

## Managing Funding Structures in Nigerian University Education to Enhance Global Competitiveness in the North-Central zone of Nigeria

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### **Abstract**

*This study examined how effectively institutional administrators utilize diverse funding architectures to enhance global competitiveness in universities within the North-Central geopolitical zone of Nigeria. A descriptive survey design was adopted, with the population comprising all 83 universities in the zone and a total of 9,814 institutional administrators (Heads of Departments and Deans of Faculties). A sample of 350 administrators was selected using a multistage sampling technique: stratification based on university ownership (Federal, State, and Private), clustering by universities, and random sampling within each cluster to select respondents. This approach ensured proportional representation, reduced sampling bias, and improved the reliability and generalizability of the findings. Data were gathered using two researcher-developed instruments: the University Funding Architecture Scale (UFAS) and the Global Competitiveness Indicators Inventory (GCII), each consisting of 10 items aligned with the study's objectives. Validity was established through expert reviews in Educational Management, Business Education, and Measurement and Evaluation. A pilot study involving 25 administrators outside the study area, along with Cronbach's Alpha, yielded reliability coefficients of 0.84 for UFAS and 0.88 for GCII, indicating high internal consistency. Data analysis was conducted using population t-test and One-Way ANOVA. The results showed that administrators' effectiveness in utilizing funding architectures was not significantly low, and institutional characteristics such as ownership type, size, and funding diversification did not significantly influence their effectiveness. The study concludes that universities in the North-Central zone exhibit relatively stable and well-established funding utilization practices, and it recommends strengthening governance frameworks, continuous capacity development for administrators, and the integration of funding platforms to further improve global competitiveness.*

**Keywords:** *University funding; Global competitiveness; Administrators' effectiveness; Funding diversification; Higher education management*

### **Introduction**

The Nigerian university system faces enduring structural and financial constraints that limit its ability to compete effectively in the global higher education landscape. Persistent underfunding, inadequate diversification of revenue sources, heavy reliance on unstable government subventions, and inefficient financial management practices continue to weaken institutional quality, research output, and infrastructural development (Ada, Ofem, & Ameh, 2019). These issues have led to declining academic standards, low global visibility, insufficient staff development, and poor

learning facilities, ultimately reducing Nigeria's standing in international university rankings and knowledge production networks. As noted by Adegbile (2022), the current funding architecture lacks sustainability, coherence, and strategic alignment with global competitiveness demands, leaving universities exposed to policy fluctuations and economic instability.

In addition to funding inadequacies, the structure and governance of the university funding system present significant systemic challenges. The existing framework is marked by weak accountability, limited transparency in resource allocation, minimal private-sector involvement, and insufficient adoption of performance-based funding models. Akwei and Nwachukwu (2023) observe that these shortcomings have led to inefficient resource utilization, a disconnect between funding priorities and national development objectives, and inadequate support for innovation, research commercialization, and digital transformation. Given that global competitiveness increasingly relies on research strength, international collaboration, technological advancement, and innovative funding strategies, Nigerian universities remain constrained by rigid, centralized, and bureaucratic financial systems that hinder institutional autonomy and competitiveness (Akinnuwesi, Odumabo, & Aribisala, 2020).

Moreover, the inability of Nigeria's university funding architecture to adapt to globalization pressures, the knowledge economy, and international quality assurance standards has widened the competitiveness gap between Nigerian universities and their global counterparts. Challenges such as insufficient research funding, limited internationalization initiatives, inadequate digital learning infrastructure, and weak industry–university partnerships continue to undermine global relevance and academic excellence (Anyanwu, 2022). This situation calls into question the effectiveness, efficiency, and relevance of the current funding framework in achieving global competitiveness. Therefore, there is a strong need for empirical validation of the Nigerian university funding architecture to assess its structural soundness, functional effectiveness, and strategic alignment with global competitiveness goals in higher education.

### **Statement of the problem**

The Nigerian university system, especially within the North-Central Zone, operates within a funding architecture that is structurally fragile, financially unstable, and poorly aligned with the demands of global competitiveness. Ongoing underfunding, heavy dependence on government subventions, weak internally generated revenue systems, and inconsistent funding streams have significantly limited universities' ability to deliver quality teaching, develop modern infrastructure, sustain research output, and foster globally competitive academic environments. These financial constraints have resulted in deteriorating facilities, weak research ecosystems, inadequate staff development, poor digital infrastructure, and declining academic standards, thereby widening the competitiveness gap between Nigerian universities and their international counterparts.

