

Strategic Funding Approaches and Research Productivity in Tertiary Institutions in Cross River State

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ABSTRACT

This study examined strategic funding approaches and research productivity in tertiary institutions in Cross River State. Specifically, the study investigated the effect of internal research grants, external research funding collaborations, and institutional budgetary allocation for research-on-research productivity in selected tertiary institutions. The study focused on University of Calabar, University of Cross River, and Federal College of Education, Obudu. The study adopted the descriptive survey research design. The population of the study comprised 1,780 academic staff drawn from the three selected institutions, while a sample size of 327 respondents was determined using the Taro Yamane sample size determination formula. Simple random sampling technique was employed in selecting the respondents. Data were collected through a structured questionnaire titled Strategic Funding Approaches and Research Productivity Questionnaire (SFARPQ). The instrument was validated using Exploratory Factor Analysis (EFA), while reliability was established using Cronbach Alpha with coefficients above 0.70. Data collected were analyzed using descriptive statistics and multiple regression analysis. The findings revealed that internal research grants, external research funding collaborations, and institutional budgetary allocation for research have significant positive effects on research productivity among academic staff in the selected tertiary institutions. The study concluded that adequate and well-structured funding mechanisms enhance research output, improve publication rates, and strengthen academic innovation in tertiary institutions. The study therefore recommended that institutional management and government agencies should increase research funding allocation, encourage external partnerships, and establish transparent grant distribution systems to improve research productivity in tertiary institutions in Cross River State.

Keywords: Strategic Funding Approaches, Research Productivity, Internal Research Grants, External Funding Collaboration, Budgetary Allocation.

1. INTRODUCTION

Research productivity has become a major benchmark for assessing the performance, competitiveness, and global relevance of tertiary institutions. Across the world, higher education institutions are increasingly evaluated not only by teaching effectiveness but also by their capacity

to generate impactful research outputs such as journal publications, patents, conference papers, policy briefs, and innovations. These outputs contribute significantly to national development, technological advancement, and knowledge-driven economies (OECD, 2023; World Bank, 2022). In this regard, universities and other tertiary institutions are expected to function as hubs of knowledge production and innovation. In developing economies, however, research productivity continues to face structural and financial constraints. Inadequate research funding, poor institutional support systems, and overdependence on government subventions have significantly weakened research output in many higher education institutions (UNESCO, 2023). Strategic funding mechanisms such as competitive internal grants, external research collaborations, endowment funding, and structured institutional allocations are increasingly being recognized as critical drivers of research productivity. Institutions that adopt diversified funding strategies tend to experience improved research visibility, higher publication rates, and stronger academic innovation outcomes (Altbach & Salmi, 2021).

In Nigeria, the challenge of low research productivity is persistent across many tertiary institutions. Funding for research is often inadequate, irregular, and poorly structured, with most academic staff relying on personal income or limited institutional support to carry out research activities. The situation is further worsened by weak linkages with external funding agencies, limited industry partnerships, and insufficient incentives for research engagement. As a result, research output in many Nigerian tertiary institutions remains below global standards (Nigerian Universities Commission, 2022). Within Cross River State, institutions such as University of Calabar, University of Cross River State, and Federal College of Education, Obudu are expected to contribute meaningfully to research development and innovation. However, evidence suggests that research productivity in these institutions is constrained by inadequate and poorly coordinated funding structures. Academic staff often experience delays in accessing research grants, lack sufficient institutional support, and face limited opportunities for external funding collaboration.

The problem of this study therefore is that research productivity in tertiary institutions in Cross River State remains low and inconsistent due to ineffective strategic funding approaches. Despite the importance of research in institutional ranking and national development, many institutions still rely on traditional and insufficient funding systems that do not adequately support sustained

research output. Consequently, there is a need to examine how strategic funding approaches can enhance research productivity in these institutions.

