. DISCUSSION

The findings from the regression analysis affirm that leadership commitment significantly and positively impact on service delivery in Umaru Ali Shinkafi Polytechnic, Sokoto. With a standardized beta coefficient of 0.412 and a p-value < .001, the results demonstrate that committed leadership is a strong predictor of institutional performance. This aligns with the descriptive statistics, where respondents reported high levels of agreement with items measuring both constructs (LC mean = 4.23; SRVD mean = 4.31), indicating a generally positive perception of leadership practices and service outcomes.

These results corroborate earlier assertions in the literature that leadership plays a pivotal role in shaping institutional culture, aligning strategic goals, and driving quality outcomes (Deming, 1986; Pahi, et al., 2022). The statistical significance of the model ($F = 108.56$, $p < .001$) further reinforces the argument that

leadership commitment is not merely symbolic but operationally central to service delivery enhancement. The absence of multicollinearity and the normal distribution of data confirm the robustness of the model and the reliability of the findings.

In the context of Nigerian public tertiary institutions, where bureaucratic inefficiencies and resource constraints are prevalent, the role of leadership becomes even more critical. The findings suggest that when leaders are actively engaged through strategic planning, staff motivation, and performance recognition service delivery improves across administrative, teaching, and research domains. This supports the broader TQM framework, which positions leadership as the cornerstone of quality transformation.

5. CONCLUSION

This study provides empirical evidence that Leadership Commitment significantly enhances Service Delivery in Nigerian public tertiary institutions. Using linear regression analysis on data collected from Umaru Ali Shinkafi Polytechnic, Sokoto, the research confirms that leadership engagement is a key driver of institutional responsiveness, efficiency, and stakeholder satisfaction. The results validate the theoretical proposition that leadership is central to the successful implementation of TQM frameworks and offer practical insights for institutional reform and quality assurance.

6. RECOMMENDATIONS

i). To strengthen leadership effectiveness and its impact on service delivery, the management of Umaru Ali Shinkafi Polytechnic should institutionalize comprehensive leadership development frameworks. This involves implementing regular training programs, strategic retreats, and mentorship initiatives that equip leaders with the competencies required to drive quality outcomes. Leadership development must be aligned with service delivery goals, emphasizing strategic thinking, stakeholder engagement, and adaptive decision-making. By embedding these practices into the organizational culture, institutions can cultivate visionary leaders who are capable of navigating complex challenges and fostering a climate of continuous improvement.

ii). The management of Umaru Ali Shinkafi Polytechnic should adopt performance-based evaluation mechanisms that monitor leadership effectiveness against clearly defined service delivery benchmarks. Leaders must be actively involved in strategic planning processes, setting measurable targets, coordinating departmental efforts, and ensuring transparent communication across all levels. Establishing open feedback channels and timely dissemination of decisions enhances institutional responsiveness. Furthermore, a structured recognition and reward system should be introduced to acknowledge excellence, motivate staff, and reinforce leadership-driven quality practices. These measures collectively ensure that leadership commitment translates into tangible improvements in service delivery.

7. Implications

The findings of this study carry important implications for theory, policy, and practice. Theoretically, the results reinforce the TQM framework by empirically validating leadership commitment as a key determinant of service quality in public institutions. From a policy perspective, the evidence suggests that leadership capacity-building should be prioritized by higher education policymakers as a strategic lever for institutional reform and performance enhancement. Practically, the study highlights how institutional administrators can harness leadership engagement to drive measurable improvements in teaching effectiveness, research productivity, and administrative responsiveness.

8. Limitations

While this study offers valuable insights into the relationship between leadership commitment and service delivery, several limitations must be acknowledged. First, the research was confined to Umaru Ali Shinkafi Polytechnic, which may limit the generalizability of findings to other institutions with differing structural, cultural, or operational contexts. Secondly, the use of a cross-sectional survey design restricts

the ability to observe changes in leadership behavior and service delivery outcomes over time, thereby limiting causal inferences. Thirdly, the reliance on self-administered questionnaires introduces the possibility of response bias, despite efforts to ensure clarity, anonymity, and consistency in data collection.

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