

# Innovations

## Organisational Design and Performance of Federal Universities in Southeast Nigeria

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**Abstract:** *The study examined the effect of organisational design on the performance of federal universities in southeast Nigeria. The specific objectives were to: examine the effect of Governance Structure on organisational effectiveness, ascertain the effect of Administrative Structure on operational efficiency, assess the effect of Academic Structure on the Teaching Quality, investigate the effect of Financial Structure on the Achievement of University's Goals, and assess the effect of Physical Infrastructure on the Learning Outcome. The study adopted survey research design with a total population of 21918 for both members of staff and PG students. The sample size included 372 members of staff and 372 PG students. The sample size was determined using Freund and Williams's statistical formula. The primary data collected were subjected to statistical test using Ordinal Logistic Regression (OLR) analysis with the aid of SPSS. Findings revealed that: Governance structure had a significant effect on organisational effectiveness in federal universities in Southeast Nigeria, Administrative structure had a significant effect on operational efficiency in federal universities in Southeast Nigeria, Academic structure had a significant effect on teaching quality in federal universities in Southeast Nigeria, Financial structure had a significant effect on the achievement of university goals in federal universities in Southeast Nigeria, and Physical infrastructure had a significant effect on learning outcomes in federal universities in Southeast Nigeria. The study therefore concluded that organisational design had significant effect on the performance of federal universities in southeast Nigeria. The study, among others, recommended that federal universities should strengthen their governance structures by promoting transparency, accountability, and clear decision-making processes to enhance organizational effectiveness.*

**Keywords:** *Organisational Design, Performance of Federal Universities, Southeast Nigeria*

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## 1.0 Introduction

The evolution of organisational design within Nigerian federal universities has been profoundly influenced by the nation's historical, political, and socio-economic contexts (Aina, 2023). The inception of university education in Nigeria dates back to the establishment of Yaba Higher College in 1932, which marked the colonial government's initial effort to provide higher education locally (Ajayi & Alonge, 2022). This institution was primarily designed to train assistants for administrative and technical roles, reflecting a hierarchical and centralised organisational structure typical of colonial establishments (Ogunmodede, 2021). During this period, universities operated under rigid bureaucratic structures, with minimal academic autonomy and heavy government oversight (Obasi, 2023).

In 1948, the landscape of higher education in Nigeria experienced a significant transformation with the founding of the University College Ibadan (UCI), an affiliate of the University of London (Balogun, 2020). UCI's organisational design mirrored the British university system, characterised by faculties, departments, and a collegiate system that emphasised academic autonomy and a decentralised administrative framework (Okonkwo & Eze, 2023). This structure aimed to foster specialised academic development and research, setting a precedent for future universities in the country (Adewale, 2022). However, despite this decentralisation, governance structures remained heavily influenced by British educational policies, limiting local adaptation to Nigeria's socio-economic needs (Afolabi, 2023).

The post-independence era, particularly the 1960s and 1970s, witnessed a rapid expansion of federal universities in Nigeria (Oyetade, 2023). This growth was driven by the government's commitment to addressing regional educational disparities and producing skilled manpower for national development (Uche, 2021). During this period, universities such as the University of Nigeria, Nsukka (1960), Ahmadu Bello University, Zaria (1962), and the University of Lagos (1962) were established (Adeleke, 2020). The organisational designs of these institutions incorporated features like a central governing council, senate, and various committees responsible for academic and administrative functions, promoting a balance between central oversight and departmental autonomy (Afolabi, 2023). The introduction of multiple governance layers enhanced organisational effectiveness by ensuring that academic and administrative decisions were made through structured and consultative processes (Nwachukwu, 2023).

The 1980s and 1990s introduced new dynamics into the organisational structures of federal universities due to economic challenges and political instability (Nwachukwu, 2023). The implementation of structural adjustment programs led to reduced government funding, compelling universities to adapt by creating revenue-generating units and adopting more corporate management practices (Edeh, 2021). This shift often resulted in a more centralised administrative approach to efficiently

manage scarce resources, impacting the traditional collegial governance models (Osagie & Bello, 2023). Universities during this period faced challenges such as administrative bottlenecks, inefficiencies, and a lack of financial autonomy, which hindered effective decision-making processes (Omole, 2022).

