



Institutional resilience and school sustainability: The roles of crisis management and corporate social responsibility in private secondary education

Ekpenyong E. Ekanem¹, Godfrey E. Ukpabio², Usen F. Mbon³ and Valentine Joseph Owan⁴

¹Department of Educational Management, University of Calabar, Nigeria (ORCID: 0000-0002-9657-9939)

²Department of Educational Management, University of Calabar, Nigeria (ORCID: 0000-0002-8924-2844)

³Department of Educational Management, University of Calabar, Nigeria (ORCID: 0000-0002-6399-1193)

⁴Department of Educational Psychology, University of Calabar, Nigeria & Ultimate Research Network, Calabar, Cross River State, Nigeria & School of Public Health, University of Port Harcourt, Choba, Nigeria (ORCID: 0000-0001-5715-3428)

Corresponding Author: Valentine Joseph Owan, owanvalentine@gmail.com

Submitted: 15 March 2026 Revised: 10 May 2026 Accepted: 24 June 2026 Published online: 28 September 2026

Abstract

Sustainable education systems depend on institutional resilience, supported by effective governance structures and socially responsible practices that sustain continuity of teaching and learning. This study examined whether crisis management and corporate social responsibility predict the sustainability of private secondary schools in the Ikom Education Zone of Cross River State, Nigeria. A correlational research design was adopted. The study involved a census of 457 school administrators, comprising 172 principals and 285 vice principals. Data were collected using a structured questionnaire that measured crisis management practices, corporate social responsibility, and private school sustainability. The instrument demonstrated acceptable validity and internal consistency. Data were analysed using multiple linear regression at the 0.05 level of significance with IBM SPSS version 27. The results indicated that crisis management and corporate social responsibility jointly predicted private school sustainability ($R = .71$, $R^2 = .50$, $F(2,454) = 224.46$, $p < .001$). Both predictors also made significant individual contributions to the prediction of private school sustainability, with crisis management ($\beta = .42$, $p < .001$) and corporate social responsibility ($\beta = .38$, $p < .001$) showing positive associations. The findings suggest that crisis management and corporate social responsibility may be understood as practices linked to institutional resilience, continuity of teaching and learning, and long-term school sustainability. The study recommends that private school administrators strengthen crisis management strategies and institutional CSR initiatives to support sustainable school governance and long-term school operations.

Keywords: Corporate social responsibility; Crisis management; Institutional resilience; Private secondary education; School governance; School sustainability

1. Introduction

Efficient management and delivery of education remain important concerns in Nigeria. To help meet the growing demand for schooling, the Federal Government has encouraged private sector involvement in education through the establishment and management of private schools. As a result, many private secondary schools have emerged to complement public education and help reduce the pressure on government-funded institutions (Hove & Dube, 2021; Zhang, 2020). The continued operation of these schools is therefore important for maintaining access to education, continuity of teaching and learning, and broader sustainable education goals (Bassey et al., 2019; Owan & Agunwa, 2019).

In this study, sustainability in private schools refers to the ability of these institutions to operate effectively over time while maintaining the resources and organisational capacity needed to achieve their goals. This involves using available resources responsibly, maintaining stable operations, and managing potential risks that may threaten the school's continuity (Owan & Offu, 2021). In practical terms, a sustainable private school is one that can meet present demands without undermining its ability to function and grow in the future (Bibri, 2021; Hoosain et al., 2020; Shabbir & Wisdom, 2020). Achieving this requires careful management of both academic and administrative activities so that the school remains stable and responsive to changing conditions. In this sense, school sustainability is closely linked to institutional resilience, as both concepts focus on the ability of schools to maintain stable operations and adapt to changing conditions over time.

Private school sustainability in this study is treated as a multidimensional construct. It includes organisational sustainability, which concerns effective management and governance structures; financial sustainability, which concerns stable and diversified resources; enrolment sustainability, which concerns the ability to attract and retain students; human resource sustainability, which concerns staff stability and professional development; and instructional continuity, which concerns the capacity to sustain teaching and learning during disruptions. This multidimensional framing aligns school sustainability with institutional resilience, especially in how schools maintain continuity under conditions of uncertainty.

Previous studies suggest that the sustainability of private schools depends on several factors, including financial stability, infrastructure, human resources, and effective leadership and administration (Antón et al., 2022; Owan & Offu, 2021; Robina-Ramírez & Cotano-Olivera, 2020; Ukpabio et al., 2020). Private schools were originally established to expand access to education, improve educational quality, and complement the work of public schools (Crawfurd et al., 2023; Wodon, 2020). However, a number of challenges have raised concerns about their long-term survival in Nigeria. These include the existence of unregistered or poorly regulated schools, high tuition fees that limit access for many families, and ownership structures that sometimes involve individuals with limited professional experience in education (Alkaabi et al., 2022; Ekaette et al., 2019, 2020; Etor et al., 2019; Meo, 2022; Owan et al., 2021; Owan, Osim et al., 2021). In some areas, enrolment in public schools has continued to increase while private school enrolment has declined, raising further concerns about the sustainability of many private institutions (Ekaette et al., 2019; Owan et al., 2021).

In response to these challenges, the Nigerian government has introduced several regulatory measures aimed at improving standards in private schools. These include stricter registration procedures, the closure or de-accreditation of non-compliant institutions, selective government takeover of certain schools, and increased regulatory oversight (Baum et al., 2018; Joshi, 2019). Despite these efforts, the long-term stability of many private schools remains uncertain. This suggests that internal governance and management practices may play an important role in determining whether these schools are able to sustain their operations over time. In particular, crisis management and corporate social responsibility may function as governance-related mechanisms through which private schools cope with challenges, maintain stakeholder trust, and support continuity of teaching and learning.

