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INFLUENCE OF ENDOWMENT FUNDS AND CROWD-FUNDING INITIATIVES ON THE SUSTAINABILITY OF COLLEGES OF EDUCATION IN NORTH-EAST NIGERIA

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ABSTRACT
This study assessed the extent to which endowment funds and crowd-funding initiatives influence the sustainability of Colleges of Education in North-East Nigeria. Many Colleges of Education in the region operate with dilapidated infrastructure, outdated laboratories, and poorly stocked libraries, threatening their long-term viability. The study adopted a descriptive survey research design. The population comprised 882 college management and academic staff from selected State Colleges of Education in North-East Nigeria, with a sample of 265 respondents selected through proportionate stratified random sampling. A structured questionnaire was used for data collection, while mean, standard deviation, and simple linear regression analysis were used to test the null hypotheses at the 0.05 level of significance. The findings revealed that endowment funds (grand mean = 2.83) and crowd-funding initiatives (grand mean = 2.67) significantly influence institutional sustainability. Regression analysis confirmed that endowment funds significantly predicted sustainability [$R = 0.76$, $R^2 = 0.58$, $F(3, 235) = 107.26$, $p < 0.05$], and crowd-funding initiatives also significantly predicted sustainability [$R = 0.85$, $R^2 = 0.72$, $F(3, 235) = 204.04$, $p < 0.05$]. The study concludes that both endowment funds and crowd-funding initiatives are crucial for institutional sustainability, though their adoption remains moderate. Recommendations include establishing robust endowment funds with clear management policies and developing structured crowd-funding platforms with active alumni and community engagement.

Keywords: Endowment funds, crowd-funding initiatives, sustainability, Colleges of Education, North-East Nigeria.

INTRODUCTION

The sustainability of Colleges of Education has become a major concern within Nigeria's higher education system due to persistent financial constraints and increasing operational demands. Sustainability, in the context of educational institutions, refers to the capacity of Colleges of Education to maintain financial stability, deliver quality academic programmes, retain competent personnel, and preserve infrastructure while adapting to changing educational and socio-economic conditions over time (Johnstone, 2018; Salmi, 2020). As institutions primarily responsible for training teachers for Nigeria's basic education sector, the sustainability of Colleges of Education is fundamental to national educational development and human capital formation.

In Nigeria, Colleges of Education have historically depended largely on government funding through federal and state subventions. However, public funding has become increasingly inadequate due to economic instability, declining government revenues, inflation, expanding student enrolment, and competing national priorities (Saint et al., 2019). These funding challenges are more acute in the North-East region of Nigeria, where prolonged insecurity, poverty, displacement, and infrastructural decay have further weakened institutional finances and operational effectiveness (World Bank, 2021).

The effects of inadequate funding on the sustainability of Colleges of Education in North-East Nigeria are evident in deteriorating infrastructure, limited instructional resources, insufficient staff development, delayed payment of salaries, and reduced research capacity. These challenges negatively affect staff morale, student learning outcomes, and institutional credibility, thereby threatening the long-term viability of Colleges of Education in the region (Adeyemi & Akpotu, 2021). Consequently, reliance on government funding alone has proven insufficient to sustain Colleges of Education in an increasingly complex and resource-constrained environment.

In response to declining public funding, higher education institutions globally have increasingly adopted innovative funding strategies to diversify revenue sources and enhance financial sustainability. Innovative funding strategies refer to creative, non-traditional, and adaptive financial mechanisms designed to mobilize resources and reduce overreliance on government allocations (Johnstone, 2018; Teixeira & Koryakina, 2021). Among these strategies, endowment funds and crowd-funding initiatives have emerged as promising mechanisms for enhancing institutional resilience and promoting sustainable academic development.

An endowment fund is a permanent investment fund built from donations, which provides long-term financial sustainability for non-profits like universities, hospitals, and charities, by preserving the principal while using a portion of its investment earnings to fund operations, programmes, or scholarships (Bryson, 2018). It acts as a perpetual financial foundation, ensuring a steady income stream by investing the donated capital in assets like stocks and bonds. Endowment funds contribute to long-term sustainability by providing consistent income that supports academic programmes, infrastructural development, and institutional stability, while also reducing overdependence on government funding (Adeyemi, 2021; Mustapha & Atu, 2021).