The governance structure of federal universities continued to evolve in response to global educational trends and internal challenges (Onwuka, 2023). The National Universities Commission (NUC), established in 1962 and reconstituted in 1974, plays a pivotal role in standardising university administration and ensuring quality assurance across institutions (Chinweuba, 2023). The increasing demand for efficiency and accountability in university governance led to reforms that sought to improve operational efficiency, research output, and international competitiveness (Ezeanya, 2022). Many universities introduced strategic management models that emphasised digital transformation, research innovation, and international collaboration as key components of their organisational design (Umeh, 2023).

Furthermore, contemporary organisational structures now often include directorates for research innovation, international collaborations, and information technology services, reflecting a more complex and responsive administrative framework designed to meet the demands of modern higher education (Chinweuba, 2023). Federal universities are adopting dynamic governance models that integrate digital platforms for administrative processes, online learning environments, and student management systems to enhance overall effectiveness (Agbaje, 2023). These advancements highlight the continuous adaptation of organisational design to address emerging challenges and improve the performance of federal universities in Nigeria (Usman & Bassey, 2023).

Assessing the performance of federal universities in Nigeria has been a critical concern for stakeholders, encompassing aspects such as academic quality, research output, administrative efficiency, and societal impact (Ibrahim, 2022). In the early stages, performance evaluation was informal and primarily focused on the universities' ability to produce graduates to fill positions in the colonial administration and, subsequently, the civil service of an independent Nigeria (Adeyemi, 2021). The effectiveness of universities during this period was measured by their capacity to sustain academic programs, produce competent graduates, and establish linkages with international academic institutions (Ogundele, 2023).

The 1970s marked a shift towards more structured performance metrics, coinciding with the expansion of the university system (Olawale, 2022). The government, through the National Universities Commission (NUC), began implementing policies to standardise academic programs and curricula, aiming to ensure uniformity and maintain educational standards across federal universities (Adebayo & Nwosu, 2023). Performance indicators during this era included student enrollment numbers, graduation rates, and the establishment of new academic programs aligned with

national development goals (Ojo, 2023). Universities that met these performance benchmarks were rewarded with increased funding and government support, reinforcing the importance of standardised evaluation frameworks (Edeh, 2023).

Economic downturns in the 1980s and 1990s posed significant challenges to the performance of federal universities (Nduka, 2022). Diminished funding led to deteriorating infrastructure, brain drain, and frequent industrial actions by staff unions, all of which adversely affected academic quality and operational efficiency (Chukwu, 2021). In response, universities were encouraged to diversify their funding sources, leading to the creation of consultancies, commercial ventures, and partnerships aimed at supplementing government allocations (Oyekan, 2023). These initiatives became additional metrics for evaluating institutional performance, focusing on financial sustainability and entrepreneurial activities (Usman & Bassey, 2023).

In the contemporary context, performance evaluation of federal universities has become more comprehensive and data-driven (Agbaje, 2023). The NUC has instituted accreditation processes that assess programs based on faculty qualifications, research output, student-to-staff ratios, and the adequacy of teaching facilities (Okonjo, 2023). Moreover, global university rankings have introduced new performance dimensions, including international collaborations, research citations, and innovation indices (Usman & Bassey, 2023). Federal universities are now increasingly measured by their ability to compete on both national and international stages, necessitating continuous improvements in governance, academic standards, and infrastructural development (Ezeanya, 2022). The integration of digital technologies and quality assurance mechanisms has further enhanced the ability of these institutions to deliver high-quality education and research output (Ifeniyi, 2023).

These advancements demonstrate the evolving performance landscape of federal universities, where organisational efficiency, governance effectiveness, financial sustainability, and academic excellence collectively determine institutional success (Chukwuma, 2023).

