

Effect of Governance Structure on the Productivity of Higher Institutions in Nigeria: Evidence from Selected Polytechnics in South-East Nigeria

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Abstract

This study examined the relationship between governance structure and institutional productivity in selected polytechnics in South-East Nigeria using primary and secondary evidence. Specifically, the study assessed the relationship between governing-board oversight, organizational structure and personnel management practices, administrative practices in relation to teaching, and governing-board activities relating to institutional international outlook. A descriptive survey design was adopted and complemented with selected institutional productivity indicators. Primary data were collected using a structured twelve-item questionnaire administered to academic and non-academic staff of four selected polytechnics: Abia State Polytechnic, Aba; Akanu Ibiam Federal Polytechnic, Unwana; Federal Polytechnic, Nekede, Owerri; and Federal Polytechnic, Oko. Of the 350 questionnaires administered, 336 were returned and 330 were complete and usable for analysis. Descriptive statistics and one-sample t-tests against the neutral scale point were used to examine the primary survey evidence, while selected institutional indicators were examined over the 2021–2024 observation period. The primary-data findings showed generally positive staff assessments across the four governance dimensions, with item mean scores ranging from 3.93 to 4.19. Governing-board oversight recorded the highest dimension-level mean (4.16), while governing-board influence on international outlook recorded the lowest (3.95), with all dimensions remaining above the neutral point. The secondary institutional indicators also showed improvement in programme accreditation, graduation rates, staff qualification levels and research output during the observation period. The institutional productivity index increased from 61.8% in 2021 to 72.4% in 2024, representing a 17.2% relative increase. Taken together, the findings indicate a consistent association between positive staff assessments of governance arrangements and improvements in selected institutional productivity indicators. However, the cross-sectional and perception-based nature of the primary evidence, together with the descriptive nature of the secondary trend data, does not establish a definitive causal effect of governance on productivity. The study recommends strengthening governing-council oversight, clarifying organizational and reporting structures, improving personnel-management practices, streamlining administrative processes that support teaching, and strengthening institutional partnerships and international engagement.

Keywords: Governance Structure; Governing Council; Institutional Productivity; Oversight; Organizational Structure; Personnel Management; Polytechnics; Nigeria.

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Introduction

Higher institutions play a central role in human-capital development through the production of skilled manpower, knowledge generation, innovation and related services that contribute to socioeconomic development. Their effectiveness depends not only on available resources but also on the structures through which authority is exercised, decisions are made, resources are allocated and institutional performance is monitored. Governance structure is therefore an important consideration in understanding institutional productivity and effectiveness (Abudetse et al., 2025; Olayiwola, 2022).

Governance structure refers to the arrangements through which authority, responsibility, decision-making, accountability and control are organised within an institution. In higher education, governance involves governing councils, institutional management, academic bodies, staff, students, government agencies and other stakeholders (Cadbury Committee, 1992; Kezar & Eckel, 2004; Shattock, 2006). Effective governance can support institutional performance through appropriate oversight, clearly defined responsibilities, effective personnel management and accountable decision-making.

In Nigerian polytechnics, governance operates within a framework of institutional administration, public accountability and regulatory oversight. Federal polytechnics operate under the Federal Polytechnics Act, while the National Board for Technical Education (NBTE) provides regulatory and supervisory oversight for technical and vocational education. Governing councils and institutional management therefore perform their functions within broader governmental and regulatory structures (Fielden, 2008; Saint et al., 2003).

Governance may influence institutional productivity through several mechanisms. Governing boards provide oversight and strategic direction, while organisational structures and personnel management practices shape coordination, staff development and administrative effectiveness (Nabaho & Turyasingura, 2024). Administrative decisions also affect teaching and other academic activities. In addition, institutional international orientation, including academic partnerships, collaborative research and professional networks, may contribute to knowledge development, staff capacity and institutional visibility. Resource dependence theory highlights the role of organisational boards in connecting institutions with external resources and networks (Pfeffer & Salancik, 1978).

Institutional productivity can be reflected in measurable outcomes such as programme accreditation, graduation rates, staff qualification levels and research output. However, evidence based solely on institutional outcomes may not explain how governance is experienced within institutions, while staff perceptions alone may not adequately reflect observable institutional performance. Combining these sources can therefore provide complementary evidence on governance and productivity.

Although governance in higher education has received considerable scholarly attention, empirical evidence specifically addressing governance and productivity in Nigerian polytechnics remains limited. Much of the existing literature has focused on universities, corporate organisations or broader conceptual issues of governance (Kezar & Eckel, 2004; Trakman, 2008). This study addresses this gap by examining governance structure and institutional productivity in four selected polytechnics in South-East Nigeria: Abia State Polytechnic, Aba; Akanu Ibiam Federal Polytechnic, Unwana; Federal Polytechnic, Nekede, Owerri; and Federal Polytechnic, Oke.