Crisis management (CM) refers to the processes through which organisations prepare for, respond to, and recover from disruptive events. In school settings, effective crisis management may involve clear emergency plans, staff training, communication systems, collaboration with relevant agencies, and leadership practices that support stability during difficult situations (Chatzipanagiotou & Katsarou, 2023; Lazaris, 2025; Mykhailova, 2025). These practices can help schools maintain operations during periods of uncertainty and reduce the impact of unexpected disruptions. However, empirical research on crisis management in educational institutions remains limited, particularly in private secondary schools in developing countries. Within sustainable education systems, such practices are closely linked to institutional resilience because they help schools preserve stability and continuity under pressure. Crisis management therefore functions as a core mechanism through which schools build and sustain institutional resilience.

Corporate social responsibility (CSR) refers to the ways organisations recognise and respond to their responsibilities toward society. In the context of education, CSR may involve ethical management practices, engagement with local communities, environmental awareness, and initiatives that benefit students and the wider society (Adu-Gyamfi et al., 2021; Khan & Ali, 2023). Evidence from business and higher education settings suggests that socially responsible practices can improve organisational reputation, strengthen stakeholder relationships, and support long-term stability (Chopra & Sharma, 2025; Dvorský et al., 2023). However, relatively little empirical work has examined how CSR operates within private secondary schools, particularly in African contexts. In school settings, CSR may also strengthen school governance by improving relationships with parents, communities, and other stakeholders whose support matters for long-

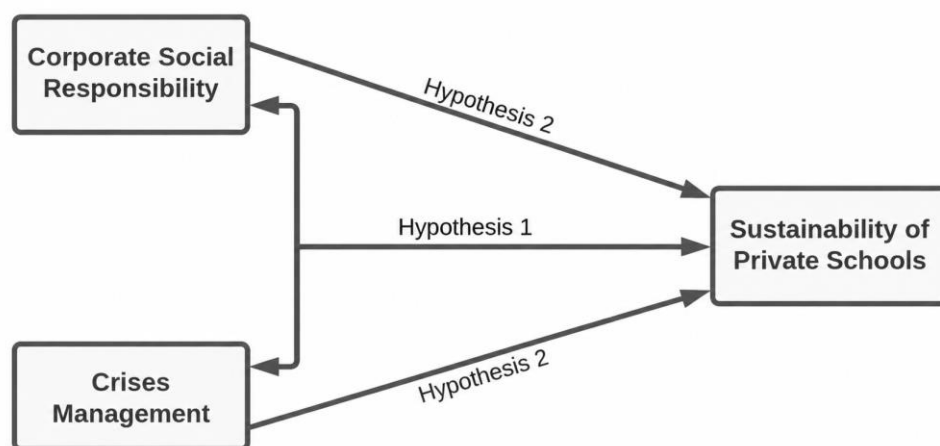
term viability. In this way, CSR may also contribute to institutional resilience by strengthening stakeholder trust and social legitimacy.

Given these gaps, it is important to understand how crisis management and corporate social responsibility may influence the sustainability of private secondary schools. Schools in Nigeria depend on stable enrolment, sound financial management, and effective administration in order to survive. Management practices that help schools respond to crises and maintain positive relationships with their communities may therefore be closely linked to their long-term survival. Yet few studies have examined the combined influence of these two factors within private secondary schools in sub-Saharan Africa (Chatzipanagiotou & Katsarou, 2023; Mykhailova, 2025).

This study therefore examines whether crisis management and corporate social responsibility predict the sustainability of private secondary schools in the Ikom Education Zone of Cross River State, Nigeria. The study contributes to the literature in three main ways. First, it extends existing work on crisis management by examining its relevance in private secondary school settings, which have received relatively limited attention in previous research. Second, it considers crisis management and corporate social responsibility together within a single analytical framework focused on school sustainability, institutional resilience, and governance in private education. By doing so, the study positions crisis management and CSR within a broader discussion of how private schools build institutional resilience and sustain long-term operations. Third, the findings provide practical guidance for school administrators, proprietors, and policymakers seeking to strengthen continuity, resilience, and the long-term viability of private educational institutions. This study is therefore positioned as a correlational contribution to sustainable school governance by examining how crisis management and corporate social responsibility are linked to institutional resilience and school sustainability in private secondary education. Based on this background, the conceptual model and hypotheses for the study were developed (see Figure 1).

Figure 1

Conceptual model showing the links between the predictors and outcome variables of the study



The following research questions were answered in the study:

RQ 1) To what extent do crisis management and corporate social responsibility jointly predict the sustainability of private secondary schools?

RQ 2) To what extent do crisis management and corporate social responsibility individually predict the sustainability of private secondary schools?

The following hypotheses were tested in this study:

H1) Crisis management and corporate social responsibility do not jointly predict the sustainability of private secondary schools.

H2) Crisis management and corporate social responsibility do not significantly predict the sustainability of private secondary schools when considered individually.

2. Methodology

2.1. Research Design

This study adopted a correlational research design. Correlational designs are used to examine the relationships between variables without manipulating them. In this approach, the researcher observes how variables are related within a naturally occurring setting. This design was considered appropriate because the study sought to examine the association between crisis management, corporate social responsibility, and the sustainability of private secondary schools.

2.2. Participants

The study involved 457 secondary school administrators drawn from private secondary schools in the Ikom Education Zone of Cross River State, Nigeria. The participants consisted of 172 principals and 285 vice principals who were actively serving in their respective schools. To be included in the study, respondents had to be currently employed as a principal or vice principal and have at least one year of administrative experience.

A census approach was used, meaning that all eligible administrators in the study area were included. This approach was appropriate because the total number of administrators within the zone was manageable, allowing the researcher to collect data from the entire population rather than selecting a sample. The demographic characteristics of the participants are presented in Table 1.