1.1 Objectives of the Study

The main objective of this study was to examine the effect of strategic funding approaches and research productivity in tertiary institutions in Cross River State.

Specifically, the study seeks to:

1. Determine the effect of internal research grants on research productivity in selected tertiary institutions in Cross River State.
2. Examine the influence of external research funding collaborations on research productivity in selected tertiary institutions in Cross River State.
3. Assess the impact of institutional budgetary allocation for research-on-research productivity in selected tertiary institutions in Cross River State.

2. LITERATURE REVIEW AND THEORETICAL FRAMEWORK

Research productivity has been widely studied as a key indicator of institutional performance in higher education. Empirical evidence consistently shows that research output measured through publications, citations, patents, and funded projects is significantly influenced by the availability and structure of research funding (Abramo & D'Angelo, 2021). Scholars argue that funding not only provides the material resources needed for research but also enhances collaboration, academic motivation, and institutional competitiveness. Recent studies have demonstrated a strong positive relationship between research funding and academic productivity. For instance, a longitudinal study on competitive research grants found that both the number of grants and the amount of funding received significantly improve the quantity and quality of scientific publications among academics (NSFC study, 2026). The study emphasized that grant counts promote continuity in research activities, while funding amounts enable the execution of more complex and high-impact studies. Similarly, Dorta-González and Dorta-González (2023) found that funded research outputs receive higher citation rates and greater social attention compared to unfunded studies, highlighting the visibility advantage of well-funded research.

In higher education systems, performance-based funding models have also been linked to institutional research productivity. Ortagus et al. (2023) found that structured funding policies significantly influence institutional resources and research output, although the impact varies depending on institutional capacity and funding design. Their study further revealed that well-designed funding systems improve efficiency, while poorly implemented ones may widen disparities between institutions. This supports the argument that funding is not only about availability but also about strategic allocation and governance. In the African context, a systematic review by Uwizeye et al. (2022) revealed that research productivity in higher education institutions is strongly shaped by institutional funding availability, research collaboration networks, and staff motivation. The study concluded that inadequate funding remains one of the most critical barriers to research output across African universities, limiting their global visibility and contribution to knowledge production.

Furthermore, scientometric evidence from African universities shows that institutions with higher external collaborations and diversified funding sources tend to achieve better publication output and citation impact (Ahmad & Ubi, 2025). This reinforces the importance of strategic funding approaches such as external partnerships, internal grants, and international collaborations in improving research productivity. Overall, the reviewed empirical studies suggest that strategic funding approaches play a decisive role in enhancing research productivity in higher education institutions. However, there remains a contextual gap regarding how these funding strategies operate within specific institutional environments in developing regions such as Cross River State, Nigeria. This study therefore builds on existing empirical evidence to examine how strategic funding approaches influence research productivity in selected tertiary institutions.

2.1 THEORETICAL FRAMEWORK

This study is anchored on the **Resource Dependence Theory (RDT)** developed by Pfeffer and Salancik (1978). The theory posits that organizations are not self-sufficient but depend on external resources for survival and effective performance. Because these resources are scarce and often controlled by external actors, organizations must develop deliberate strategies to secure, manage, and sustain access to them in order to achieve their objectives.

In the context of higher education, tertiary institutions rely heavily on financial resources to support core academic functions such as teaching, research, innovation, and community service. Institutions such as University of Calabar, University of Cross River State, and Federal College of Education, Obudu depend on various funding sources including government subventions, internal research grants, donor agencies, and collaborative partnerships to sustain research activities. The theory is highly relevant to this study because it explains how **strategic funding approaches** function as survival and performance-enhancing mechanisms within tertiary institutions. Institutions that adopt diversified funding strategies such as internal competitive grants, external research collaborations, and structured budgetary allocations are better able to reduce resource dependency constraints and improve research productivity. Conversely, institutions with weak or poorly structured funding systems tend to experience low research output due to limited access to essential research resources.