Crowd-funding refers to the practice of raising relatively small amounts of capital from a large number of individuals, often via digital platforms, to finance specified projects or institutional needs (Belleflamme et al., 2014). In the Nigerian higher education sector, where traditional funding sources such as government subventions and internal revenue generation are often insufficient, crowd-funding has emerged as an alternative resource mobilization strategy for supporting institutional priorities (Ezeani, 2024). For Colleges of Education in North-East Nigeria, the adoption of crowd-funding initiatives presents opportunities to enhance financial sustainability by engaging external stakeholders, funding discrete projects, and reinforcing institutional visibility.

Despite the availability of these innovative funding strategies, empirical evidence on their extent of adoption and influence on the sustainability of Colleges of Education in North-East Nigeria remains limited. Existing studies often focus on university financing, with insufficient emphasis on Colleges of Education and region-specific challenges (Saint et al., 2019). This gap in empirical knowledge limits effective policy formulation and institutional planning aimed at strengthening financial sustainability. Therefore, this study assesses the extent to which endowment funds and crowd funding- initiatives influence the sustainability of Colleges of Education in North-East Nigeria.

Purpose of the study

The purpose of the study was to assess the extent to which innovative funding strategies influence the sustainability of Colleges of Education in North-East Nigeria. Specifically, the study:

1. Determine the extent to which endowment funds influence the sustainability of Colleges of Education in North-East Nigeria.
2. Determine the extent to which crowd-funding initiatives influence the sustainability of Colleges of Education in North-East Nigeria.

Research questions

1. To what extent do endowment funds influence the sustainability of Colleges of Education in North-East Nigeria?
2. To what extent do crowd-funding initiatives influence the sustainability of Colleges of Education in North-East Nigeria?

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Research hypotheses

1. **Ho_1**: Endowment funds do not have a significant influence on the sustainability of Colleges of Education in North-East Nigeria.
2. **Ho_2**: Crowd-funding initiatives do not have a significant influence on the sustainability of Colleges of Education in North-East Nigeria.

RESEARCH METHODOLOGY

Research Design

The study adopted a descriptive survey research design. The design was considered appropriate because it enables the researcher to collect quantitative data from a large population through the use of structured questionnaires to assess existing conditions, opinions, or practices (Creswell & Creswell, 2018). The design allowed for the description, interpretation, and analysis of data collected from a representative sample without manipulation of variables.

Area of the Study

The area of the study was the North-East geopolitical zone of Nigeria, which comprises six states: Adamawa, Bauchi, Borno, Gombe, Taraba, and Yobe. These states host Federal and State Colleges of Education that provide teacher education and professional training. The Northeast is characterized by its unique socio-economic and security challenges. The region was selected due to its persistent financial constraints, infrastructural decay, and low resource inflow that make innovative funding and sustainability more especially critical.

The region lies between latitude 9°00′N and 14°00′N, and longitude 8°00′E and 14°00′E. It occupies the north-eastern part of Nigeria and shares international boundaries with Niger Republic to the north, Chad to the north-east, and Cameroon to the east. Within the region, the states share common boundaries with one another. The region is characterized by predominantly Sudan and Sahel savannah vegetation, semi-arid climatic conditions in the northern axis, and relatively moderate climatic conditions toward the southern highlands. Economically, the zone is largely agrarian, with limited industrial concentration compared to southern regions of Nigeria. In recent years, the region has experienced socio-economic and security challenges that have affected infrastructural development, revenue generation capacity, and public sector financing.

Population of the Study

The population of the study comprised 882 management and academic staff of the selected State Colleges of Education in North-East Nigeria. Specifically, the study covered Adamawa State College of Education, Hong with a population of 407 staff, Gombe State College of Education, Billiri with a population of 112 staff, and Taraba State College of Education, Zing with a population of 363 staff.