The study examines four dimensions of governance structure: governing-board oversight, organisational structure and personnel management, administration in relation to teaching, and governing-board influence on institutional

international outlook. It combines staff survey evidence with institutional productivity indicators covering programme accreditation, graduation rates, staff qualification levels and research output for 2021–2024.

Statement of the Problem

Nigerian polytechnics are expected to produce technically skilled graduates, support applied research, provide industry-relevant training and contribute to national development. Meeting these responsibilities requires governance arrangements that promote effective decision-making, accountability, coordination and institutional responsiveness. However, higher institutions continue to face challenges relating to administration, personnel management, accountability, institutional coordination, funding and the balance between institutional autonomy and external regulation.

Weak or poorly coordinated governance arrangements may affect institutional activities through unclear responsibilities, ineffective oversight, delayed decision-making and inadequate personnel management. Such challenges may have implications for teaching, staff productivity, research activities, accreditation and other dimensions of institutional performance. Despite these concerns, empirical evidence on the relationship between governance structure and productivity in Nigerian polytechnics remains relatively limited.

Existing studies have provided important insights into higher-education governance, but considerable attention has been directed towards universities and conceptual aspects of governance. Moreover, studies relying exclusively on staff perceptions may not adequately capture changes in institutional performance, while institutional statistics may show changes in outcomes without explaining how governance processes are experienced by staff. There is therefore a need for evidence that considers both perspectives.

The present study addresses this gap by examining the relationship between governance structure and institutional productivity in four selected polytechnics in South-East Nigeria. It combines primary evidence from academic and non-academic staff with secondary institutional indicators covering programme accreditation, graduation rates, staff qualification levels and research output from 2021 to 2024. The study focuses on governing-board oversight, organisational structure and personnel management, administration and teaching, and governing-board influence on institutional international outlook.

The study does not assume that changes in institutional productivity are caused solely by governance structure, since institutional performance may also be influenced by funding, infrastructure, staffing, student enrolment, government policies, regulatory interventions and other contextual factors. Rather, it examines the relationship between specified governance dimensions and selected indicators of institutional productivity using complementary survey and documentary evidence.

Objectives of the Study

The study examines the effect of governance structure on the productivity of selected polytechnics in South-East Nigeria. Specifically, it seeks to:

- i. examine the effect of governing-board oversight on the productivity of selected polytechnics in South-East Nigeria;
- ii. examine the effect of organisational structure and personnel management practices on institutional productivity;

- iii. determine the effect of administrative practices on teaching effectiveness in selected polytechnics in South-East Nigeria; and
- iv. examine the effect of governing-board activities on the international outlook of selected polytechnics in South-East Nigeria.

Research Hypotheses

The following null hypotheses were tested at the 0.05 level of significance:

- H₀₁: The mean response on governing-board oversight does not differ significantly from the neutral point in selected polytechnics in South-East Nigeria.
- H₀₂: The mean response on organisational structure and personnel management practices does not differ significantly from the neutral point in selected polytechnics in South-East Nigeria.
- H₀₃: The mean response on administrative practices and teaching effectiveness does not differ significantly from the neutral point in selected polytechnics in South-East Nigeria.
- H₀₄: The mean response on governing-board activities and institutional international outlook does not differ significantly from the neutral point in selected polytechnics in South-East Nigeria.

Review of Related Literature

Concept of Governance Structure

Governance structure refers to the formal and informal arrangements through which authority, responsibility, decision-making, accountability and control are organised within an institution. It encompasses the composition and functions of governing bodies, reporting relationships, decision-making procedures, accountability mechanisms and the distribution of authority. The Cadbury Committee (1992) defines corporate governance in terms of the system by which organisations are directed and controlled. Although developed in the corporate context, these principles are relevant to higher-education institutions, where governance involves the coordination of governing councils, management, academic bodies and other stakeholders. In African higher education, governance reforms have increasingly focused on strengthening institutional leadership, accountability, management and the relationship between institutional autonomy and external oversight (Varghese, 2016; Nabaho & Turyasingura, 2024).

Agency Theory emphasises the need for monitoring and accountability where responsibility for organisational resources is delegated from principals to agents (Jensen & Meckling, 1976). In higher education, this perspective is relevant to the relationship between governing councils and institutional management, particularly in relation to oversight, accountability and strategic direction. The stakeholder perspective, on the other hand, recognises that institutional decisions affect and are influenced by multiple groups, including staff, students, government, employers, professional bodies and communities (Freeman, 1984). Effective governance therefore requires mechanisms for balancing these interests while maintaining institutional effectiveness. Evidence from African higher-education systems also indicates that governance and leadership arrangements are closely connected with institutional management and performance (Owusu-Mensah, 2021; Nabaho & Turyasingura, 2024).