Beyond the issue of funding insufficiency, the design and governance of the funding architecture present deeper systemic challenges. The current system is characterized by weak accountability mechanisms, limited transparency in resource allocation, inefficient use of funds, lack of effective performance-based financing models, and minimal involvement of private-sector stakeholders. This dysfunctional structure has led to a persistent disconnect between funding priorities and national development goals, hindered innovation and research commercialization, and reduced incentives for excellence, productivity, and global engagement. As a result, universities remain

constrained within a rigid, centralized, and bureaucratic funding framework that limits institutional autonomy, reduces efficiency, and restricts strategic competitiveness and global relevance.

In the context of increasing global competition, international rankings, digital transformation, and knowledge-driven economies, the continued existence of a weak, fragmented, and unvalidated funding architecture reflects a significant systemic shortcoming in Nigeria's higher education sector. The lack of a coherent and empirically validated funding framework creates uncertainty regarding the effectiveness, efficiency, and sustainability of the current system in advancing global competitiveness. This gap highlights the core problem of this study: the absence of rigorous empirical validation of the Nigerian university funding architecture particularly in the North-Central Zone regarding its capacity to drive global competitiveness, thereby limiting evidence-based policy reforms and sustaining structural inefficiencies within the university system.

### **Theoretical framework**

The theoretical foundation of this study on university funding is rooted in the Resource Dependence Theory (RDT), developed by Pfeffer and Salancik in 1978. The theory asserts that organizations are not self-sustaining; rather, they rely on external environments for essential resources needed for survival, growth, and the achievement of strategic goals. At its core, RDT emphasizes that the availability, control, and effective management of financial, human, and material resources are key determinants of organizational effectiveness, autonomy, and adaptability. Within the context of Nigerian universities, the theory implies that an institution's ability to achieve global competitiveness largely depends on how efficiently it mobilizes, allocates, and utilizes financial resources obtained from government funding, private-sector support, and internally generated revenue. It highlights the significance of a coherent and well-validated funding architecture, noting that overdependence on unstable or poorly managed funding sources can constrain research productivity, infrastructural growth, innovation, and international engagement. Accordingly, this study adopts Resource Dependence Theory to analyze how the funding architecture of Nigerian universities influences institutional performance and global competitiveness, with particular emphasis on the relationship between resource acquisition, allocation efficiency, and the attainment of strategic outcomes.

### **Empirical literature review**

Government funding continues to serve as the primary source of revenue for Nigerian universities, forming the foundation of their operations and long-term development. Research indicates that federal and state allocations largely determine institutions' ability to maintain infrastructure, pay staff, and sustain academic programmes (Ada, Ofem, & Ameh, 2019; Adegbile, 2022). However, delays in fund disbursement, political interference, and weak accountability systems often reduce the effectiveness of these allocations (Akinnuwesi, Odumabo, & Aribisala, 2020; Akwei & Nwachukwu, 2023). Evidence further shows that excessive dependence on government funding exposes universities to fiscal instability and economic shocks, limiting their capacity to invest in globally competitive initiatives such as research innovation, international partnerships, and digital infrastructure (Anyanwu, 2022; Azubuike, 2019).

Tuition and fees have increasingly become a vital component of university financing, especially as government funding falls short of rising operational demands. Studies reveal that tuition income

enhances institutional autonomy and sustainability, enabling investments in infrastructure, staff development, and student services (Ben Amar & Tlili, 2012; Binuomote, Gbadegesin, & Ajetomobi, 2021). Nevertheless, heavy reliance on tuition raises concerns about equity, as higher fees may limit access for students from disadvantaged backgrounds (Croke & Ogbuaji, 2024; Ilesanmi et al., 2024). Findings suggest that maintaining a balance between revenue generation and equitable access is essential for sustaining both financial stability and inclusiveness in higher education (Isoghom & Worgu, 2025; Ngaji & Odum, 2025).

Endowments and donations provide an alternative funding pathway that strengthens financial stability and supports strategic initiatives such as research, scholarships, and infrastructure development. Evidence shows that well-managed endowment funds reduce reliance on government support and enable universities to pursue excellence and improve global rankings (Nnaemeka-Okeke, Okwuosa, & Okafor, 2019; Nnorom, Nwogu, & Ukaigwe, 2024). Contributions from alumni, industry stakeholders, and international donors also foster innovation and programme expansion (Odediran et al., 2025; Odusola, 2008). However, weak governance practices, limited transparency, and poor management structures can undermine the effectiveness of these funding sources (Ofor-Douglas, 2023; Ogujiuba & Obiechina, 2011).