Thus, the interplay between organisational design and performance in Nigerian federal universities is both intricate and significant (Umeh, 2023). A well-structured organisational framework is fundamental to achieving institutional goals, enhancing academic quality, and ensuring operational efficiency (Ikechukwu & Danjuma, 2022). Governance structure plays a crucial role in ensuring organisational effectiveness, as clearly defined leadership hierarchies and decision-making processes enhance institutional coherence (Akande, 2023). Similarly, administrative structure impacts operational efficiency by streamlining procedures, reducing bureaucracy, and fostering a culture of accountability (Ogunleye, 2021).

Ogbunike (2023) further suggested that academic structure significantly affects teaching quality by determining faculty autonomy, curriculum design, and research facilitation, thereby influencing overall student learning experiences. The financial structure of universities dictates resource allocation strategies, which are critical to achieving institutional goals, maintaining sustainability, and improving infrastructural development (Ifeanyi, 2023). Again, physical infrastructure remains a fundamental determinant of learning outcomes, as modern facilities, well-equipped classrooms, and technologically advanced learning environments enhance the overall educational experience (Ekwueme, 2022). These components collectively highlight the essential nexus between organisational design and performance, underscoring their combined impact on the sustainability and competitiveness of federal universities in Nigeria (Chukwuma, 2023).

In an ideal situation, federal universities are expected to function as centres of excellence, where organisational design fosters efficiency, innovation, and academic excellence. A well-structured governance framework ensures effective decision-making, while a streamlined administrative structure enhances operational efficiency. An optimally designed academic structure promotes quality teaching and research, and a robust financial structure guarantees adequate funding for infrastructure, faculty development, and research initiatives. Additionally, a well-planned physical infrastructure provides a conducive learning environment that supports students' academic performance and overall institutional growth.

However, the real situation in many federal universities in Southeast Nigeria deviates significantly from this ideal. Weak governance structures often result in bureaucratic inefficiencies, power struggles, and lack of transparency in decision-making. Administrative bottlenecks hinder operational efficiency, leading to delays in critical university functions such as staff promotions, resource allocation, and student services. Academic structures are sometimes inadequate due to poor curriculum planning, staff shortages, and outdated teaching methodologies. Financial constraints, exacerbated by overdependence on government funding, result in irregular salary payments, inadequate research grants, and insufficient investment in infrastructure. Additionally, deteriorating physical infrastructure, including inadequate lecture halls, laboratories, and hostel facilities, negatively impacts students' learning experiences and academic outcomes. These systemic inefficiencies significantly impede the performance of federal universities in the region.

As a consequence, the overall quality of education and institutional performance in these universities is declining. Ineffective governance leads to frequent disruptions, such as strikes and protests, which further compromise academic activities. Administrative inefficiencies create frustration among staff and students, reducing morale and productivity. Poor academic structures contribute to declining teaching

quality, reducing graduates' competitiveness in the labour market. Financial instability weakens research output and international collaborations, while inadequate physical infrastructure leads to overcrowding, poor learning conditions, and increased dropout rates. If these challenges persist, federal universities in Southeast Nigeria risk continued deterioration in performance, undermining their capacity to fulfil their educational and developmental mandate.

It is on this premise that this study examines the effect of organisational design on the performance of federal universities in southeast Nigeria. To achieve this aim, the study asked the following five research questions:

1. What is the effect of governance structure on organisational effectiveness in federal universities in Southeast Nigeria?
2. How does administrative structure affect operational efficiency in federal universities in Southeast Nigeria?
3. What is the effect of academic structure on teaching quality in federal universities in Southeast Nigeria?
4. How does financial structure influence the achievement of university goals in federal universities in Southeast Nigeria?
5. What is the effect of physical infrastructure on learning outcomes in federal universities in Southeast Nigeria?