Higher-education governance is characterised by the distribution of authority among governing councils, executive management and academic bodies. Its effectiveness depends not only on formal structures but also on how these actors interact in practice (Kezar & Eckel, 2004; Shattock, 2006). Comparative higher-education literature further

shows that leadership and governance arrangements are shaped by changing expectations concerning institutional autonomy, accountability, strategic management and external engagement (Ryan & Carmichael, 2021). A continuing concern is therefore the balance between institutional autonomy, accountability and external regulation, particularly in public institutions (Fielden, 2008; Trakman, 2008; Varghese, 2016). In Nigerian tertiary institutions, these relationships operate within statutory and regulatory frameworks that define the responsibilities of governing councils and institutional management (Federal Ministry of Education, 2024).

Governance structure may influence institutional productivity through several mechanisms. Governing-board oversight can strengthen accountability and management supervision, while clear organisational structures and personnel management practices can improve coordination, staff development and administrative efficiency (Opuda-Asibo, 2024; Nabaho & Turyasingura, 2024). Administrative processes may also affect teaching effectiveness by influencing the availability of resources, responsiveness to academic needs and coordination between academic and administrative personnel. Governance and transparency initiatives in Nigeria have increasingly emphasised the importance of institutional information, accountability and evidence-based management in tertiary institutions (Federal Ministry of Education, 2025; Federal Ministry of Information and National Orientation, 2025).

The external orientation of an institution represents another dimension of governance. Resource Dependence Theory suggests that organisations rely on external relationships for resources, information, legitimacy and strategic opportunities (Pfeffer & Salancik, 1978). Governing boards may therefore facilitate institutional partnerships, research collaborations, industry linkages and international engagements that contribute to institutional development. African higher-education governance literature similarly identifies external partnerships, internationalisation, quality assurance and institutional networking as important dimensions of contemporary higher-education management (Nabaho & Turyasingura, 2024; Varghese, 2016). In this respect, the external orientation of governing boards may provide institutions with opportunities to access knowledge, resources and strategic relationships beyond their immediate institutional environment.

Based on these perspectives, this study conceptualises governance structure in terms of four dimensions: governing-board oversight; organisational structure and personnel management practices; administration in relation to teaching; and governing-board influence on institutional international outlook. Governing-board oversight concerns the supervision, accountability and monitoring functions of the governing body. Organisational structure and personnel management concern reporting relationships, division of responsibilities, coordination and practices affecting staff productivity. Administration in relation to teaching focuses on the extent to which administrative policies, decisions and collaboration support teaching and learning. Governing-board influence on institutional international outlook concerns the role of the governing body in supporting international collaborations, research engagement and institutional global visibility. These four dimensions provide the conceptual basis for examining governance and selected indicators of institutional productivity in the study area.

Theoretical Framework

The study draws on Agency Theory, Stakeholder Theory, Resource Dependence Theory and the organisational structure perspective to explain how governance arrangements may relate to institutional productivity. The theories

provide complementary explanations of board oversight, internal organisational arrangements, administrative practices and institutional external orientation.

Agency Theory

Agency Theory, developed by Jensen and Meckling (1976), explains the potential divergence of interests between principals and agents and the need for monitoring, accountability and control mechanisms. In public higher institutions, the theory provides a basis for understanding the relationship between governing councils and institutional management. Effective board oversight can strengthen accountability and supervision of management and ensure that institutional activities are aligned with organisational objectives. The theory therefore underpins the study's examination of governing-board oversight.

Stakeholder Theory

Stakeholder Theory, associated with Freeman (1984), emphasises the interests of groups that affect or are affected by organisational activities. Higher institutions operate within a broad stakeholder environment involving staff, students, government, employers, professional bodies and communities. Administrative decisions concerning staffing, academic resources, infrastructure and institutional policies can influence the conditions under which teaching and learning occur. Stakeholder Theory therefore provides a basis for examining the relationship between administrative practices and teaching effectiveness.

Resource Dependence Theory

Resource Dependence Theory explains organisational dependence on external actors for resources, information, legitimacy and strategic relationships (Pfeffer & Salancik, 1978). Governing boards can perform boundary-spanning functions by facilitating relationships with government agencies, professional organisations, industry, research institutions and international partners. The theory is therefore relevant to the study's examination of governing-board activities and institutional international outlook.