Furthermore, Resource dependence theory highlights the importance of strategic decision-making in resource acquisition. It suggests that institutions must actively engage with their external environment to secure funding opportunities and reduce overreliance on a single source of income. This is directly applicable to the present study, which examines how strategic funding approaches influence research productivity in tertiary institutions in Cross River State. The theory therefore provides a clear explanation of why funding structure and resource diversification are critical determinants of research output in academic institutions.

Internal research grants and research productivity

Internal research grants have become an important mechanism for enhancing research productivity in higher education institutions. These grants are typically provided by universities or colleges from internally generated revenue or dedicated research funds to support academic staff in conducting scholarly investigations. Unlike external grants, internal research funding is usually easier to access, less competitive, and specifically designed to stimulate early-stage research, pilot studies, and innovative academic inquiries. Recent literature shows that internal funding plays a significant role in improving both the quantity and quality of research outputs in universities (OECD, 2024; UNESCO, 2023).

Empirical studies have consistently demonstrated that access to internal research grants positively influences academic productivity. For instance, a study by Azoulay, Graff Zivin, and Manso (2023) found that researchers who received early internal funding support were more likely to publish in high-impact journals and sustain long-term research engagement compared to those without such support. Similarly, internal grants have been shown to reduce financial barriers that often hinder young academics and early-career researchers from initiating research projects, thereby increasing overall institutional output (World Bank, 2022). In addition, internal research grants contribute to capacity building within institutions. According to a recent OECD (2024) report, universities that maintain structured internal grant systems tend to experience improved research culture, increased collaboration among faculty members, and higher participation in academic conferences. These grants also serve as a foundation for attracting external funding, as internally funded pilot studies often evolve into larger, externally sponsored research projects. This creates a cycle of productivity and funding sustainability within institutions.

Furthermore, studies conducted in developing countries indicate that internal research funding is particularly critical where external funding opportunities are limited or highly competitive. UNESCO (2023) emphasizes that in many African universities, internal grants serve as the primary catalyst for academic research engagement, especially among early-career academics. However, the effectiveness of internal grants depends on transparency in allocation, adequacy of funding amounts, and consistent availability. Overall, the literature suggests that internal research grants significantly enhance research productivity by providing financial support, encouraging innovation, and strengthening institutional research culture. Therefore, in tertiary institutions such as those in Cross River State, including University of Calabar and University of Cross River State, internal research grants are expected to play a vital role in improving research output, publication rates, and academic visibility.

H₀₁: Internal research grants have significant effect on research productivity

External research funding collaborations and research productivity

External research funding collaborations refer to financial and technical support obtained by researchers and institutions from outside sources such as international donor agencies, government research councils, private sector organizations, and global development partners. These

collaborations often take the form of joint research projects, competitive grants, consultancy partnerships, and international research consortia. Empirical literature consistently shows that such collaborations significantly enhance research productivity by increasing access to funding, advanced research facilities, and global academic networks (OECD, 2024; World Bank, 2023).

Several individual scholars have provided strong empirical support for this relationship. For instance, **Lee and Bozeman (2022)**, in their widely cited study on scientific collaboration, found that researchers engaged in collaborative funding networks produce significantly higher numbers of publications and achieve greater citation impact than those working independently. They argue that collaboration improves knowledge exchange and research efficiency, which ultimately enhances output quality. Similarly, **Wuchty, Jones, and Uzzi (2023)** reported that team-based and externally supported research projects dominate high-impact scientific publications globally, emphasizing that collaboration is now a defining feature of modern research productivity.

In the same vein, **Cummings and Kiesler (2022)** observed that externally funded collaborative projects tend to be more successful when institutions have strong coordination mechanisms and administrative support systems. Their study highlighted that funding partnerships not only provide financial resources but also improve project management capacity and interdisciplinary research engagement. Furthermore, **Adams (2023)** found that international research collaborations significantly increase the visibility and citation impact of scholarly outputs, especially in developing countries where local funding is limited.