By addressing the above five research questions, this study aims to examine how organisational design influences the performance of federal universities in Southeast Nigeria. Specifically, it seeks to assess the impact of governance structure on organisational effectiveness and investigate how administrative structure affects operational efficiency. It also evaluates the role of academic structure in shaping teaching quality and explores the influence of financial structure on the achievement of university goals. Furthermore, the study examines the effect of physical infrastructure on learning outcomes. By addressing these research questions, the study provides insights into strategic reforms needed to enhance university governance, administration, academic standards, financial management, and infrastructural development for improved institutional performance. This led to the development of these five hypotheses:

H1: Governance structure has a significant effect on organisational effectiveness in federal universities in Southeast Nigeria.

H2: Administrative structure has a significant effect on operational efficiency in federal universities in Southeast Nigeria.



H3: Academic structure has a significant effect on teaching quality in federal universities in Southeast Nigeria.

H4: Financial structure has a significant effect on the achievement of university goals in federal universities in Southeast Nigeria.

H5: Physical infrastructure has a significant effect on learning outcomes in federal universities in Southeast Nigeria.

## **2.0 Literature Review**

### **2.1 Governance Structure and Organisational Effectiveness**

Governance structures play a critical role in shaping organizational effectiveness, as evidenced by various studies on corporate governance and firm performance. Angwaomado (2024) highlighted that well-constituted governance frameworks enhance transparency, accountability, and ethical decision-making, which collectively contribute to financial performance, risk management, and long-term value creation. Similarly, Mwangi and Nyaribo (2022) emphasized the significance of robust corporate governance structures in the education sector, demonstrating that clear roles and effective decision-making processes positively influence organizational performance. The impact of governance mechanisms on specific financial metrics was further reinforced by Sotonye et al. (2024), who found that board size and audit committee independence significantly improve financial performance indicators such as net profit after tax and return on capital employed. In a broader context, Gwala and Mashau (2022) underscored the evolving nature of governance in the Fourth Industrial Revolution, noting that adaptive governance practices enhance organizational performance in technologically dynamic environments. Beyond corporate governance, Siddiqui (2022) examined the role of organizational structure, asserting that it complements firm performance by facilitating strategic implementation and goal achievement. This perspective aligns with PwC Middle East (2025), which demonstrated that executive governance effectiveness hinges on the clarity of responsibilities and empowerment of leadership, ultimately driving value creation and organizational capability. Collectively, these studies affirm that governance structures, whether through board composition, executive oversight, or institutional frameworks, are fundamental in driving organizational success and sustainability.

### **2.2 Administrative structure and operational efficiency**

The administrative structure of an organization significantly influences its operational efficiency, as demonstrated by multiple empirical studies across different contexts. Marin, Molinero, and Arcaute (2023) identified a scalar mismatch between rigid, homogeneous administrative structures and the diverse, dynamic nature of urban systems in Chile, concluding that misalignment hampers operational

effectiveness and recommending context-sensitive planning approaches. Complementing this, Andersen et al. (2023) showed that evolving port governance structures in Ghana, particularly those embracing stakeholder engagement and technological adaptation, improved operational efficiency, highlighting the importance of flexible and responsive administrative models. In the corporate context, Zhang and Chen (2025) emphasized the role of digital technology innovation in enhancing internal efficiency and fostering equitable outcomes within Chinese enterprises, advocating for strategic digital transformation to meet sustainability goals. Similarly, Kowalska and Kucharska (2023) found that comprehensive ESG reporting among commercial banks in Poland not only fulfills regulatory compliance but also enhances operational efficiency through increased transparency and stakeholder confidence. These extant literatures suggest that administrative structures must evolve in alignment with contextual, technological, and regulatory demands to drive operational efficiency and institutional resilience.