Organisational Structure Perspective

The organisational structure perspective emphasises the division and coordination of tasks, authority and responsibilities within organisations (Mintzberg, 1979). In higher institutions, clear reporting relationships, delegation of responsibilities and effective communication can facilitate coordination and reduce role ambiguity. This perspective provides a basis for examining organisational structure and personnel management practices in relation to institutional productivity.

Theoretical Synthesis

The four perspectives provide complementary explanations for the governance dimensions examined in the study. Agency Theory explains governing-board oversight and accountability; the organisational structure perspective addresses internal structures and personnel management; Stakeholder Theory provides a basis for understanding administrative practices and teaching; and Resource Dependence Theory explains the external and international orientation of governing boards. Together, these perspectives provide the theoretical basis for examining governance structure and institutional productivity in selected Nigerian polytechnics.

Methodology

Research Design

The study adopted a mixed-method design comprising a cross-sectional survey and documentary analysis. Primary data were obtained from academic and non-academic staff of four selected polytechnics in South-East Nigeria, while secondary data were obtained from institutional records covering 2021–2024. The survey examined staff perceptions of governance structure and institutional productivity, while the documentary data provided institutional-level evidence on selected productivity indicators, including programme accreditation, graduation rates, staff qualifications, and research output.

Population and Study Area

The study was conducted in four selected polytechnics in South-East Nigeria: Abia State Polytechnic, Aba; Akanu Ibiam Federal Polytechnic, Unwana; Federal Polytechnic, Nekede, Owerri; and Federal Polytechnic, Oko. The study population comprised academic and non-academic staff of the four institutions. The inclusion of both categories of staff was based on their involvement in teaching, administration, personnel management and other institutional activities affected by governance arrangements.

For the documentary component, the population comprised institutional records and official documents relating to the four selected polytechnics for the period 2021–2024. The records covered selected productivity indicators, including programme accreditation, graduation rates, staff qualification levels and research output.

Sample Size and Sampling Procedure

The sample size for the primary survey was determined using the Cochran (1977) formula:

$$n = \frac{Z^2 pq}{e^2}$$

where:

n = required sample size;

Z = standard normal deviate at 95% confidence level (1.96);

p = estimated proportion of the population (0.65);

$q = 1 - p(0.35)$; and

e = margin of error (0.05).

A pilot survey of 50 staff provided an estimated proportion of 0.65, which was used for the sample size determination. Thus:

$$n = \frac{(1.96)^2(0.65)(0.35)}{(0.05)^2}$$

$$n = \frac{3.8416 \times 0.2275}{0.0025}$$

$$n = 349.6$$

The calculated sample size was therefore rounded to 350 respondents.

A proportionate sampling procedure was used to distribute the 350 questionnaires across the four institutions according to their respective staff populations. The allocation was 80 respondents for Abia State Polytechnic, 85 for Akanu Ibiam Federal Polytechnic, 100 for Federal Polytechnic, Nekede, and 85 for Federal Polytechnic, Oko. Within each institution, respondents were selected from the academic and non-academic staff categories using simple random sampling.

For the secondary component, institutional records covering 2021–2024 were purposively selected based on their relevance to the study objectives and the availability of comparable information across the four institutions. The same categories of productivity indicators were extracted for each institution and year to facilitate comparative analysis.

Instrument and Data Collection

Primary data were collected using a structured 12-item questionnaire developed from the study objectives, literature and theoretical framework. The items covered four dimensions of governance structure: governing board oversight, organisational structure and personnel management, administration and teaching, and governing board influence on institutional international outlook. Responses were measured on a five-point Likert scale ranging from Strongly Agree (5) to Strongly Disagree (1).

The instrument was subjected to face and content validation by experts in educational management, higher-education administration, and measurement and evaluation. A pilot test involving 50 staff outside the main sample produced an overall Cronbach's alpha coefficient of 0.89, with coefficients ranging from 0.79 to 0.84 across the four dimensions, indicating satisfactory internal consistency.

Of the 350 questionnaires administered, 336 were returned and 330 were considered usable, representing a usable response rate of 94.3%. Secondary data were extracted from institutional records, official publications, administrative reports, accreditation records, and other authorised documentary sources using a structured data-extraction schedule.

Data Analysis

Questionnaire data were analysed using frequencies, percentages, means and standard deviations. One-sample t-tests were used to test whether item mean scores differed significantly from the neutral point of 3.00 at the 0.05 significance level. Ninety-five per cent confidence intervals and Cohen's *d* were reported as measures of statistical significance and effect size, respectively. The Holm procedure was applied to adjust for multiple comparisons, while exact two-sided sign tests were used as non-parametric checks.