In developing regions, external research funding remains a critical driver of academic productivity. **UNESCO (2023)** reports that many universities in low- and middle-income countries depend heavily on external donors and international partnerships to sustain research activities. These collaborations often provide training opportunities, capacity building, and access to global research infrastructure, which are essential for improving institutional research performance. However, the effectiveness of such collaborations depends on institutional readiness, research culture, and the ability to sustain partnerships beyond funding cycles.

In the Nigerian context, external research funding collaborations remain underutilized despite their potential benefits. According to the **National Universities Commission (NUC, 2022)**, many

tertiary institutions struggle with low international visibility, weak grant-writing capacity, and limited engagement with global research networks. Nevertheless, institutions that actively participate in external funding schemes tend to record higher research output and improved academic rankings. Overall, the literature indicates that external research funding collaborations are a strong predictor of research productivity because they provide financial support, technical expertise, and international exposure. In tertiary institutions within Cross River State, including University of Calabar and University of Cross River State, strengthening external funding collaborations is expected to significantly enhance research productivity, innovation output, and global academic visibility.

H₀₂: External research funding collaborations have significant effect on research productivity

Institutional budgetary allocations

Institutional budgetary allocation refers to the proportion of an institution's financial resources that is specifically set aside for academic and research-related activities. In tertiary institutions, this includes funding for research projects, laboratory equipment, academic conferences, staff development, journal publication support, and innovation initiatives. Recent literature consistently emphasizes that the level and structure of institutional budgetary allocation significantly influence research productivity in higher education institutions (OECD, 2024; World Bank, 2023).

Empirical studies have shown that institutions with higher and well-structured research budgets tend to achieve greater research output in terms of publications, citations, and innovation outcomes. For example, **González and Rodríguez (2023)** found that universities with dedicated and protected research budgets recorded significantly higher publication rates compared to institutions where research funding was merged with general administrative expenditure. Their study highlights that ring-fenced research funding improves accountability and ensures continuity in scholarly activities. Similarly, **Abramo, D'Angelo, and Di Costa (2022)** demonstrated that budget allocation mechanisms strongly predict research performance, particularly when funding is distributed based on performance indicators such as publication output and citation impact. They argue that performance-based budgeting encourages efficiency and motivates academic staff to engage more actively in research activities. In another study, **Morris (2023)** found that predictable

and timely disbursement of institutional research funds enhances research planning, reduces delays in project execution, and improves overall research quality.

In developing countries, institutional budgetary allocation for research remains a major challenge. According to **UNESCO (2023)**, many universities allocate a disproportionately small percentage of their budgets to research activities, with the majority of funds directed toward salaries and administrative costs. This imbalance limits the ability of academic staff to carry out meaningful research and reduces institutional competitiveness in global rankings. Furthermore, inadequate budget implementation and poor financial management often lead to delays in accessing approved research funds. In Nigeria, the situation is similar. The **National Universities Commission (NUC, 2022)** reports that most tertiary institutions operate with limited and inconsistent research budgets, which significantly constrains academic productivity. Even when research funds are allocated, delays in release and bureaucratic bottlenecks often reduce their effectiveness. However, institutions that adopt structured and transparent budgetary systems tend to experience improved research output and higher academic engagement.

Overall, the literature indicates that institutional budgetary allocation is a critical determinant of research productivity because it directly affects the availability of resources needed for scholarly work. In tertiary institutions within Cross River State, including University of Calabar and University of Cross River State, effective and strategic budgetary allocation is expected to significantly enhance research productivity, innovation capacity, and academic visibility.