Table 1

Demographic Characteristics of Participants (N = 457)

<i>Category</i>	<i>Frequency (f)</i>	<i>Percentage (%)</i>
Gender		
Male	245	53.6
Female	212	46.4
Age (years)		
25–34	98	21.5
35–44	172	37.6
45–54	137	30
55+	50	10.9
Administrative Position		
Principal	172	37.6
Vice Principal	285	62.4
Years of Administrative Experience		
1–5	130	28.5
6–10	185	40.5
11–15	92	20.1
16+	50	10.9
Highest Educational Qualification		
Bachelor's Degree	312	68.3
Master's Degree	135	29.5
Doctorate	10	2.2

2.3. Instrumentation

Data were collected using a structured questionnaire developed by the researchers. The instrument was divided into two sections. Section A gathered demographic information from the respondents, while Section B contained items designed to measure crisis management, corporate social responsibility, and the sustainability of private secondary schools. Section B consisted of 18 items organized on a five-point Likert scale: Strongly Agree (SA), Agree (A), Neutral (N), Disagree (D), and Strongly Disagree (SD). The items were grouped into three subscales representing crisis management, corporate social responsibility, and private school sustainability.

2.4. Validity and Reliability

The face and content validity of the instrument were assessed by two specialists in test and measurement from the Department of Educational Foundations, Faculty of Education, University of Calabar. The experts reviewed the items to ensure that they were consistent with the objectives of the study. During this process, items that were considered irrelevant were removed, some were modified for clarity, and others were retained. The suggestions provided by the specialists were incorporated into the final version of the instrument.

A pilot test was conducted using 60 teachers from three private secondary schools in the Calabar Education Zone. Teachers were selected because they were familiar with the school management environment and could meaningfully respond to the items during instrument testing. These teachers did not participate in the main study. The participants were selected through simple random sampling. Data obtained from the pilot study were subjected to exploratory factor analysis (EFA) to examine the dimensional structure of the instrument.

Before conducting the factor analysis, several preliminary checks were performed. Skewness and kurtosis values were first examined to assess the distribution of the variables. Values close to zero suggest approximate normality (Ekpenyong et al., 2023; Owan, Ekpenyong et al., 2021; Owan, Odigwe et al., 2022). The results showed that all variables fell within the acceptable range of -1 to $+1$, indicating a reasonably normal distribution. Univariate normality was further examined using histograms and the Shapiro–Wilk test. The histograms displayed bell-shaped distributions, and the Shapiro–Wilk test indicated that the data did not significantly deviate from normality since all p -values were greater than .05. Multivariate normality was also assessed using Mardia's coefficient, and the results indicated no significant violation of multivariate normality assumptions.

Outliers were examined using box plots, Mahalanobis distance, and visual inspection of scatterplots. No problematic cases were detected in the dataset, suggesting that the data were suitable for further analysis (Owan, Emanghe et al., 2022). The inter-item correlations were then examined, and items that showed weak or non-significant relationships with other variables were considered unsuitable and removed. Through this process, eight items were discarded, reducing the initial set of items to 22.

Exploratory factor analysis was conducted using Maximum Likelihood Estimation (MLE). Direct Oblimin rotation, an oblique rotation method, was applied to allow for possible correlations among the factors. This approach was considered appropriate because the constructs examined in the study—crisis management, corporate social responsibility, and private secondary school sustainability—were expected to be related rather than completely independent.

The analysis produced three factors that together explained 62.7% of the total variance. Factor 1 had an eigenvalue of 3.12 and explained 26.0% of the variance, Factor 2 had an eigenvalue of 2.48 and accounted for 20.7% of the variance, while Factor 3 had an eigenvalue of 1.92 and explained 16.0% of the variance. The Kaiser–Meyer–Olkin measure of sampling adequacy was .83, indicating that the data were suitable for factor analysis. Bartlett's Test of Sphericity was also significant ($\chi^2 = 750.62$, $df = 153$, $p < .001$), confirming that the correlation matrix was appropriate for factor analysis (Ekpenyong et al., 2022; Owan, Ekpenyong et al., 2021).

Further examination of the pattern matrix and factor loadings led to the removal of two items with loadings below .40 and two items that cross-loaded on more than one factor. The final instrument therefore consisted of 18 items with acceptable factor loadings. Factor loadings ranged from .57 to .85 for Factor 1, .56 to .88 for Factor 2, and .53 to .81 for Factor 3, indicating moderate to strong relationships between the items and their respective factors. Based on the content of the items, the three factors were labelled crisis management, corporate social responsibility, and private secondary school sustainability. A summary of the exploratory factor analysis results is presented in Table 2.

Table 2
Exploratory factor analysis result summary

SN	Items	M	SD	λ	λ^2	ε
Factor 1: Crisis management ($\alpha = .94$)		23.60	5.10	5.07	4.32	1.68
1	My school has a well-documented crisis management plan.	4.20	0.95	.93	.86	.14
2	My school responds promptly and efficiently to crises	3.95	0.82	.91	.83	.17
3	My school has established partnerships with external agencies for crisis support.	3.80	0.88	.89	.79	.21
4	My school demonstrates strong leadership during crises	4.10	0.76	.85	.72	.28
5	My school maintains open communication with relevant authorities during a crisis.	3.70	0.91	.78	.61	.39
6	My school conducts post-crisis evaluations to improve its crisis management strategies.	3.85	0.78	.71	.50	.50
Factor 2: Corporate social responsibility ($\alpha = .92$)		24.15	5.20	5.14	4.47	1.53
7	My school has a well-defined corporate social responsibility strategy.	4.15	0.87	.96	.92	.08
8	My school encourages student involvement in volunteerism and social causes.	3.90	0.96	.94	.88	.12
9	My school actively engages in activities that promote environmental sustainability.	4.05	0.82	.93	.86	.14
10	My school supports community development projects.	4.25	0.75	.88	.77	.23
11	My school considers the environmental impact of its decisions and policies.	3.80	0.88	.74	.55	.45
12	My school collaborates with external organisations to address social and environmental challenges.	4.00	0.92	.69	.48	.52
Factor 3: Private sec. schools' sustainability ($\alpha = .76$)		23.95	4.94	4.90	4.13	1.87
13	The school proactively monitors and addresses factors that could threaten its long-term viability.	3.75	0.89	.96	.92	.08
14	The school actively seeks and diversifies its funding sources to sustain its operations	4.05	0.78	.95	.90	.10
15	My school maintains a strong enrolment rate to support its financial sustainability.	3.90	0.85	.93	.86	.14
16	My school regularly adapts its educational programs to meet evolving student and parent needs.	4.10	0.81	.83	.69	.31
17	My school continuously invests in improving its infrastructure and facilities to ensure a conducive learning environment.	4.20	0.72	.63	.40	.60
18	My school maintains a dedicated staff by providing them with opportunities for professional development	3.95	0.89	.60	.36	.64