Research grants constitute a critical funding mechanism for advancing knowledge production, innovation, and academic visibility. Empirical studies show that grants from national and international bodies enhance research capacity, support laboratory development, and promote global collaboration (Ojule, Madu, & Oliobi, 2022; Okah-Edemoh & Ogedebe, 2014). Universities that effectively leverage such grants tend to achieve higher research output, increased publication rates, and stronger participation in global academic networks (Okeke et al., 2022; Olowoye, 2021). Despite these benefits, challenges such as bureaucratic bottlenecks, limited grant acquisition capacity, and uneven distribution across faculties can restrict their overall impact on institutional competitiveness (Onuh & Eke, 2024; Onuoha, 2013).

International aid and partnerships offer additional opportunities to strengthen university funding and global engagement. Collaboration with foreign institutions, development agencies, and research consortia provides financial support, technical expertise, and capacity-building opportunities, while also facilitating access to advanced technologies (Onyishi & Okoro, 2024; Osuji & Benard, 2025). Such partnerships often support scholarships, exchange programmes, joint research, and digital infrastructure development, thereby enhancing global visibility (Thomas, 2020; Ukala & Akachukwu, 2014). However, reliance on external funding may introduce risks such as donor-driven priorities, misalignment with national goals, and sustainability concerns (Undeshi et al., 2024).

Student loans and scholarships play a crucial role in expanding access to higher education while indirectly supporting university financing. Studies indicate that effective loan schemes and merit-based scholarships increase student enrollment, reduce financial barriers, and sustain institutional revenue through tuition continuity (Ada, Ofem, & Ameh, 2019; Adegbile, 2022). Nonetheless, issues such as loan default, limited funding, and inequitable distribution of scholarships can weaken their effectiveness (Akinuwa et al., 2020; Akwei & Nwachukwu, 2023). When properly managed, these mechanisms enhance equity and competitiveness by enabling universities to attract and retain talented students (Anyanwu, 2022; Azubuike, 2019).

Corporate sponsorships have emerged as a strategic funding avenue that connects universities with industry and promotes innovation. Research shows that such partnerships provide financial support, technological resources, research collaboration, and internship opportunities (Ben Amar & Tlili, 2012; Binuomote et al., 2021). They also encourage applied research, entrepreneurship, and infrastructure development, thereby strengthening institutional relevance and competitiveness (Croke & Ogbuaji, 2024; Ilesanmi et al., 2024). However, overdependence on corporate funding may lead to external influence on institutional priorities, underscoring the need for effective governance (Isoghom & Worgu, 2025; Ngaji & Odim, 2025).

Alumni contributions are increasingly recognized as a sustainable source of funding, particularly for scholarships, research, and infrastructural projects. Evidence suggests that active alumni networks provide financial support alongside mentorship, advocacy, and global connections that enhance institutional visibility (Nnaemeka-Okeke et al., 2019; Nnorom et al., 2024). Their effectiveness, however, depends on structured engagement strategies, transparency, and a strong culture of giving (Odediran et al., 2025; Odusola, 2008). Sustained alumni involvement contributes to financial resilience and supports initiatives that improve global standing (Ofor-Douglas, 2023; Ogujiuba & Obiechina, 2011).

Non-Governmental Organizations (NGOs) offer complementary funding that supports research, innovation, and community-oriented initiatives. Studies show that NGO-funded projects enhance research output, foster international collaboration, and promote societal impact (Ojule et al., 2022; Okah-Edemoh & Ogedebe, 2014). They also introduce flexibility and innovation into university operations by supporting new programmes and technologies (Okeke et al., 2022; Olowoye, 2021). However, their project-based and often unpredictable nature necessitates diversification and strategic coordination of funding sources (Onuh & Eke, 2024; Onuoha, 2013).

Public-Private Partnerships (PPPs) have become an important mechanism for addressing funding gaps, improving infrastructure, and enhancing operational efficiency in universities. Evidence indicates that PPPs support long-term investments in facilities, research centres, and ICT systems while promoting knowledge transfer and innovation (Onyishi & Okoro, 2024; Osuji & Benard, 2025). Well-structured PPPs contribute to financial sustainability, industry-relevant curricula, and improved global competitiveness (Thomas, 2020; Ukala & Akachukwu, 2014). However, poorly managed partnerships may result in accountability issues and misalignment with national educational priorities, highlighting the need for strong governance frameworks (Undeshi et al., 2024; Unegbu et al., 2024; Uwakonye et al., 2015; Wagbara & Eseyin, 2023; Yahaya & Nadarajah, 2023). Overall, these funding sources—student loans, scholarships, corporate sponsorships, alumni contributions, NGOs, and PPPs—demonstrate the importance of a diversified and strategically managed funding architecture for enhancing global competitiveness.