Secondary data were organised by institution and year and analysed using descriptive statistics and year-to-year comparisons. Selected productivity indicators were standardised and combined into a composite institutional productivity index to examine changes between 2021 and 2024. The primary and secondary findings were subsequently compared to identify areas of convergence or divergence between staff perceptions and observed institutional productivity patterns.

Ethical Considerations

Participation in the survey was voluntary, and respondents were informed of the purpose of the study and their right to decline participation. Confidentiality and anonymity were maintained, and no personally identifying information was collected. Institutional permission was obtained before data collection, and the documentary data were used solely for research purposes.

Results

Response Rate and Respondent Profile

Of the 350 questionnaires administered, 336 were returned (96.0%), while 330 were complete and usable for analysis, representing a usable response rate of 94.3%. The usable responses comprised 76 from Abia State Polytechnic, Aba; 80 from Akanu Ibiam Federal Polytechnic, Unwana; 94 from Federal Polytechnic, Nekede, Owerri; and 80 from Federal Polytechnic, Oko.

Academic staff constituted 178 respondents (53.9%), while non-academic staff accounted for 152 (46.1%). Male respondents numbered 201 (60.9%), while female respondents numbered 129 (39.1%). In terms of years of service, 72 respondents (21.8%) had less than five years of service, 96 (29.1%) had 5–9 years, 88 (26.7%) had 10–14 years, and 74 (22.4%) had 15 years or more.

Table 1: Respondent Profile (N = 330)

VARIABLE	CATEGORY	FREQUENCY	PERCENTAGE (%)
INSTITUTION	Abia State Polytechnic, Aba	76	23.0
	Akanu Ibiam Federal Polytechnic, Unwana	80	24.2
	Federal Polytechnic, Nekede, Owerri	94	28.5
	Federal Polytechnic, Oko	80	24.2
STAFF CATEGORY	Academic	178	53.9
	Non-academic	152	46.1
GENDER	Male	201	60.9
	Female	129	39.1
YEARS OF SERVICE	Less than 5 years	72	21.8
	5–9 years	96	29.1
	10–14 years	88	26.7
	15 years and above	74	22.4
TOTAL		330	100.0

Source: Field survey, 2026.

Descriptive Results

The twelve questionnaire items were grouped into four governance dimensions: governing-board oversight, organisational structure and personnel management, administration and teaching, and governing-board influence on international outlook. Frequencies, percentages, means and standard deviations were used to summarise the responses.

Table 2: Distribution of Responses, Means and Standard Deviations (N = 330)

<i>Item</i>	<i>SD</i>	<i>D</i>	<i>N</i>	<i>A</i>	<i>SA</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>Remark</i>
Governing-board oversight								
1. The governing board effectively supervises the activities of management.	9	19	28	123	151	4.18	0.99	Agree
2. Decisions of the governing board positively influence institutional performance.	10	17	25	126	152	4.19	1.00	Agree
3. The governing board ensures accountability and transparency.	13	19	32	115	151	4.10	1.08	Agree
Organisational structure and personnel management								
4. The organisational structure promotes efficiency and smooth workflow.	9	23	28	132	138	4.11	1.01	Agree
5. Personnel management practices enhance staff productivity.	17	21	28	122	142	4.07	1.11	Agree
6. Clear reporting lines improve institutional productivity.	13	24	27	125	141	4.08	1.07	Agree
Administration and teaching								
7. Administrative policies support effective teaching and learning.	15	22	33	118	142	4.06	1.09	Agree
8. Timely administrative decisions improve the quality of teaching.	19	28	37	113	133	3.95	1.16	Agree
9. Collaboration between administrators and academic staff enhances teaching.	11	19	36	123	141	4.10	1.03	Agree
Governing board and international outlook								
10. The governing board supports policies that promote international collaborations.	17	26	39	114	134	3.98	1.14	Agree
11. The governing board encourages participation in international research programmes.	19	28	42	108	133	3.93	1.18	Agree
12. Decisions of the governing board enhance global visibility and reputation.	21	26	38	114	131	3.94	1.18	Agree

Note: SD = Strongly Disagree; D = Disagree; N = Neutral; A = Agree; SA = Strongly Agree. Entries are frequencies.

Source: Field survey, 2026.

The item means ranged from 3.93 to 4.19, with all twelve items falling within the “Agree” category. The highest mean was recorded for the statement that governing-board decisions positively influence institutional performance (M = 4.19), while the lowest was recorded for participation in international research programmes (M = 3.93). Overall, respondents expressed positive assessments across the four governance dimensions.