2.5. Convergent and Discriminant Validity

Convergent validity refers to the extent to which items within the same construct are related and measure the same underlying concept (Kaddech et al., 2022; Muñoz González et al., 2022; Owan, Duruamaku-Dim et al., 2022). It was assessed using the average variance extracted (AVE) and composite reliability (CR). AVE indicates the proportion of variance captured by the items relative to the total variance, and values above 0.50 are generally considered acceptable (Ab Hamid et al., 2017; Owan, Owan et al., 2022). As presented in Table 3, the AVE values for crisis management, corporate social responsibility, and private secondary school sustainability were 0.72, 0.74, and 0.69, respectively. Since all values exceeded the recommended threshold, the constructs demonstrate adequate convergent validity.

Discriminant validity refers to the extent to which different constructs are distinct from one another (Henseler et al., 2015; Kaddech et al., 2022). This was assessed by examining the correlations among the constructs. As shown in Table 3, the correlations between the constructs were relatively low. The correlation between crisis management and corporate social responsibility was 0.32, while the correlations between crisis management and private secondary school

sustainability and between corporate social responsibility and private secondary school sustainability were 0.23 and 0.17, respectively. In addition, the square root of the AVE values (shown in bold along the diagonal) was greater than the correlations between the constructs. This indicates that each construct is distinct and supports the presence of discriminant validity (Boateng et al., 2018; Muñoz González et al., 2022; Owan, Akah et al., 2022; Owan, Emanghe et al., 2022).

Composite reliability (CR) was also used to assess the internal consistency of the constructs (Owan, Owan et al., 2022). Values above 0.70 are generally considered acceptable (Boateng et al., 2018). As reported in Table 3, the CR values for crisis management, corporate social responsibility, and private secondary school sustainability were 0.92, 0.93, and 0.74, respectively, indicating satisfactory reliability.

Table 3

Convergent and discriminant validity

<i>Factors</i>	<i>AVE</i>	<i>CR</i>	<i>(1)</i>	<i>(2)</i>	<i>(3)</i>
(1) Crisis management	0.72	0.92	0.85		
(2) Corporate social responsibility	0.74	0.93	0.32	0.86	
(3) Private secondary schools' sustainability	0.69	0.74	0.23	0.17	0.83

Cronbach's alpha was further used to assess the internal consistency of the instrument. The reliability coefficients for crisis management, corporate social responsibility, and private secondary school sustainability were 0.94, 0.92, and 0.76, respectively (see Table 2). These values indicate that the instrument has satisfactory internal consistency.

2.6. Ethical Considerations

Ethical standards were carefully observed throughout the study to protect the rights and well-being of the participants. Before data collection began, the respondents were informed about the purpose of the study and the procedures involved. Their participation was voluntary, and informed consent was obtained before the questionnaires were administered. Participants were assured that the information they provided would be treated confidentially and used strictly for academic purposes. No personal identifiers were collected, and responses were recorded anonymously. The respondents were also informed that they could withdraw from the study at any point without any consequences. These measures were taken to ensure that the study respected participants' autonomy and maintained the confidentiality of their responses.

2.7. Data Collection

Data collection was carried out with the assistance of five trained research assistants who were briefed on the objectives of the study and their responsibilities during the process. Each private secondary school within the Ikom Education Zone was visited individually. Upon arrival, the researchers first met with the school principal to explain the purpose of the study and obtain permission to administer the questionnaire. After approval was granted, questionnaires were distributed to the participating administrators, namely the principals and vice principals. The respondents were encouraged to provide honest and unbiased responses and were assured that their responses would remain confidential and would be used only for research purposes. The completed questionnaires were collected immediately after completion. This procedure was repeated across all participating schools until all the instruments were distributed and retrieved.

2.8. Data Analysis Procedures

Descriptive statistics, including mean and standard deviation, were used to summarise the data collected from the respondents. To test the study hypotheses, multiple linear regression analysis was conducted at the 0.05 level of significance using IBM SPSS version 27. The regression analysis was used to examine the joint and individual contributions of the two independent variables, crisis management (X_1) and corporate social responsibility (X_2), to the prediction of private secondary school sustainability (Y). The regression model used in the analysis was expressed as:

$$Y = a + B_1X_1 + B_2X_2$$

Where a represents the intercept, while B_1 and B_2 represent the regression coefficients indicating the contribution of crisis management and corporate social responsibility to the prediction of private secondary school sustainability.

3. Results

3.1. Joint Prediction of Private School Sustainability

The joint prediction of private secondary school sustainability by crisis management and corporate social responsibility in the Ikom Education Zone was examined using multiple linear regression analysis. As shown in Table 4, the model explained 50% of the variance in private school sustainability ($R = .71$, $R^2 = .50$, $\text{Adj. } R^2 = .50$, $\text{SE} = 6.52$), indicating that the two predictors jointly accounted for a substantial proportion of the variation in sustainability. The overall regression model was statistically significant, $F(2, 454) = 224.46$, $p < .001$. This result indicates that crisis management and corporate social responsibility jointly predicted the sustainability of private secondary schools. The null hypothesis on the joint prediction was therefore rejected.