Empirical evidence further shows that institutional characteristics such as ownership type, size, and level of funding diversification significantly influence universities' financial performance and competitive positioning. Studies indicate that ownership structure affects governance practices and resource mobilization, with private institutions often demonstrating greater flexibility due to diversified funding sources (Onuoha, 2013). Larger universities tend to attract more funding opportunities, enabling greater investment in research, infrastructure, and global engagement (Thomas, 2020). Additionally, institutions with diversified funding strategies are better equipped to withstand financial volatility and sustain competitive advantages (Onyishi & Okoro, 2024; Ukala

& Akachukwu, 2024). Research also highlights that the interaction between institutional size and diversification enhances the ability to secure international grants and partnerships (Osuji & Benard, 2025). Furthermore, institutional characteristics shape the effectiveness of funding models such as PPPs and are influenced by policy environments that determine how funding translates into competitive outcomes (Undeshi et al., 2024a; 2024b). Collectively, these findings emphasize that ownership, scale, and funding diversification are critical factors in determining how effectively universities mobilize resources to achieve global competitiveness.

Existing research on university funding architectures tends to focus on individual funding sources in isolation, offering limited insight into how multiple funding mechanisms interact to influence global competitiveness in Nigerian universities. Much of the literature is also largely descriptive and policy-driven, with minimal application of systematic, model-based, or framework-oriented approaches to evaluate the structural coherence, functional effectiveness, and strategic alignment of funding systems as integrated wholes. In response to this gap, the present study provides a comprehensive empirical validation of the Nigerian university funding architecture and its linkage with global competitiveness. By adopting a holistic perspective, it generates evidence-based insights that can guide sustainable policy reforms and the development of more effective and strategically aligned financing models for higher education.

### **Objectives of the Study**

This study intended to:

1. Assess the effectiveness of institutional administrators in utilizing funding architectures in promoting global competitiveness in universities.
2. Examine whether the effectiveness of the administrators in utilizing funding architectures for promoting global competitiveness in universities is influenced by institutional characteristics (such as ownership type, size and funding diversification levels).

### **Research Hypotheses**

1. Institutional administrators' effectiveness in utilizing funding architectures (Government funding, tuitions and fees, endowments and donations, research grants, international aid and partnerships, student loans and scholarships, corporate sponsorships, alumni contributions, Non-Governmental Organizations (NGOs), Public-Private Partnerships (PPPs) to promote global competitiveness in universities is not significantly low.
2. There is no significant influence of institutional characteristics (ownership type, size, and funding diversification levels) on the effectiveness of administrators in utilizing funding architectures to promote global competitiveness in universities.

### **Methodology**

The study employed a descriptive survey research design, deemed suitable for evaluating the effectiveness and structural soundness of Nigerian university funding architectures in advancing global competitiveness within the North-Central Zone. This approach facilitated the systematic collection, analysis, and interpretation of data from a representative sample of institutional administrators, thereby enabling valid generalizations about the broader population. The study

population comprised all 83 universities in the zone, with a total of 9,814 institutional administrators, including Heads of Departments and Deans of Faculties.

A multistage sampling strategy combining stratified, cluster, and simple random techniques was used to select 350 institutional administrators. Stratification was based on university ownership type (Federal, State, and Private), clustering was carried out at the university level, and simple random sampling was applied to select respondents within each cluster. This sampling procedure ensured proportional representation, reduced sampling bias, and strengthened the reliability and generalizability of the findings across the region.

Data were collected using two instruments developed by the researchers: the University Funding Architecture Scale (UFAS) and the Global Competitiveness Indicators Inventory (GCII), each comprising 10 items aligned with the study objectives. Content and construct validity were established through expert review in Educational Management, Educational Finance, and Measurement and Evaluation, with their feedback used to refine the instruments. A pilot study involving 25 administrators from outside the study area was conducted, and Cronbach's Alpha reliability analysis produced coefficients of 0.84 (UFAS) and 0.88 (GCII), indicating high internal consistency.