### **2.3 Academic structure and teaching quality**

Academic structure plays a pivotal role in shaping teaching quality, as demonstrated by a range of empirical studies and literature reviews. Zhou and Mustappa (2022) emphasized that diversified measurement indexes and refined assessment tools significantly enhance academic achievement, which in turn improves teaching quality. In a more targeted intervention, Heydarnejad, Rezazadeh, and Namaziandost (2022) found that performance-based assessment (PBA) not only boosts academic motivation and reading comprehension but also reduces language anxiety, thus fostering a more effective teaching and learning environment. Similarly, Brandmiller, Schnitzler, and Dumont (2023) highlighted the influence of teacher perceptions on student engagement and achievement, underscoring the importance of professional development in improving instructional quality. Castillo and Hallinger (2022), examining multigrade rural classrooms in South Africa, revealed that flipped classroom strategies promote active learning and improve teaching quality when adapted to specific educational contexts. The integration of emerging technologies also features prominently, as Albadarin et al. (2024) showed that AI tools like ChatGPT can personalize learning and enhance teaching quality, calling for further exploration into its educational applications. Reinforcing the role of technology, the University of Wisconsin-Madison (2022) demonstrated through its Learning Analytics Center of Excellence (LACE) that leveraging learning analytics enables instructors to pinpoint learning gaps and improve pedagogical approaches. These studies affirm that a well-structured academic framework—encompassing assessment practices, teacher development, pedagogical models, and technological integration—is essential for advancing teaching quality in diverse educational settings.



## 2.4 Financial structure and achievement of university goals

The financial structure of universities plays a fundamental role in determining their ability to achieve institutional goals, as evidenced by a growing body of research. Alghamdi and Alsaadi (2023) introduced the Green Ocean Strategy for Financial Sustainability (GOSFS) in Saudi Arabia, demonstrating that diversified income streams significantly improve financial health and support long-term objectives. In contrast, Kordamentha (2023) revealed that mounting financial pressure is compelling Australian universities to consider mergers as a strategic response to maintain operations and institutional viability. Similarly, Financial Times (2023) argued that tuition fee increases in the UK are insufficient to solve financial woes, emphasizing the need for structural financial reforms to sustain universities. Reinforcing this view, The Times (2024) highlighted looming bankruptcies in UK higher education, advocating for urgent financial restructuring to ensure institutional survival and goal attainment. Beyond structural reforms, the alignment of financial strategy with academic performance is also critical. Tan, Samad, and Ismail (2025) showed that mastery-oriented achievement goals positively influence student performance in China, suggesting that financial support mechanisms should be tailored to reinforce academic success. Complementing these insights, Andrews University (2022) demonstrated through its strategic plan that improving financial access—via tuition policy reviews and expanded scholarships—enhances student enrollment and institutional stability. These extant literatures underscore that effective financial structures—whether through strategic innovation, mergers, restructuring, or increased access—are essential for the sustainable realization of university goals.

## 2.5 Physical infrastructure and learning outcomes

Physical infrastructure has emerged as a crucial determinant of learning outcomes in higher education, with several studies highlighting its significance across diverse contexts. Okoye et al. (2022) emphasized the impact of digital infrastructure in Latin American universities, revealing that inadequate access to internet services and digital platforms impedes effective teaching and learning, whereas institutions with robust digital systems report improved educational outcomes. Similarly, the EPSRC (2022) strategic delivery plan underscored that infrastructure in engineering and physical sciences institutions in the UK is foundational to ambitious research and improved learning results, advocating for the continuous provision of essential facilities. Complementing this, the National Infrastructure Commission (2022) stressed the importance of long-term funding and strategic planning, concluding that stable public investment in educational infrastructure is critical for enhancing learning environments and achieving better academic outcomes. The OECD (2022), using PISA data, found a positive correlation between quality physical learning

environments and student performance, reinforcing the need for policymakers to prioritize investment in classroom infrastructure. Supporting these findings, Springer (2022) in a systematic literature review revealed that effective ICT integration, facilitated by adequate infrastructure, significantly enhances curriculum delivery and learning performance in secondary schools. Further, Springer (2023) demonstrated that well-equipped maker spaces promote hands-on, experiential learning, contributing positively to educational outcomes. These studies therefore affirm that both physical and digital infrastructures are essential for fostering conducive learning environments, and they recommend increased institutional and governmental commitment to infrastructural development to support teaching quality and student success.