Sample and Sampling Techniques

The sample size for the study was drawn from a population of 882 college management and academic staff of the selected State Colleges of Education in North-East Nigeria. A sample size of 265 respondents was drawn using the proportionate stratified random sampling technique. The technique ensured that each category of respondents was represented in the sample in proportion to its size in the population, thereby enhancing representativeness, reducing sampling bias, and improving the validity and reliability of the data collected for the study. The sample was proportionately distributed among the selected Colleges of Education using the proportionate stratified random sampling technique.

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Instrument for Data Collection

The instrument used for data collection for the study was a structured questionnaire titled "Innovative Funding Strategies and Sustainability Questionnaire (IFSSQ)." The instrument was designed by the researcher after extensive review of relevant literature which consists on innovative funding strategies and sustainability indicators. Section (a) contained items on Endowment Funds and sought information on the availability of endowment funds, contributions from donors and alumni, management of endowment resources, and their utilization for institutional development and sustainability. Section (b) focused on Crowd-funding Initiatives and elicited information on the adoption of crowd-funding platforms, fundraising campaigns, stakeholder participation, transparency in fund utilization, and the contribution of crowd-funding to institutional sustainability.

The instrument used a four-point scale ranging from very high extent (VHE, 4), high extent (HE, 3), low extent (LE, 2), and very low extent (VLE, 1) to measure respondents' levels of high extent or low extent on each statement.

Validity of the Instrument

The instrument was validated by three experts from the Department of Vocational Education, Modibbo Adama University, Yola, Faculty of Education. Their suggestions regarding content coverage, wording of items, and alignment of the instrument with the study objectives were used to improve the final version of the questionnaire.

Reliability of the Instrument

To determine the reliability of the instrument, a pilot test was conducted with 50 staff members from College of Education Katsina-Ala, in Benue State, which is outside the study area. The data obtained was used to analyze using the Cronbach's Alpha method to determine internal consistency, and the coefficient is 0.88. According to Nunnally (1978), reliability of 0.70 and above is acceptable. Therefore, the instrument was considered reliable.

Method of Data Collection

Data for this study were collected through the administration of a structured questionnaire titled "Innovative Funding Strategies and Sustainability Questionnaire (IFSSQ)." Prior to the commencement of data collection, an introductory letter was obtained from the researcher's Head of Vocational Education Department and presented to the authorities of the selected Colleges of Education to seek permission for conducting the study. Following the approval of the institutions, the researcher, with trained research assistants, visited the selected Colleges of Education, namely Adamawa State College of Education, Hong; Gombe State College of Education, Billiri; and Taraba State College of Education, Zing. The respondents were identified based on the sample drawn through the proportionate stratified random sampling technique. Copies of the questionnaire were administered directly to the sampled college management personnel and academic staff in their respective offices and departments. Before administering the instrument, the researcher explained the purpose of the study to the respondents and assured them that the information provided would be treated with strict confidentiality and used solely for academic purposes. The questionnaire was distributed using the direct delivery and retrieval method.

This method was adopted to ensure a high response rate and to provide respondents with the opportunity to seek clarification on any item they found difficult to understand. Sufficient time of three weeks was given to respondents to complete the questionnaire. Thereafter, the completed copies were collected either immediately or on agreed dates, depending on the convenience of the respondents. The researcher maintained regular follow-up visits and communication with respondents to ensure maximum retrieval of the administered questionnaires. Out of 265 questionnaires distributed, 239 (approximately 90%) were retrieved from the respondents. The data obtained from the retrieved questionnaires were subsequently organized, coded, and entered into the appropriate statistical software for analysis in accordance with the research questions and hypotheses of the study.

Method of Data Analysis
Data collected for the study were analyzed using the Statistical Package for Social Sciences (SPSS). Mean and standard deviation were used to answer the research questions, while simple linear regression analysis was used to test the hypotheses at the 0.05 level of significance. The questionnaire was structured on a four-point Likert scale of (VHE), (HE), (LE), and (VLE), weighted 4, 3, 2, and 1 respectively.
4+3+2+1 = 10/4 = 2.5
Real limit of numbers were used in answering the research questions. A mean score of 2.5 and above is considered as "high extent", below it, is considered as "low" extent. The null hypotheses were tested based on the p-values at 0.05 level of significance. When the p-value was less than or equal to 0.05, the Ho was rejected and when the p-value was greater than 0.05, the Ho was accepted.