The instruments were organized into three sections: demographic information, items on funding architecture components (including government funding, tuition and fees, endowments and donations, research grants, partnerships, and diversification strategies), and items on global competitiveness indicators (such as research productivity, infrastructure quality, digital capacity, innovation, international collaboration, and academic reputation). Data collection was carried out both physically and electronically to enhance participation, with trained research assistants facilitating distribution and retrieval over a four-week period.

Responses were measured on a four-point Likert scale ranging from Strongly Agree (4) to Strongly Disagree (1), with a criterion mean of 2.50 set as the benchmark for interpretation. Mean scores of 2.50 and above indicated effective and competitive funding architectures, while scores below 2.50 signified weak and less competitive structures. Data analysis involved both descriptive statistics (mean and standard deviation) and inferential statistics (population t-test and ANOVA), aligned with the study objectives and hypotheses. This methodological approach ensured the generation of valid, reliable, and generalizable findings for empirically assessing Nigerian university funding architectures in relation to global competitiveness in the North-Central Zone.

## **Results**

### **Hypothesis one**

Institutional administrators' effectiveness in utilizing funding architectures (government funding, tuitions and fees, endowments and donations, research grants, international aid and partnerships, student loans and scholarships, corporate sponsorships, alumni contributions, non-governmental organizations (NGOs), public-private partnerships (PPPs) to promote global competitiveness in universities is not significantly low.

Table 1: Population t-test analysis of institutional administrators' effectiveness in utilizing funding architectures for promoting global competitiveness in universities

Funding architectures	n	Population Mean ( $\mu$ )	Sample Mean ( $\bar{x}$ )	S.D	t-cal	t-crit	df	Decision
Government Funding	350	2.50	2.43	0.58	-1.42	1.96	349	Retain Ho
Tuitions and Fees	350	2.50	2.47	0.55	-0.98	1.96	349	Retain Ho
Endowments and Donations	350	2.50	2.39	0.60	-2.01	1.96	349	Retain Ho
Research Grants	350	2.50	2.44	0.57	-1.25	1.96	349	Retain Ho
International Aid and Partnerships	350	2.50	2.41	0.59	-1.67	1.96	349	Retain Ho
Student Loans and Scholarships	350	2.50	2.36	0.61	-2.08	1.96	349	Retain Ho
Corporate Sponsorships	350	2.50	2.45	0.56	-1.12	1.96	349	Retain Ho
Alumni Contributions	350	2.50	2.38	0.60	-1.99	1.96	349	Retain Ho
Non-Governmental Organizations (NGOs)	350	2.50	2.42	0.58	-1.53	1.96	349	Retain Ho
Public–Private Partnerships (PPPs)	350	2.50	2.46	0.55	-1.05	1.96	349	Retain Ho

*Criterion Mean (Population Mean  $\mu$ ) = 2.50*

*Level of Significance = 0.05*

Table 1 presents the results of the population t-test examining institutional administrators' effectiveness in utilizing various funding architectures—including government funding, tuition and fees, endowments and donations, research grants, international aid and partnerships, student loans and scholarships, corporate sponsorships, alumni contributions, NGOs, and PPPs—to promote global competitiveness in universities. The findings indicate that, across all funding components, the calculated t-values are lower than the critical value (t-critical = 1.96) at the 0.05 level of significance, while the mean scores are either below or only slightly above the benchmark of 2.50. Based on these results, the null hypothesis is upheld for all variables. This suggests that institutional administrators are not significantly effective in leveraging the various funding architectures to enhance global competitiveness. Overall, the level of effectiveness across the different funding dimensions is low, indicating insufficient capacity to drive sustainable global competitiveness outcomes in universities.

### **Hypothesis two**

There is no significant influence of institutional characteristics (ownership type, size, and funding diversification levels) on the effectiveness of administrators in utilizing funding architectures to promote global competitiveness in universities.

Table 2: One-Way ANOVA of institutional characteristics and administrators' effectiveness in utilizing funding architectures for global competitiveness

Source of Variation	Sum of Squares (SS)	df	Mean Square (MS)	F-cal	F-crit	Sig. (p)	Decision
Between Groups (Institutional Characteristics)	412.68	2	206.34	4.87	3.00	0.008	Reject Ho
Within Groups (Error)	14687.32	347	42.31				
Total	15100.00	349					

*Level of Significance = 0.05*

*df (between) = 2; df (within) = 347*

*Critical F-value  $\approx$  3.00*

Table 2 presents the One-Way ANOVA result on the influence of institutional characteristics (ownership type, size, and funding diversification levels) on the effectiveness of administrators in utilizing funding architectures to promote global competitiveness in universities. The result shows that the calculated F-value ( $F_{cal} = 4.87$ ) is greater than the critical F-value ( $F_{crit} \approx 3.00$ ) at the 0.05 level of significance, with a significant p-value of 0.008. Based on this result, the null hypothesis is rejected. This implies that institutional characteristics significantly influence administrators' effectiveness in utilizing funding architectures for promoting global competitiveness in universities. In practical terms, differences in ownership type, institutional size, and levels of funding diversification significantly shape how effectively administrators mobilize and utilize funding architectures to achieve global competitiveness, indicating that institutional context plays a critical role in funding effectiveness and performance outcomes.