Table 3: Summary of Results by Governance Dimension

<i>Governance Dimension</i>	<i>Items</i>	<i>Cluster Mean</i>	<i>Mean % Agreeing (A + SA)</i>	<i>Remark</i>
<i>Governing-board oversight</i>	1–3	4.16	82.4	Agree
<i>Organisational structure and personnel management</i>	4–6	4.08	80.7	Agree
<i>Administration and teaching</i>	7–9	4.03	77.6	Agree
<i>Governing board and international outlook</i>	10–12	3.95	74.0	Agree
<i>Grand mean</i>	1–12	4.05	78.7	Agree

Source: Field survey, 2026.

The dimension-level results show that governing-board oversight recorded the highest cluster mean ($M = 4.16$), while governing-board influence on international outlook recorded the lowest ($M = 3.95$). All four dimensions remained within the “Agree” category.

Secondary Institutional Productivity Indicators

Selected institutional productivity indicators were examined for the 2021–2024 observation period. The indicators comprised programme accreditation, graduation rates, staff qualification levels and research output.

Table 4: Selected Institutional Productivity Indicators, 2021–2024

<i>Indicator</i>	<i>2021</i>	<i>2022</i>	<i>2023</i>	<i>2024</i>
<i>Programmes with valid accreditation (%)</i>	68.4	72.1	76.8	81.5
<i>Graduation rate (%)</i>	62.7	66.3	70.1	74.6
<i>Staff with postgraduate qualifications (%)</i>	58.9	62.4	67.2	71.8
<i>Annual research outputs</i>	118	137	156	181
<i>Institutional productivity index (%)</i>	61.8	65.2	69.1	72.4

Source: Authors’ compilation from institutional records, 2021–2024.

The institutional indicators increased across the observation period. Programmes with valid accreditation increased from 68.4% in 2021 to 81.5% in 2024, while the graduation rate increased from 62.7% to 74.6%. The proportion of staff with postgraduate qualifications increased from 58.9% to 71.8%, and reported research output increased from 118 to 181.

The institutional productivity index increased from 61.8% in 2021 to 72.4% in 2024, representing a relative increase of 17.2%. These changes provide complementary evidence on institutional performance during the observation period. However, the secondary indicators do not by themselves establish that governance caused the observed changes, since other institutional, financial, policy and environmental factors may also have contributed.

Test of Hypotheses

The four null hypotheses were tested using one-sample t-tests against the neutral point of 3.00 on the five-point Likert scale. The tests were based on the twelve questionnaire items measuring the four governance dimensions. A significance level of 0.05 was adopted for the decision rule.

Table 5: One-Sample t-Test of Item Means Against the Neutral Point (3.00), N = 330

HYPOTHESIS	ITEM	MEAN	STD. DEV.	T (DF = 329)	P-VALUE	DECISION
H₀₁	1	4.18	0.99	21.66	< .001	Reject H ₀₁
	2	4.19	1.00	21.60	< .001	Reject H ₀₁
	3	4.10	1.08	18.50	< .001	Reject H ₀₁
H₀₂	4	4.11	1.01	19.94	< .001	Reject H ₀₂
	5	4.07	1.11	17.49	< .001	Reject H ₀₂
	6	4.08	1.07	18.33	< .001	Reject H ₀₂
H₀₃	7	4.06	1.09	17.68	< .001	Reject H ₀₃
	8	3.95	1.16	14.87	< .001	Reject H ₀₃
	9	4.10	1.03	19.38	< .001	Reject H ₀₃
H₀₄	10	3.98	1.14	15.61	< .001	Reject H ₀₄
	11	3.93	1.18	14.33	< .001	Reject H ₀₄
	12	3.94	1.18	14.46	< .001	Reject H ₀₄

Note: The test value was 3.00, representing the neutral point on the five-point Likert scale. $p < .05$ indicates statistical significance.

Hypothesis One

H₀₁: Staff do not perceive the oversight responsibility of the governing board to have a significant effect on institutional performance.

Items 1–3 recorded mean ratings of 4.18, 4.19 and 4.10, respectively. All three means were significantly higher than the neutral value of 3.00 ($p < .001$). The null hypothesis is therefore rejected. The result indicates that staff reported a statistically significant positive perception of the contribution of governing-board oversight to institutional performance.

Hypothesis Two

H₀₂: Staff do not perceive organisational structure and personnel management practices to have a significant effect on institutional productivity.

Items 4–6 recorded mean ratings of 4.11, 4.07 and 4.08, respectively. Each mean was significantly higher than the neutral value of 3.00 ($p < .001$). The null hypothesis is therefore rejected. The finding indicates that staff reported a statistically significant positive perception of the contribution of organisational structure and personnel management practices to institutional productivity.

Hypothesis Three

H₀₃: Staff do not perceive administrative practices to have a significant effect on teaching effectiveness.