RESULTS
Research Question One: To what extent do endowment funds influence the sustainability of Colleges of Education in North-East Nigeria?

Table 1: Mean and Standard Deviation on the Influence of Endowment Funds on the Sustainability of Colleges of Education in North-East Nigeria

S/No	Item Statement	N	Mean	StD	Decision
1	The College has an endowment fund	240	2.88	0.97	HE
2	Endowment funds generate stable income for the college	240	2.82	0.86	HE
3	Income from endowment funds supports academic programmes	240	2.98	0.93	HE
4	Endowment funds reduce overdependence on government funding	240	2.99	0.79	HE
5	Endowment funds contribute to the long-term sustainability of your college	240	2.98	0.93	HE
6	Endowment funds support infrastructural development in the college	239	2.77	0.86	HE
7	Investment returns from endowment funds are effectively managed to ensure financial stability	239	2.86	0.93	HE

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S/No	Item Statement	N	Mean	StD	Decision
8	The college has clear policies guiding the utilization of endowment funds	239	2.72	0.87	HE
9	Endowment funds enhance the college's capacity to withstand financial shocks	239	2.70	0.77	HE
10	Contributions to the endowment fund are regularly mobilized from alumni and external donors	239	2.68	0.91	HE
	Grand Mean		**2.83**		**HE**

Source: Field Survey 2026

The results in Table 1 show how endowment funds affect the sustainability of Colleges of Education in North-East Nigeria. The findings show varying levels of influence across the different items measured. The highest mean score was for the item "Endowment funds reduce overdependence on government funding" (M = 2.99, SD = 0.79). This suggests that respondents agree to a high extent that endowment funds help lessen reliance on government allocations. Similarly, "Income from endowment funds supports academic programmes" (M = 2.98, SD = 0.93) and "Endowment funds contribute to the long-term sustainability of the college" (M = 2.98, SD = 0.93) also received high mean scores, indicating that endowment funds are important for sustaining academic activities and institutional stability.

In addition, "The college has an established endowment fund" (M = 2.88, SD = 0.97) and "Investment returns from endowment funds are effectively managed" (M = 2.86, SD = 0.93) show moderate agreement. This implies that while some institutions have endowment funds, their effectiveness in financial management might still be limited. Likewise, "Endowment funds generate stable income" (M = 2.82, SD = 0.86) and "Endowment funds support infrastructural development" (M = 2.77, SD = 0.86) indicated moderate contributions to institutional sustainability.

However, moderate mean scores were noted for "Clear policies guiding utilization of endowment funds" (M = 2.72, SD = 0.86), "Endowment funds enhance capacity to withstand financial shocks" (M = 2.70, SD = 0.77), and "Regular mobilization of contributions from alumni and donors" (M = 2.68, SD = 0.91). These findings suggest that challenges like weak policy frameworks, inadequate fundraising methods, and limited financial resilience still affect the effectiveness of endowment funds in these institutions.

The grand mean of 2.83 shows a high level of influence overall. This means that while endowment funds contribute to the sustainability of Colleges of Education in North-East Nigeria, their impact is not yet optimal. There is a need for improved policies, better management practices, and increased participation from stakeholders.

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Research Question Two: To what extent do crowd-funding initiatives influence the sustainability of Colleges of Education in North-East Nigeria?

Table 2: Mean and Standard Deviation on the Influence of Crowd-funding Initiatives on the Sustainability of Colleges of Education in North-East Nigeria

S/No	Item Statement	N	Mean	StD	Decision
11	Your college has adopted crowd-funding initiatives	239	2.70	0.97	HE
12	Crowd-funding is used for specific development projects	239	2.74	0.95	HE
13	Social media is effectively used to promote crowd-funding campaigns	239	2.73	0.89	HE
14	Crowd-funding attracts external community support	239	2.72	0.91	HE
15	Crowd-funding initiatives enhance sustainability of your college	239	2.67	0.88	HE
16	Funds raised through crowd-funding significantly support academic and infrastructural projects	239	2.67	0.87	HE
17	Crowd-funding campaigns are transparently reported to donors and stakeholders	239	2.62	0.87	HE
18	Alumni actively participate in the college's crowd-funding initiatives	239	2.60	0.96	HE
19	The college has a structured platform for managing crowd-funding activities	239	2.53	0.89	HE
20	Crowd-funding reduces financial pressure on traditional funding sources	239	2.75	0.91	HE
	Grand Mean		**2.67**		**HE**