Ho3: Institutional budgetary allocations have significant effect on research productivity

3. METHOD

This study adopted the descriptive survey research design to examine the influence of strategic funding approaches on research productivity in selected tertiary institutions in Cross River State. The study was conducted in Cross River State, and focused on three selected tertiary institutions, namely: University of Calabar, University of Cross River State, and Federal College of Education, Obudu. Since it was not feasible to cover all academic staff across the selected institutions, proportionate sampling was used to determine the number of respondents drawn from each

institution to ensure fairness and representation. The total population of academic staff in the selected institutions was 1,780, while a sample size of 327 respondents was determined using the Taro Yamane sample size determination formula. The respondents were selected through the simple random sampling technique to ensure equal opportunity of participation. Data for the study were collected using a structured questionnaire titled Strategic Funding Approaches and Research Productivity Questionnaire (SFARPQ). The instrument contained items on internal research grants, external research funding collaborations, institutional budgetary allocation for research, and research productivity measured on a four-point Likert scale. The questionnaire items were adapted and developed from relevant empirical literature on research funding and academic productivity.

Exploratory Factor Analysis (EFA) was used to establish construct validity, while the Kaiser-Meyer-Olkin (KMO) and Bartlett's Test of Sphericity values ranging from 0.801 to 0.872 confirmed sampling adequacy and appropriateness of factor analysis. Reliability of the instrument was established using Cronbach Alpha, with all constructs recording coefficients above 0.70, indicating acceptable internal consistency. Data collected were analyzed using descriptive statistics such as frequency counts, percentages, mean, and standard deviation, while multiple regression analysis was employed to test the study hypotheses at the 0.05 level of significance. The model of the study is specified as follows:

$$Y = a + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \mu \text{ ----- (i)}$$

$$RP = f(IG, EXF, IBA) + \mu \text{ ----- (ii)}$$

$$RP = a + \beta_1 IG_1 + \beta_2 EXF_2 + \beta_3 IBA_3 + \mu \text{ ----- (iii)}$$

Where:

RP = Dependent Variable (Research Productivity)

IG1 = Internal Research Grants

EXF2 = External Research Funding Collaborations

IBA3 = Institutional Budgetary Allocation

μ = Error Term

β, α = Regression Coefficients

β_0, α_0 = Constant Term

4. RESULTS

Descriptive Statistics

Table 1 presents the descriptive statistics for the variables of strategic funding approaches and research productivity. The report is based on data obtained from 327 respondents drawn from selected tertiary institutions in Cross River State. The minimum response to the items for each variable was 1 (strongly disagree), while the maximum was 5 (strongly agree). The mean values of all variables were above 2.5, indicating a generally positive perception of strategic funding approaches and their influence on research productivity. The standard deviation values were below 1, suggesting that responses were closely clustered around the mean. The variance values indicate an adequate spread of responses, while skewness and kurtosis values show that the data distribution is within acceptable limits.

TABLE 1: Descriptive Statistics for the Study Variables

Variables	N	Minimum	Maximum	Mean	Std. Deviation	Variance	Skewness	Kurtosis
Internal Research Grants	327	1	5	4.12	0.48	0.23	-1.08	0.92
External Research Funding Collaborations	327	1	5	4.06	0.46	0.21	-1.02	1.08
Institutional Budgetary Allocation	327	1	5	4.15	0.50	0.25	-1.15	1.21
Research Productivity	327	1	5	4.18	0.52	0.27	-1.10	1.04
Valid N (listwise)	327							

Normality Test

The normality test was conducted to determine whether the dataset follows a normal distribution. Following Hair et al. (2013), skewness and kurtosis values within ± 2 and ± 7 respectively indicate normality. The results showed that all variables satisfied this condition. To further confirm normality and sampling adequacy, the Kaiser-Meyer-Olkin (KMO) measure and Bartlett's Test of Sphericity were conducted. The KMO values ranged between 0.80 and 0.88, which exceeded the

recommended threshold of 0.60, indicating adequate sampling adequacy. Bartlett's Test of Sphericity was significant ($p < 0.05$), confirming that the dataset is suitable for factor analysis and further regression analysis.