3.2. Individual Prediction by Crisis Management and Corporate Social Responsibility

The individual predictive contributions of the predictors were examined using the regression coefficients. Table 4 shows that crisis management made a significant contribution to private school sustainability ($B = 0.60$, $\text{SE} = 0.06$, $\beta = .42$, $t = 10.58$, $p < .001$). This indicates that higher levels of crisis management were associated with higher sustainability scores, when corporate social responsibility was held constant. Corporate social responsibility also made a significant contribution to the prediction of sustainability ($B = 0.59$, $\text{SE} = 0.06$, $\beta = .38$, $t = 9.40$, $p < .001$), indicating that schools with stronger corporate social responsibility practices tended to report higher sustainability scores.

A comparison of the standardized beta coefficients indicates that crisis management ($\beta = .42$) contributed slightly more strongly to sustainability than corporate social responsibility ($\beta = .38$). On the basis of these findings, the null hypothesis stating that crisis management and corporate social responsibility do not make significant individual contributions to the prediction of private secondary school sustainability was rejected.

Table 4

Joint and Individual Contributions of Crisis Management and CSR to Private School Sustainability

R	R^2	Adj. R^2	SE		
.71	.50	.50	6.52		
Model	SS	df	MS	F-ratio	p-value
Regression	19095.57	2	9547.78	224.46	<.001
Residual	19311.43	454	42.54		
Total	38407	456			
Predictors	B	SE	β	T	p-value
(Constant)	6.26	0.94		6.69	<.001
Crisis Management	0.60	0.06	0.42	10.58	<.001
Corporate social resp.	0.59	0.06	0.38	9.40	<.001

In summary, the results show that both crisis management and corporate social responsibility were significant predictors of the sustainability of private secondary schools in the Ikom Education Zone. Together, they explained a substantial proportion of the variance in sustainability, and each predictor made a significant contribution to the model.

4. Discussion

The study found that crisis management and corporate social responsibility jointly predict school sustainability in private secondary schools in the Ikom Education Zone of Cross River State, and these findings may be interpreted within the broader lens of institutional resilience. Schools

reporting stronger crisis management and CSR practices also tended to report greater operational stability, continuity of teaching and learning, and stronger sustainability levels. These findings suggest that combining internal risk management strategies with socially responsible practices may support institutional resilience by supporting continuity, stakeholder trust, and long-term school viability, aligning with prior research on organisational resilience and responsible management (Al-Dmour et al., 2025; Mostepaniuk et al., 2022). In educational settings, CSR is increasingly regarded as a strategic tool that strengthens stakeholder trust and reinforces institutional values, while comprehensive crisis management enhances an institution's capacity to withstand disruptions (Hermoso et al., 2025; Lazaris, 2025; Mykhailova, 2025). This reinforces the view that institutional resilience serves as a critical bridge between governance practices and sustainable school outcomes.

Crisis management independently showed a significant predictive association with school sustainability. Schools implementing well-defined emergency procedures, dedicated response teams, regular staff training, and frequent updates to crisis plans were more likely to maintain operational continuity. Evidence from previous studies indicates that such practices reduce disruptions, preserve stakeholder confidence, and support staff and student retention during periods of instability (Arop et al., 2018; Jankelová et al., 2021; Lazaris, 2025; Mykhailova, 2025; Owan, 2018). These findings suggest that resilience depends on both preparedness and adaptive capacity (Mykhailova, 2025). However, technological adaptation strategies were not measured in this study and are mentioned here only as a possible direction for future research.

Similarly, CSR had a significant predictive association with school sustainability. Institutions reporting stronger CSR activities that address community needs, environmental considerations, and social responsibilities also reported higher sustainability scores (Al-Dmour et al., 2025; Aziz et al., 2025; Changra, 2025; Vartiak, 2025). Previous studies indicate that CSR supports institutional reputation, stakeholder relationships, and alignment with broader social and educational goals. The effect of CSR on sustainability, however, is moderated by factors such as resource availability, stakeholder engagement, and governance quality, indicating that CSR alone cannot fully ensure sustainable outcomes (Mostepaniuk et al., 2022; Xue et al., 2025).

The combined findings suggest that private schools achieve higher sustainability when strong crisis management systems operate alongside meaningful CSR initiatives. This combination may support institutional resilience by enhancing operational continuity, strengthening stakeholder confidence, and improving long-term school viability. While these results are most directly applicable to the Ikom Education Zone, they are also relevant to wider discussions of sustainable school governance and institutional resilience in private education in Nigeria and similar settings.

5. Limitations and Suggestions for Further Research

The study has some limitations. First, it was conducted in only one education zone in Cross River State, which may limit the generalisability of the findings to other locations. Second, the study relied on self-reported data from school administrators, which may be affected by social desirability bias. Third, the cross-sectional design does not permit conclusions about changes over time. Fourth, the study drew only on administrators' perspectives and did not include teachers, parents, students, or other external stakeholders. Future studies may address these issues by extending the work to other regions, using longitudinal designs, and including multiple stakeholder groups. Future research may also examine additional factors linked to school sustainability, such as funding patterns, infrastructure quality, staff development, and digital preparedness.

6. Conclusion

This study examined the roles of crisis management and corporate social responsibility in private secondary school sustainability, with the findings discussed in relation to institutional resilience among private secondary schools in the Ikom Education Zone of Cross River State, Nigeria. The results indicate that both crisis management and corporate social responsibility jointly and

individually predict school sustainability, and the findings are consistent with the view that these practices support institutional resilience. Effective crisis management is linked to schools' capacity to manage unexpected events and maintain operational stability, while corporate social responsibility is linked to stronger community relationships, institutional reputation, and long-term viability. The study contributes to the literature by linking crisis management and CSR to institutional resilience and sustainable school governance in private secondary education. Practically, the findings support the need for school administrators and policymakers to prioritise crisis management strategies and CSR initiatives as important parts of sustainable school governance. Beyond the Ikom Education Zone, these results may guide private schools in similar Nigerian regions and comparable settings in sub-Saharan Africa, informing policies and practices that support resilience, continuity of teaching and learning, and long-term institutional stability.