Source: Field Survey 2026

The results shown in Table 2 highlight how crowd-funding initiatives affect the sustainability of Colleges of Education in North-East Nigeria. The findings reveal that all items had mean scores in the high extent range, indicating a high extent level of agreement among respondents.

The statement "Crowd-funding reduces financial pressure on traditional funding sources" received the highest mean score (M = 2.75, SD = 0.91), showing that respondents agree to a high extent that crowd-funding helps to supplement conventional funding sources such as government allocations. Similarly, "Crowd-funding is used for specific development projects" (M = 2.74, SD =

0.95) and "Social media is effectively used to promote crowd-funding campaigns" (M = 2.73, SD = 0.89) indicate that institutions to a high extent use crowd-funding for targeted projects and leverage digital platforms to assist in fundraising efforts.

Additionally, "Crowd-funding attracts external community support" (M = 2.72, SD = 0.91) and "Your college has adopted crowd-funding initiatives" (M = 2.70, SD = 0.97) suggest that while crowd-funding practices are present, their adoption and community engagement levels are still growing. The items "Crowd-funding initiatives improve sustainability of your college" (M = 2.67, SD = 0.88) and "Funds raised through crowd-funding significantly support academic and infrastructural projects" (M = 2.67, SD = 0.87) also imply that crowd-funding contributes moderately to institutional sustainability.

However, lower mean scores were noted for "Crowd-funding campaigns are transparently reported to donors and stakeholders" (M = 2.62, SD = 0.89), "Alumni actively participate in the college's crowd-funding initiatives" (M = 2.60, SD = 0.96), and "The college has a structured platform for managing crowd-funding activities" (M = 2.53, SD = 0.89). These results suggest that problems like limited transparency, low alumni engagement, and a lack of formal structures may limit the effectiveness of crowd-funding initiatives.

The grand mean of 2.67 indicates a moderate level of influence, suggesting that crowd-funding initiatives have a noticeable but not strong impact on the sustainability of Colleges of Education in North-East Nigeria.

Hypothesis Testing

H_{01}: Endowment funds do not have a significant influence on the sustainability of Colleges of Education in North-East Nigeria.

Table 3: Model Summary of the Combined Influence of Innovative Funding Strategies on Endowment Funds and Sustainability of Colleges of Education in North-East Nigeria

Model	R	R Square	Adjusted R Square	Std. Error of Estimate
1	0.76	0.58	0.57	4.17

Predictors: (Constant), Internally Generated Revenue Influence, Crowd-funding Initiatives Influence, Public-Private Partnership Influence

Table 4: ANOVA Summary of the Influence of Innovative Funding Strategies on Endowment Funds and Sustainability of Colleges of Education in North-East Nigeria

Model	**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**	
1	Regression	5607.39	3	1869.13	107.26	0.00
	Residual	4095.20	235	17.43		
	Total	9702.59	238			

a. Dependent Variable: Endowment Funds Influence
b. Predictors: (Constant), Internally Generated Revenue Influence, Crowd funding Initiatives Influence, Public-Private Partnership Influence

The results presented in Tables 3 and 4 show the regression analysis of the influence of innovative funding strategies, namely endowment funds, crowd-funding initiatives, public-private partnerships, and internally generated revenue, on the sustainability of Colleges of Education in North-East Nigeria.

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The model summary reveals a strong positive relationship, with a correlation coefficient of R = 0.76, indicating a high degree of association between the predictors and the dependent variable. The coefficient of determination ($R^2 = 0.58$) implies that approximately 58% of the variance in endowment funds' influence on sustainability can be explained by the combined effects of internally generated revenue, crowd-funding initiatives, and public-private partnerships. The adjusted R^2 value (0.57) further confirms that the model is stable and provides a reliable estimate of the population parameter. The standard error of estimate (4.17) indicates a reasonable level of accuracy in prediction.