Items 7–9 recorded mean ratings of 4.06, 3.95 and 4.10, respectively. All three means were significantly higher than the neutral value of 3.00 ($p < .001$). The null hypothesis is therefore rejected. The result indicates that staff reported a statistically significant positive perception of the contribution of administrative practices to teaching effectiveness.

Hypothesis Four

H₀₄: Staff do not perceive governing-board activities to have a significant effect on the international outlook of the institution.

Items 10–12 recorded mean ratings of 3.98, 3.93 and 3.94, respectively. Each mean was significantly higher than the neutral value of 3.00 ($p < .001$). The null hypothesis is therefore rejected. The finding indicates that staff reported a statistically significant positive perception of the contribution of governing-board activities to the international outlook of the institutions.

Therefore, the hypothesis tests indicate that respondents' ratings for all four governance dimensions were significantly above the neutral point. The results therefore show consistently positive staff perceptions of the relationship between governance arrangements and the selected institutional outcomes. The secondary institutional indicators presented in Table 4 provide complementary evidence of changes in institutional productivity between 2021 and 2024 but do not constitute independent tests of the causal effect of governance.

Summary of findings, conclusion and recommendations

Summary of Findings

The major findings are summarized as follows:

- i. Governing-board oversight and institutional performance: Staff reported a positive assessment of governing-board oversight. The three items measuring this dimension recorded mean scores of 4.18, 4.19 and 4.10, with a cluster mean of 4.16. The hypothesis test showed that the item means were significantly above the neutral point of 3.00 ($p < .001$), leading to the rejection of H₀₁.
- ii. Organizational structure and personnel management: The findings showed positive staff assessments of organizational structure and personnel management practices. The three items recorded mean scores of 4.11, 4.07 and 4.08, with a cluster mean of 4.08. All three item means were significantly above 3.00 ($p < .001$), leading to the rejection of H₀₂.
- iii. Administration and teaching effectiveness: Staff responses indicated a positive association between administrative practices and teaching effectiveness. The three items recorded mean scores of 4.06, 3.95 and 4.10, producing a cluster mean of 4.03. The means were significantly above the neutral point ($p < .001$), resulting in the rejection of H₀₃.
- iv. Governing-board activities and international outlook: The findings indicated a positive staff assessment of the influence of governing-board activities on institutional international outlook. The three items recorded mean scores of 3.98, 3.93 and 3.94, with a cluster mean of 3.95. The results were significantly above the neutral point ($p < .001$), leading to the rejection of H₀₄.

- v. Changes in institutional productivity indicators: The secondary institutional indicators showed improvement over the 2021–2024 observation period. Programme accreditation increased from 68.4% to 81.5%, graduation rate from 62.7% to 74.6%, and staff with postgraduate qualifications from 58.9% to 71.8%. Annual research output increased from 118 to 181, while the institutional productivity index increased from 61.8% to 72.4%, representing a 17.2% relative increase.
- vi. Overall pattern of evidence: Across the four governance dimensions, the overall cluster means ranged from 3.95 to 4.16, while the grand mean was 4.05. The survey therefore showed consistently positive staff assessments of the governance dimensions examined, while the secondary indicators showed improvement in selected institutional productivity measures during the observation period. These two sources of evidence indicate a consistent pattern but do not, by themselves, establish that governance was the sole or direct cause of the observed productivity changes.

Conclusion

This study examined the relationship between governance structure and institutional productivity in four selected polytechnics in South-East Nigeria using primary survey evidence and selected secondary institutional indicators. The findings show consistently positive staff assessments across the four governance dimensions examined: governing-board oversight, organizational structure and personnel management, administration and teaching, and governing-board influence on international outlook.

The secondary institutional evidence also showed improvement in selected measures of institutional performance during the 2021–2024 observation period. Taken together, the findings present a consistent pattern in which positive staff assessments of governance arrangements occurred alongside improvements in selected institutional productivity indicators.

The study therefore concludes that governance structure is an important dimension of institutional functioning in the selected polytechnics. However, the findings do not establish that governance structure alone caused the observed improvements in institutional productivity. Staff assessments reflect perceptions of governance, while the secondary indicators describe changes in institutional outcomes over time. Other factors, including funding, leadership, government policies, staff development, student characteristics and regulatory interventions, may also have influenced institutional performance.

The evidence should therefore be interpreted as demonstrating an important association between governance arrangements and institutional functioning rather than as a definitive estimate of the causal effect of governance structure on productivity.

Recommendations

Based on the findings of the study, the following recommendations are made:

- i. Governing-board oversight: Governing councils of the selected polytechnics should strengthen oversight, accountability and monitoring mechanisms while maintaining appropriate operational responsibilities for institutional management. Regular monitoring of institutional performance and clearer accountability procedures should be used to improve the effectiveness of board oversight.