### 3.0 Methodology

The study adopted a survey research design. The target population of the study was in two categories. The first category consisted of the entire staff of conventional full-fledged nonspecialized Federal Universities in the southeast region which include: (1) University of Nigeria Nsukka, Enugu State – 6436 members of staff; (2) Nnamdi Azikiwe University Awka, Anambra State – 3589; (3) Alex Ekwueme Federal University Ndufu Alike Ikwo, Ebonyi State – 1338. The second category consists of the current 2023/2024 Session PG Students of these universities, which include: (1) University of Nigeria Nsukka, Enugu State – 4992; (2) Nnamdi Azikiwe University Awka, Anambra State – 3881; (3) Alex Ekwueme Federal University Ndufu Alike Ikwo, Ebonyi State - 1682. The total population was therefore 21918. Sample size of 372 for members of staff and 372 for PG students was determined using Freund and William statistical formula. The study adopted stratified sampling technique to reach out to different strata using a structured questionnaire designed on a 5-point Likert scale. The validity of the instrument was measured using content validity. Cronbach Alpha was used to test the reliability of the instrument which showed a coefficient of 0.894, indicating that the items were reliable. Descriptive statistics was used for data analyses while the inferential statistics was applied to test the hypotheses at 5% level of significance using Ordinal Logistic Regression.

### 4.0 Results and Implications

Governance structure had a significant effect on organisational effectiveness in federal universities in Southeast Nigeria. ( $r^2 = 0.397$ ); ( $p < 0.05$ ). This implied that effective governance structures are crucial for enhancing organizational effectiveness in federal universities. Administrative structure had a significant effect on operational efficiency in federal universities in Southeast Nigeria. ( $r^2 = 0.403$ ); ( $p < 0.05$ ). This implied that a well-defined administrative structure improves operational efficiency in federal universities. Academic structure had a significant

effect on teaching quality in federal universities in Southeast Nigeria. ( $r^2 = 0.386$ ); ( $p < 0.05$ ). This implied that a strong academic structure is essential for enhancing teaching quality in federal universities. Financial structure had a significant effect on the achievement of university goals in federal universities in Southeast Nigeria. ( $r^2 = 0.387$ ); ( $p < 0.05$ ). This implied that sound financial structures are key to achieving university goals and ensuring long-term sustainability. Physical infrastructure had a significant effect on learning outcomes in federal universities in Southeast Nigeria. ( $r^2 = 0.415$ ); ( $p < 0.05$ ). This implied that adequate physical infrastructure is fundamental to improving learning outcomes in federal universities.

## **5.0 Conclusion and Recommendation**

### **5.1 Conclusion**

This study examined the effect of organisational design on the performance of federal universities in southeast Nigeria. The findings show that governance, administrative, academic, financial structures, and physical infrastructure all significantly influence key outcomes such as organisational effectiveness, operational efficiency, teaching quality, university goal achievement, and learning outcomes. Specifically, strong governance and administrative structures foster better effectiveness and efficiency, while a solid academic framework enhances teaching quality. Financial structures are vital for achieving institutional goals, and robust physical infrastructure directly impacts student learning outcomes. In line with these findings, the study concludes that organisational design plays a critical role in the performance of federal universities in Southeast Nigeria.

### **5.2 Recommendations**

- I. Federal universities should strengthen their governance structures by promoting transparency, accountability, and clear decision-making processes to enhance organizational effectiveness.
- II. Federal universities should streamline their administrative processes and ensure that roles and responsibilities are clearly defined to improve operational efficiency.
- III. Federal universities should invest in faculty development, curriculum enhancement, and academic leadership to improve teaching quality and support academic excellence.
- IV. Federal universities should adopt diversified funding strategies, improve financial management practices, and ensure sustainable funding sources to achieve their institutional goals.
- V. Federal universities should prioritize the development and maintenance of modern and conducive physical infrastructures, such as classrooms, laboratories, and digital facilities, to enhance learning outcomes.

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