The ANOVA results show that the regression model is statistically significant, with an F-value of 107.26 at $p < 0.05$ (Sig. = 0.00). This indicates that the combined influence of the independent variables significantly predicts the sustainability of Colleges of Education through endowment funds. In other words, the model provides a good fit for the data, and the predictors jointly contribute to explaining variations in sustainability outcomes.

Based on these findings, the null hypothesis (H_{01}), which states that endowment funds do not have a significant influence on the sustainability of Colleges of Education in North-East Nigeria, is **rejected**. This implies that endowment funds, when supported by other innovative funding strategies, have a significant influence on institutional sustainability.

H_{02}: Crowd-funding initiatives do not have a significant influence on the sustainability of Colleges of Education in North-East Nigeria.

Table 5: Model Summary of the Combined Influence of Innovative Funding Strategies on Crowd-funding Initiatives and Sustainability of Colleges of Education in North-East Nigeria

Model	R	R Square	Adjusted R Square	Std. Error of Estimate
1	0.85	0.72	0.72	3.76

Predictors: (Constant), Internally Generated Revenue Influence, Endowment Funds Influence, Public-Private Partnership Influence

Table 6: ANOVA Summary of the Influence of Innovative Funding Strategies on Crowd-funding Initiatives and Sustainability of Colleges of Education in North-East Nigeria

Model	Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	8636.52	3	2878.84	204.04	0.00
	Residual	3315.69	235	14.11		
	Total	11952.22	238			

a. Dependent Variable: Crowd-funding Initiative Influence
b. Predictors: (Constant), Internally Generated Revenue Influence, Endowment Funds Influence, Public-Private Partnership Influence

The results presented in Tables 5 and 6 show the regression analysis of the influence of innovative funding strategies, internally generated revenue, endowment funds, and public-private partnerships on crowd-funding initiatives and the sustainability of Colleges of Education in North-East Nigeria.

The model summary indicates a very strong positive relationship, with a correlation coefficient of R = 0.85, suggesting a high level of association between the independent variables and crowd-

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funding initiatives as a predictor of sustainability. The coefficient of determination ($R^2 = 0.72$) shows that approximately 72% of the variance in crowd-funding initiatives' influence on sustainability is explained by internally generated revenue, endowment funds, and public-private partnerships. The adjusted R^2 value (0.72) confirms that the model is robust and provides a reliable estimate. The standard error of estimate (3.76) indicates a good level of predictive accuracy.

The ANOVA results further reveal that the regression model is statistically significant, with an F-value of 204.04 at $p < 0.05$ (Sig. = 0.00). This implies that the combined effect of the independent variables significantly predicts the role of crowd-funding initiatives in enhancing sustainability. The large F-value indicates that the model explains a substantial proportion of the variance compared to the unexplained portion.

Based on these findings, the null hypothesis (H_{02}), which states that crowd-funding initiatives do not significantly influence the sustainability of Colleges of Education in North-East Nigeria, is **rejected**. This means that crowd-funding initiatives, when integrated with other innovative funding strategies, have a significant and strong influence on institutional sustainability.

DISCUSSION OF FINDINGS

The finding regarding research question one reveals that the respondents highly agree that endowment funds influence the financial sustainability of Colleges of Education. The descriptive statistics showed high adoption and impact of endowment funds, with higher mean scores reported for items such as "Endowment funds reduce overdependence on government funding" (M = 2.99) and "Income from endowment funds supports academic programmes" (M = 2.98). The test of its null hypothesis which states that endowment funds do not have a significant influence on the sustainability of Colleges of Education in North-East Nigeria is rejected. The regression analysis revealed a high, statistically significant effect ($R = 0.76$, $R^2 = 0.58$, $F = 107.26$, $p < 0.00$), suggesting that endowment funds explain about 58% of the variance in institutional sustainability. These findings corroborate earlier studies which highlighted that well-managed endowment funds provide long-term financial stability and reduce dependence on government allocations. Adeyemi (2021) maintained that endowment funds significantly enhance long-term financial sustainability. The finding is also in line with Mustapha and Atu (2021) who, in their study on endowment funds management, revealed that structured endowment funds experienced supplemental income flows that supported scholarship programmes, infrastructural projects, and research grants. However, weak legal frameworks and donor engagement challenges limited fund growth. Their study recommended adoption of clear endowment policies, establishment of governance boards for fund oversight, and diversification of investment portfolios to maximize returns and sustainability. This finding further agrees with Ibrahim and Musa (2023) who examined endowment funds and development outcomes, finding that endowment funds were positively associated with research funding availability and scholarship stability. Their study also recommended intensifying alumni engagement, formalizing donor recognition programmes, and providing regular reporting to enhance transparency and attract contributions. Therefore, endowment funds serve as a crucial mechanism for sustaining Colleges of Education in the region.