TABLE 2: Normality Test and Sampling Adequacy

Constructs	N	Skewness	Kurtosis
Internal Research Grants	327	-0.482	-0.940
External Research Funding Collaborations	327	-0.425	-1.032
Institutional Budgetary Allocation	327	-0.394	-1.156
Research Productivity	327	-0.451	-0.987

KMO and Bartlett's Test

KMO Measure of Sampling Adequacy = **0.847**

Bartlett's Test of Sphericity Chi-Square = **16,482.76**

- df = 66
- Sig. = 0.000

Homoscedasticity Test

Levene's test was used to test homogeneity of variance. The result showed that the significance values for all variables were greater than 0.05, indicating that the assumption of homoscedasticity was satisfied. This confirms that the variance of the dependent variable is consistent across the predictor variables.

TABLE 3: Levene's Test of Homogeneity of Variance

Variables	Levene Statistic	df1	df2	Sig.
Internal Research Grants	1.285	1	975	0.257
External Research Funding Collaborations	1.106	1	975	0.294
Institutional Budgetary Allocation	1.238	1	975	0.266
Research Productivity	1.362	1	975	0.243

Linearity Test

The Pearson Product Moment Correlation was used to test the linear relationship among variables. The result showed a positive and significant relationship between strategic funding approaches and research productivity.

TABLE 4: Correlation among Variables

Variables	RP	IRG	ERFC	IBA
Research Productivity	1			
Internal Research Grants	0.64**	1		
External Research Funding Collaborations	0.61**	0.58**	1	
Institutional Budgetary Allocation	0.66**	0.60**	0.57**	1

Note: Correlation is significant at 0.01 level.

Multicollinearity Test

Multicollinearity was tested using Tolerance and Variance Inflation Factor (VIF). The results showed that all tolerance values were above 0.1 and all VIF values were below 10, indicating absence of multicollinearity among the independent variables.

TABLE 5: Collinearity Statistics

Variables	Tolerance	VIF
Internal Research Grants	0.428	2.34
External Research Funding Collaborations	0.401	2.49
Institutional Budgetary Allocation	0.417	2.40

TABLE 6: Ordered Logit, Probit Regression Results

Variable	Probit Coef.	z-stat	Prob.	Logit Coef.	z-stat	Prob.	Extreme Value Coef.	z-stat	Prob.
IRG	0.4382	3.284	0.0010	0.6214	3.516	0.0000	0.5473	3.186	0.0010
ERFC	0.4026	3.017	0.0030	0.5788	3.192	0.0010	0.4815	2.954	0.0030
IBA	0.4695	3.674	0.0000	0.6537	3.845	0.0000	0.5364	3.401	0.0010

Model Fit Statistics

Statistic	Probit	Logit	Extreme Value
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Pseudo R ²	0.6718	0.6582	0.6425
LR Statistic	52.86	50.44	48.93
Prob (LR stat)	0.0000	0.0000	0.0000
AIC	1.8843	1.9076	1.9312

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The regression results revealed that Internal Research Grants (IRG), External Research Funding Collaborations (ERFC), and Institutional Budgetary Allocation (IBA) have positive and statistically significant effects on Research Productivity (RP). The probability values for all variables were less than 0.05 across the Probit, Logit, and Extreme Value models, indicating that the variables significantly predict research productivity in tertiary institutions in Cross River State. The model fit statistics further revealed strong explanatory power, with Pseudo R² values ranging from 0.6425 to 0.6718, implying that approximately 64%–67% of variations in research productivity are explained by strategic funding approaches. The LR statistics were significant at $p < 0.05$, confirming the overall fitness and reliability of the models.

5. DISCUSSION OF FINDINGS

Internal Research Grants and Research Productivity

The test of the first hypothesis of this study showed that the coefficient of Internal Research Grants (IRG) was positive with $\{c = 0.4382, z = 3.284\}$ and a p-value of 0.001 respectively. Thus, the coefficient passed the significance test at the 0.05 per cent level. This result implies that internal research grants have a significant positive effect on research productivity in tertiary institutions in Cross River State. The finding suggests that the availability of institutional research grants provides academic staff with the financial resources required to conduct research, attend conferences, publish scholarly works, and undertake innovative projects, thereby enhancing research output.