Based on the findings of this study, the following recommendations were made. First, the leadership of private secondary schools should develop clear frameworks, mechanisms, and strategies for managing school-related crises and other anticipated disruptions. This would strengthen preparedness, support continuity of teaching and learning, and improve long-term school stability. Finally, private secondary school proprietors should strengthen corporate social responsibility through scholarships, community support initiatives, and other socially responsive activities that build public trust and strengthen school-community relationships. Such practices may support the long-term sustainability of the school.

Author contributions: Ekpenyong E. Ekanem: Conceptualization, Methodology, Investigation, Data Curation, Writing – Original Draft. Godfrey E. Ukpabio: Methodology, Investigation, Validation, Writing – Review & Editing. Usen F. Mbon: Investigation, Validation, Data Curation, Writing – Review & Editing. Valentine Joseph Owan: Conceptualization, Methodology, Formal Analysis, Data Curation, Writing – Review & Editing, Supervision. All authors read and approved the final version of the manuscript.

Data availability statement: The data supporting the findings of this study are available upon reasonable request from the corresponding author. The data are not publicly available due to confidentiality and participant-related considerations.

Declaration of interest: The authors declare no conflict of interest.

Ethical approval and consent: Ethical approval for the study was obtained from the University of Calabar Research Ethics Committee (UNICAL/REC/2024/0248). Informed consent was obtained from all participants before data collection. Participation was voluntary, and participants were assured that their responses would be treated confidentially and used strictly for academic purposes. No personal identifiers were collected, and participants were informed of their right to withdraw from the study at any time without consequences.

Funding: This research received no specific funding from any public, commercial, or not-for-profit funding agency.

References

- Ab Hamid, M. R., Sami, W., & Mohmad Sidek, M. H. (2017). Discriminant validity assessment: Use of Fornell and Larcker criterion versus HTMT criterion. *Journal of Physics: Conference Series*, 890(1). <https://doi.org/10.1088/1742-6596/890/1/012163>
- Adu-Gyamfi, M., He, Z., Nyame, G., Boahen, S., & Frempong, M. F. (2021). Effects of internal CSR activities on social performance, the employee perspective. *Sustainability*, 13(11), Article 6235. <https://doi.org/10.3390/su13116235>
- Al-Dmour, H., Al-Dmour, R., Al-Dmour, A., & Al-Dmour, Y. (2025). The synergistic impact of social responsibility and circular economy on institutional performance in higher education, the role of community engagement. *International Journal of Sustainability in Higher Education*. Advance online publication. <https://doi.org/10.1108/IJSHE-09-2024-0605>

- Alkaabi, A., Cherian, J. P., & Davidson, R. (2022). Is private schooling worth it? A study on the relationship between cost, quality, and student achievement in the private schools. *International Journal of Educational Management*, 36(7), 1362–1379. <https://doi.org/10.1108/IJEM-01-2022-0010>
- Antón, H. F., Sánchez Vera, F., Martínez Guirao, J. E., & Tellez Infantes, A. (2022). Social sustainability and school segregation in the Region of Murcia (Spain). *Sustainability*, 14(3), 1580. <https://doi.org/10.3390/su14031580>
- Arop, F. O., Owan, V. J., & Ekpang, M. A. (2018). Administrators' conflict management strategies utilisation and job effectiveness of secondary school teachers in Obubra Local Government Area, Cross River State, Nigeria. *IJAR International Journal of Economics and Business Management*, 4(7), 11–21. <https://doi.org/10.5281/zenodo.4320490>
- Aziz, R. C., Tuan Sulaiman, T. F., Awang, A. I., Md Ninggal, M. T., & Aziz, N. (2025). Community-driven corporate social responsibility through educational outreach, a case study of Open University Malaysia rural engagement projects. *International Journal of Research and Innovation in Social Science*, 9(14), 991–1000. <https://doi.org/10.47772/IJRISS.2025.914MG0076>
- Bassey, B. A., Owan, V. J., & Agunwa, J. N. (2019). Quality assurance practices and students' performance evaluation in universities of South-South Nigeria: A structural equation modelling approach. *British Journal of Psychology Research*, 7(3), 1–13. <https://doi.org/10.5281/zenodo.4458641>
- Baum, D. R., Abdul-Hamid, H., & Wesley, H. T. (2018). Inequality of educational opportunity: the relationship between access, affordability, and quality of private schools in Lagos, Nigeria. *Oxford Review of Education*, 44(4), 459–475. <https://doi.org/10.1080/03054985.2017.1421153>
- Bibri, S. E. (2021). Data-driven smart sustainable cities of the future: Urban computing and intelligence for strategic, short-term, and joined-up planning. *Computational Urban Science*, 1, 1–29. <https://doi.org/10.1007/s43762-021-00008-9>
- Boateng, G. O., Neilands, T. B., Frongillo, E. A., Melgar-Quinonez, H. R., & Young, S. L. (2018). Best practices for developing and validating scales for health, social, and behavioral research: A primer. *Frontiers in Public Health*, 6, Article 149. <https://doi.org/10.3389/fpubh.2018.00149>
- Changra, A. (2025). An analytical study on inclusive education and social responsibility, bridging community engagement and educational equity. *International Journal of Full Multidisciplinary Research*, 7(3), 1–11. <https://doi.org/10.36948/ijfmr.2025.v07i03.46025>
- Chatzipanagiotou, P., & Katsarou, E. (2023). Crisis management, school leadership in disruptive times and the recovery of schools in the post COVID-19 era, a systematic literature review. *Education Sciences*, 13(2), Article 118. <https://doi.org/10.3390/educsci13020118>
- Chopra, A., & Sharma, P. (2025). Navigating crises, the strategic role of CSR in crisis management and mitigation. *Journal of Information Systems Engineering and Management*, 10(4s), 1–10. <https://doi.org/10.52783/jisem.v10i4s.465>
- Crawford, L., Hares, S., & Todd, R. (2023). The impact of private schools, school chains and PPPs in developing countries. *The World Bank Research Observer*, 2023, lkad005. <https://doi.org/10.1093/wbro/lkad005>
- Dvorský, J., Švihlíková, I., Kozubíková, L., Frajtova Michalíková, K., & Balcerzak, A. P. (2023). Effect of CSR implementation and crisis events in business on the financial management of SMEs. *Technological and Economic Development of Economy*, 29(5), 1496–1519. <https://doi.org/10.3846/tede.2023.19821>
- Ekaette, S. O., Ameh, E., & Owan, V. J. (2020). Statistical trends of school size, location and enrolment: An evaluation of public junior secondary schools for sustainable development. *World Journal of Vocational Education and Training*, 2(2), 76–88. <https://doi.org/10.18488/journal.119.2020.22.76.88>
- Ekaette, S. O., Ekpennyong, J. A., & Owan, V. J. (2019). School characteristics and enrollment trend in upper basic schools in Akwa Ibom State, Nigeria from 2008-2016. *Pedagogical Research*, 4(3), Article em0039. <https://doi.org/10.29333/pr/5855>
- Ekpennyong, J. A., Owan, V. J., Mbon, U. F., & Undie, S. B. (2023). Family and community inputs as predictors of students' overall, cognitive, affective and psychomotor learning outcomes in secondary schools. *Journal of Pedagogical Research*, 7(1), 103–127. <https://doi.org/10.33902/JPR.202319099>
- Ekpennyong, J. A., Owan, V. J., Ogar, J. O., & Undie, J. A. (2022). Hierarchical linear modelling of educational outcomes in secondary schools: What matters – teachers' or administrators' input? *Cogent Education*, 9(1), Article ID 2133491. <https://doi.org/10.1080/2331186X.2022.2133491>
- Etor, C. R., Obeten, R. B., & Obona, E. E. (2019). Management of skill-oriented subjects and goal attainment in private secondary schools in Ikom education zone, Cross River state, Nigeria. *Global Journal of Educational Research*, 18(1), 27–34. <https://doi.org/10.4314/gjedr.v18i1.4>

- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115–135. <https://doi.org/10.1007/s11747-014-0403-8>
- Hermoso, J. R. V., Laguardilla, S. A., Salapare, V. R., Briones, J. P., & Verano, J. P. E. (2025). Impact of corporate social responsibility on job satisfaction of teaching personnel in a private educational institution in the Philippines. *Inclusive Society and Sustainability Studies*, 5(1), 57–76. <https://doi.org/10.31098/issues.v5i1.3350>
- Hoosain, M. S., Paul, B. S., & Ramakrishna, S. (2020). The impact of 4IR digital technologies and circular thinking on the United Nations sustainable development goals. *Sustainability*, 12(23), 10143. <https://doi.org/10.3390/su122310143>
- Hove, B., & Dube, B. (2021). Covid-19 and the entrenchment of a virtual Elite private school: Rethinking education policies in Zimbabwe. *Journal of Culture and Values in Education*, 4(2), 84–94.
- Jankelová, N., Joniaková, Z., Blštáková, J., Skorková, Z., & Procházková, K. (2021). Leading employees through the crises: Key competences of crises management in healthcare facilities in coronavirus pandemic. *Risk Management and Healthcare Policy*, 14, Article 561. <https://doi.org/10.2147/RMHP.S288171>
- Joshi, P. (2019). The private education system's growth, roles and needs: Private stakeholder perspectives from Nepal. *International Journal of Educational Development*, 65, 57–67. <https://doi.org/10.1016/j.ijedudev.2019.01.002>
- Kaddech, N., Guelmami, N., Bonsaksen, T., Doggui, R., Beji, C., & El Ati, J. (2022). Adaptation and psychometric evidence of the Arabic version of the Diabetes Self-Management Questionnaire (A-DSMQ). *Healthcare*, 10(5), 951. <https://doi.org/10.3390/healthcare10050951>
- Khan, S., & Ali, I. (2023). Corporate social responsibility impact on the performance of private sector education. *Quantum Journal of Social Sciences and Humanities*, 4(5), 50–58. <https://doi.org/10.55197/qjssh.v4i5.303>
- Lazaris, D. (2025). Crisis management in school environments, a holistic approach based on literature review. *International Journal of Advanced Multidisciplinary Research and Studies*, 5(4), 444–449. <https://doi.org/10.62225/2583049X.2025.5.4.4612>
- Meo, S. (2022). Understanding marketing strategies of private schools in a provincial town in Rajasthan, India. *Corvinus Journal of Sociology and Social Policy*, 13(2), 161–182. <https://doi.org/10.14267/CJSSP.2022.2.8>
- Mostepaniuk, A., Nasr, E., Awwad, R. I., Hamdan, S., & Aljuhmani, H. Y. (2022). Managing the relationship between corporate social responsibility and sustainability, a systematic review. *Sustainability*, 14(18), Article 11203. <https://doi.org/10.3390/su141811203>
- Muñoz González, J. M., Ariza Carrasco, C., Hidalgo Ariza, M. D., & Romero Esquinas, M. H. (2022). Psychometric study of a scale on the use of video games for the initial training of teachers. *Frontiers in Education*, 7. <https://doi.org/10.3389/feduc.2022.988581>
- Mykhailova, Y. (2025). The role of crisis management in strengthening the resilience of educational institutions. *Kyiv Economic Scientific Journal*, (9), 201–205. <https://doi.org/10.32782/2786-765X/2025-9-27>
- Owan, V. J. (2018). Conflict management strategies and secondary school teachers' job effectiveness in Obubra Local Government Area of Cross River State, Nigeria. In *University of Calabar, Nigeria*. <https://doi.org/10.13140/RG.2.2.35015.55200>
- Owan, V. J., & Agunwa, J. N. (2019). Principals' administrative competence and teachers' work performance in secondary schools in Calabar Education Zone of Cross River State, Nigeria. *Humanities and Social Sciences Letters*, 7(1), 20–28. <https://doi.org/10.18488/journal.73.2019.71.20.28>
- Owan, V. J., & Offu, O. E. (2021). Standardised predictive linear models of managerial processes and the sustainability of graduate programmes (SGPs) in universities: A case study. *Contemporary Mathematics and Science Education*, 2(1), Article ep21006. <https://doi.org/10.30935/conmaths/9681>
- Owan, V. J., Akah, L. U., Ekpo, A. J., Ubi, I. O., Abeng, F. A., & Akah, G. T. (2022). Socioeconomic factors and the evaluation of HIV/AIDS prevention programs: A psychometric analysis of an instrument. *Electronic Journal of General Medicine*, 19(6), Article ID em405. <https://doi.org/10.29333/ejgm/12320>
- Owan, V. J., Ameh, E., & Ubabudu, M. C. (2021). Enrolment patterns in Federal universities based on three criteria (2010-2031): A time series analysis. *Journal of Educational Research in Developing Areas (JEREDA)*, 2(1), 34–51. <https://doi.org/10.47434/JEREDA.2.1.2021.34>
- Owan, V. J., Duruamaku-Dim, J. U., Okon, A. E., Akah, L. U., Agurokpon, D. C., Ubi, I. O., & Abanyam, V. A. (2022). Interlinking alcohol intake, mental stress, psychotic experiences and job performance of higher