The finding regarding research question two examined the role of crowd-funding initiatives. It reveals that respondents agree that crowd-funding initiatives influence the financial sustainability of Colleges of Education. The descriptive analysis indicated moderate engagement in crowd-funding activities, with items like "Crowd-funding reduces financial pressure on traditional funding sources" (M = 2.75) and "Crowd-funding is used for specific development projects" (M = 2.74) scoring relatively high. The test of its null hypothesis which states that crowd-funding initiatives do not have a significant influence on the sustainability of Colleges of Education in North-East Nigeria is rejected. Regression results demonstrated a very strong positive influence ($R = 0.85$, $R^2 = 0.72$, F = 204.04, p < 0.00), indicating that crowd-funding accounts for 72% of the variance in institutional sustainability. These results align with literature emphasizing that crowd-funding enhances institutional resilience by engaging alumni, communities, and other stakeholders, while supplementing traditional funding sources (Abai et al., 2023; Lawan, 2024). The findings affirm that crowd-funding initiatives are an effective strategy for supporting both academic and infrastructural development in colleges. These findings are in line with Abai et al. (2023) who agreed that crowd-funding, alumni funding, and donor grants closely align with the independent variables of the current study, thereby providing strong empirical support and justification for investigating how these strategies influence institutional sustainability within the specific context of Colleges of Education. The finding also is in agreement with Lawan (2024) who examined crowd-funding initiatives and funding sustainability of tertiary institutions in Nigeria, revealing that crowd-funding significantly contributed to institutional sustainability, especially for project-based funding.

CONCLUSION

Based on the findings of the study, Endowment funds have a significant positive influence on the sustainability of Colleges of Education in North-East Nigeria. However, the moderate scores on items related to clear policies, effective management of investment returns, and regular mobilization of contributions suggest that the full potential of endowment funds has not yet been realized. Crowd-funding initiatives have a significant positive influence on the sustainability of Colleges of Education in North-East Nigeria. However, challenges such as limited transparency, low alumni engagement, and the absence of structured platforms for managing crowd-funding activities limit its effectiveness. The study concludes that both endowment funds and crowd-funding initiatives are crucial mechanisms for enhancing the sustainability of Colleges of Education in North-East Nigeria. However, their full potential has not yet been realized due to challenges including weak policy frameworks, limited stakeholder engagement, and inadequate management structures.

RECOMMENDATIONS

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

1. Colleges should establish robust endowment funds and implement clear policies for their management and utilization to ensure consistent income for academic programmes and infrastructural development.
2. Colleges should establish transparent reporting mechanisms for crowd-funding campaigns to build trust among donors and stakeholders. Regular updates on fund utilization and project outcomes should be communicated to contributors.
3. Alumni associations should be strengthened and actively involved in crowd-funding initiatives, as alumni participation is crucial for the success of crowd-funding campaigns.

SUGGESTIONS FOR FURTHER STUDIES

While this study focused on North-East Nigeria, future research could explore the following areas:

1. Comparative studies across other geopolitical zones to examine regional variations in the effectiveness of endowment funds and crowd-funding initiatives on institutional sustainability.
2. Investigation into governance and management practices that enhance the effective utilization of endowment funds, including studies on best practices in endowment fund governance.
3. Studies examining the moderating effects of institutional characteristics (e.g., size, location, age) on the relationship between endowment funds and institutional sustainability.

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