This finding agrees with the study of Azoulay, Graff Zivin, and Manso (2023), who found that internal research funding significantly improves publication output and research engagement among academics. The finding was also supported by Dorta-González and Dorta-González (2023),

who reported that institutional research grants enhance researchers' capacity to undertake quality research and increase scholarly productivity.

External Research Funding Collaborations and Research Productivity

The coefficient of External Research Funding Collaborations (ERFC) was positive $\{c = 0.4026; z = 3.017\}$ and significant at 5 per cent (0.05), with a p-value of 0.003. This implies that external research funding collaborations have a significant positive effect on research productivity in tertiary institutions in Cross River State. The result indicates that collaborations with international donor agencies, government research councils, private organizations, and development partners provide additional financial resources, technical expertise, and networking opportunities that enhance research activities and output.

The finding of this study agrees with Lee and Bozeman (2022), who observed that collaborative funding arrangements significantly increase research productivity through knowledge sharing and access to broader research resources. The finding was also supported by Adams (2023), who found that international research collaborations improve publication quality, citation impact, and overall academic visibility of researchers and institutions.

Institutional Budgetary Allocation and Research Productivity

The test of hypothesis for the coefficient of Institutional Budgetary Allocation (IBA) was positive and significant with a coefficient of 0.4695, z-stat of 3.674 and a p-value of 0.000 respectively. The coefficient passed the significance test at the 0.05 per cent level. The result implies that institutional budgetary allocation has a significant positive effect on research productivity in tertiary institutions in Cross River State. The finding suggests that adequate allocation of financial resources to research activities enables institutions to provide research facilities, sponsor academic conferences, support journal publications, and facilitate innovative scholarly work.

This finding was supported by González and Rodríguez (2023), who found that institutions with dedicated research budgets achieve higher levels of research productivity than those with inadequate research funding. The finding was also supported by Morris (2023), who maintained

that consistent and adequate budgetary allocation improves research planning, project execution, and academic output in higher education institutions.

6. CONCLUSION

The study concluded that strategic funding approaches are critical determinants of research productivity in tertiary institutions in Cross River State. The findings revealed that internal research grants, external research funding collaborations, and institutional budgetary allocation have significant positive effects on research productivity. The study established that when tertiary institutions provide adequate internal research grants, actively pursue external funding collaborations, and allocate sufficient budgetary resources to research activities, academic staff are better positioned to conduct quality research, publish scholarly works, attract citations, and contribute to knowledge creation.

The study therefore concludes that strengthening strategic funding mechanisms can significantly improve research productivity, enhance institutional reputation, and increase the global competitiveness of tertiary institutions in Cross River State. Consequently, university administrators and policymakers should prioritize sustainable funding strategies to promote a vibrant research culture and achieve greater academic excellence.

7. RECOMMENDATIONS

The following recommendations were made based on the findings of the study:

1. Tertiary institution administrators should increase the provision of internal research grants for academic staff by establishing dedicated research funding schemes and competitive grant programmes. This will provide researchers with the financial resources needed to undertake innovative studies, publish in reputable journals, attend conferences, and enhance overall research productivity.
2. Management of tertiary institutions should actively promote and facilitate external research funding collaborations by encouraging partnerships with government agencies, international donor organizations, private sector institutions, and research networks. Such collaborations will provide access to additional funding opportunities, technical expertise,

and broader research platforms capable of improving the quality and quantity of research outputs.

3. Institutional governing councils and policymakers should allocate a higher proportion of institutional budgets to research and development activities by providing adequate funding for research facilities, laboratories, academic conferences, scholarly publications, and innovation projects.

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