- institutions' graduates: A structural equation modelling. *Journal of Education and Health Promotion*, 11, Article 312. https://doi.org/10.4103/jehp.jehp_417_22
- Owan, V. J., Ekpenyong, J. A., & Asuquo, M. E. (2021). A structural equation model of principals' communication patterns, funds management and school-community relationship. *Journal of Pedagogical Sociology and Psychology*, 3(1), 1–18. <https://doi.org/10.33902/JPSP.2020364435>
- Owan, V. J., Emanghe, E. E., Denwigwe, C. P., Etudor-Eyo, E., Usoro, A. A., Ebuara, V. O., Effiong, C., Ogar, J. O., & Bassey, B. A. (2022). Curriculum management and graduate programmes' viability: The mediation of institutional effectiveness using PLS-SEM approach. *Journal of Curriculum and Teaching*, 11(5), 114–127. <https://doi.org/10.5430/jct.v11n5p114>
- Owan, V. J., Odigwe, F. N., Okon, A. E., Duruamaku-dim, J. U., Ubi, I. O., Emanghe, E. E., Owan, M. V., & Bassey, B. A. (2022). Contributions of placement, retraining and motivation to teachers' job commitment: structural equation modelling of the linkages. *Heliyon*, 8(4), Article ID e09334. <https://doi.org/10.1016/j.heliyon.2022.e09334>
- Owan, V. J., Osim, R. O., Emanghe, E. E., Ameh, E., & Ekpenyong, J. A. (2021). Principals' management of library resources and teachers' lesson preparation practices in secondary schools: A predictive evaluation. *Library Philosophy and Practice (e-Journal)*, 2021, Article ID 6180. <https://digitalcommons.unl.edu/libphilprac/6180>
- Owan, V. J., Owan, M. V., & Lata, N. (2022). Discharge of pedagogic duties: A bootstrapped structural equation modelling of teachers' use of research materials in school libraries. *Journal of Applied Learning & Teaching*, 5(2), 116–131. <https://doi.org/10.37074/jalt.2022.5.2.13>
- Robina-Ramírez, R., & Cotano-Olivera, C. (2020). Driving private schools to go "green": The case of Spanish and Italian religious schools. *Teaching Theology & Religion*, 23(3), 175–188. <https://doi.org/10.1111/teth.12547>
- Shabbir, M. S., & Wisdom, O. (2020). The relationship between corporate social responsibility, environmental investments and financial performance: Evidence from manufacturing companies. *Environmental Science and Pollution Research*, 27, 39946–39957. <https://doi.org/10.1007/s11356-020-10217-0>
- Ukpabio, G. E., Ekanem, E. E., Mbon, U. F., & Arop, F. O. (2020). Administrators' awareness, procurement and management of virtual laboratories for teaching Science subjects in secondary schools: A case study. *The Journal of Social Sciences Research*, 6(65), 598–605. <https://doi.org/10.32861/jssr.65.598.605>
- Vartiak, L. (2025). Basic research of the perception of corporate social responsibility in the academic environment. *International Journal of Business, Law, and Education*, 6(1), 711–723. <https://doi.org/10.56442/ijble.v6i1.1077>
- Wodon, Q. (2020). Are new secondary schools built where they are needed most in Uganda? Comparing Catholic with public and other private schools. *The Review of Faith & International Affairs*, 18(2), 44–60. <https://doi.org/10.1080/15570274.2020.1753994>
- Xue, J., & de Leon, J. C. B. (2025). Challenges in implementing corporate social responsibility initiatives in private schools, insights from Mingde Experimental School. *International Journal of Science and Engineering Applications*, 14(5), 8–11. <https://doi.org/10.7753/IJSEA1405.1002>
- Zhang, W. (2020). Shadow education in the service of tiger parenting: Strategies used by middle-class families in China. *European Journal of Education*, 55(3), 388–404. <https://doi.org/10.1111/ejed.12414>