- ii. Organizational structure and personnel management: The institutions should strengthen organizational structures, clarify reporting relationships and improve personnel management practices. Appropriate staff development, performance appraisal, promotion and professional-development mechanisms should be implemented to support staff productivity and institutional efficiency.
- iii. Administration and teaching: Institutional management should strengthen administrative processes that directly support teaching and learning. Administrative decisions affecting academic activities should be made promptly, while effective collaboration between administrative and academic staff should be encouraged to facilitate the delivery of teaching and learning activities.
- iv. International outlook: Governing councils and institutional management should strengthen policies and mechanisms that support international collaboration, research partnerships, academic exchanges and participation in international programmes. Such initiatives should be aligned with institutional priorities and supported by appropriate administrative arrangements.
- v. Institutional performance monitoring: The institutions should continue to combine staff assessments with measurable institutional indicators when evaluating governance and institutional performance. Regular monitoring of accreditation, graduation rates, staff qualifications and research output can provide evidence for identifying areas requiring further institutional improvement.

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APPENDICES

APPENDIX I: QUESTIONNAIRE

Effect of Governance Structure on the Productivity of Higher Institutions in Nigeria: Evidence from Selected Polytechnics in South-East Nigeria

Instruction

Please indicate the extent to which you agree with each of the following statements by ticking (✓) the option that best represents your opinion.

Response Options

- SA = Strongly Agree (5)
A = Agree (4)
N = Neutral (3)
D = Disagree (2)
SD = Strongly Disagree (1)

Section A: Governance Structure and Institutional Outcomes

No.	Statement	SA	A	N	D	SD
A. Governing-Board Oversight						
1	The governing board effectively supervises the activities of management.					
2	Decisions of the governing board positively influence institutional performance.					
3	The governing board ensures accountability and transparency.					
B. Organizational Structure and Personnel Management						
4	The organizational structure promotes efficiency and smooth workflow.					
5	Personnel management practices enhance staff productivity.					
6	Clear reporting lines improve institutional productivity.					
C. Administration and Teaching						
7	Administrative policies support effective teaching and learning.					
8	Timely administrative decisions improve the quality of teaching.					

9	Collaboration between administrators and academic staff enhances teaching.					
D. Governing Board and International Outlook						
10	The governing board supports policies that promote international collaborations.					
11	The governing board encourages participation in international research programmes.					
12	Decisions of the governing board enhance global visibility and reputation.					

Section B: Respondent Information

Please tick (✓) the appropriate option.

1. Institution

- ☐ Abia State Polytechnic, Aba
- ☐ Akanu Ibiam Federal Polytechnic, Unwana
- ☐ Federal Polytechnic, Nekede, Owerri
- ☐ Federal Polytechnic, Oko

2. Staff Category

- ☐ Academic Staff
- ☐ Non-Academic Staff

3. Gender

- ☐ Male
- ☐ Female

4. Years of Service

- ☐ Less than 5 years
- ☐ 5–9 years
- ☐ 10–14 years
- ☐ 15–19 years
- ☐ 20 years and above

APPENDIX II: SECONDARY INSTITUTIONAL DATA COLLECTION SCHEDULE

Effect of Governance Structure on the Productivity of Higher Institutions in Nigeria: Evidence from Selected Polytechnics in South-East Nigeria

The following institutional indicators were compiled for the four selected polytechnics for the 2021–2024 observation period.

Secondary Institutional Data

No.	Indicator	2021	2022	2023	2024
1	Programmes with valid accreditation (%)	68.4	72.1	76.8	81.5
2	Graduation rate (%)	62.7	66.3	70.1	74.6
3	Staff with postgraduate qualifications (%)	58.9	62.4	67.2	71.8
4	Annual research outputs	118	137	156	181
5	Institutional productivity index (%)	61.8	65.2	69.1	72.4

Source: Authors' compilation from institutional records, 2021–2024.

Sources of Institutional Records

The secondary data were compiled from relevant institutional records, including:

- i. institutional annual reports;
- ii. programme accreditation records;
- iii. academic affairs/registry records;
- iv. staff establishment and personnel records; and
- v. research and publication records.

Indicator Definitions

1. Programme accreditation: Proportion of programmes with valid accreditation during the relevant year.
2. Graduation rate: Proportion of students expected to complete their programmes who successfully graduated during the relevant period.
3. Staff with postgraduate qualifications: Proportion of academic staff possessing postgraduate qualifications during the relevant year.
4. Annual research outputs: Number of documented research outputs produced by academic staff during the year.
5. Institutional productivity index: A composite measure derived from the selected institutional productivity indicators using the weighting procedure specified in the methodology.