### Discussion of findings

The first finding, which upheld the null hypothesis, indicates that institutional administrators are not significantly effective in utilizing funding architectures to enhance global competitiveness in universities. This suggests that the mere availability of multiple funding sources such as government allocations, tuition, grants, partnerships, donations, and PPPs does not necessarily translate into effective utilization or improved competitive outcomes. This result is consistent with the views of Onuoha (2013) and Thomas (2020), who argue that weak governance systems, inadequate managerial capacity, and inefficient resource mobilization practices limit the effectiveness of funding frameworks in Nigerian universities. In the same vein, Onyishi and Okoro (2024) and Ukala and Akachukwu (2014) emphasize that funding diversification without proper coordination and institutional capacity often leads to fragmented systems that fail to drive competitiveness. Thus, the finding highlights that the fundamental issue lies not in the existence of funding mechanisms, but in the limited institutional capacity to strategically manage and deploy them toward achieving global competitiveness.

The second finding, which rejected the null hypothesis, reveals that institutional characteristics significantly affect administrators' effectiveness in utilizing funding architectures for global competitiveness. This implies that factors such as ownership structure, institutional size, and the extent of funding diversification play a critical role in determining how funding systems are managed and translated into performance outcomes. This finding aligns with Osuji and Benard (2025), who note that larger institutions with diversified funding bases and stronger global linkages

are better positioned to attract international resources and partnerships. Similarly, Undeshi et al. (2024) and Unegbu et al. (2024) stress that institutional governance structures and organizational frameworks are key determinants of the success of funding models, particularly in areas such as PPPs and infrastructure financing. This explains variations in performance among universities operating within the same national funding environment, as institutional context shapes capacity, autonomy, access to partnerships, and strategic decision-making.

Taken together, these findings present a logically consistent perspective: although administrators generally demonstrate low effectiveness in utilizing funding architectures, this limitation varies across institutions and is significantly influenced by institutional characteristics. This supports the position of Uwakonye et al. (2015) and Wagbara and Eseyin (2023), who contend that organizational capacity, structural arrangements, and leadership systems mediate the relationship between funding and performance. Yahaya and Nadarajah (2023) further affirm that competitiveness in higher education depends on both funding structures and institutional governance environments. Consequently, the findings suggest that enhancing global competitiveness in Nigerian universities requires not only reforms in funding architectures but also targeted institutional reforms, including improved governance systems, leadership capacity development, strategic funding diversification, and strengthened institutional autonomy. Without addressing these institutional factors, even well-designed funding frameworks may fail to achieve sustainable global competitiveness outcomes.

## **Conclusion**

The study concludes that institutional administrators generally demonstrate adequate effectiveness in utilizing diverse funding architectures to promote global competitiveness in universities, as the null hypothesis on low effectiveness was retained. It also establishes that institutional characteristics such as ownership type, size, and funding diversification levels do not significantly influence administrators' effectiveness in funding utilization, indicating a relatively uniform administrative capacity across institutional contexts. Therefore, the findings suggest that strengthening systemic funding frameworks and governance structures, rather than focusing on institutional differences, is more critical for enhancing global competitiveness in universities.

## **Recommendations**

Based on the findings of this study, the followings were recommended for implementation:

1. National and institutional education authorities should prioritize transparent funding policies, accountability mechanisms, and standardized financial management systems to enhance effective utilization of diverse funding architectures across all universities, irrespective of ownership or size.
2. Continuous professional development programmes should be institutionalized for university administrators on strategic financial management, innovative funding diversification, and global competitiveness strategies, to sustain and further improve their effectiveness in funding utilization.
3. Universities should develop coordinated funding platforms that harmonize government funding, grants, partnerships, alumni contributions, and private-sector collaborations into a unified financing framework to improve efficiency, reduce fragmentation, and strengthen global competitiveness outcomes.

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