

Original Research Article

Appraisal of Built-Environment Agencies' Roles on Building Collapse in Lagos State, Nigeria

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Abstract: This study examines the roles, effectiveness, and spatial distribution of built environment agencies in mitigating building collapse in Lagos State, Nigeria. It addresses an empirical gap by integrating institutional assessment with spatial analysis, drawing on institutional theory to explain regulatory performance. A mixed-methods approach was employed, involving officers from eleven built environment agencies and construction professionals. Using purposive and stratified sampling, 165 respondents were selected. Data were obtained through structured questionnaires, key-informant interviews, and GIS-based spatial datasets analysed using Average Nearest Neighbour and buffer techniques, alongside descriptive and inferential statistics. Qualitative data were thematically analysed to support quantitative findings. Results indicate moderate agency effectiveness, with a mean score of 3.02 on a 5-point scale. Spatial analysis reveals a concentration of regulatory activities in Lagos Mainland and Lagos Island, while peripheral areas experience weaker oversight. Additionally, 64% of respondents identified fragmented inter-agency coordination as a key factor in recurring building collapse. The study concludes that improving spatial coverage, strengthening institutional capacity, and enhancing regulatory coordination are essential for reducing building collapse incidents in Lagos State. Word Count – 173

Keywords: Building Collapse, Built Environment Agencies, Institutional Effectiveness, Spatial Analysis (GIS)

1. Introduction

Building collapse has emerged as a recurring problem in rapidly urbanizing regions, particularly in developing countries such as Nigeria. Lagos State, being the commercial hub of Nigeria, experiences intense development pressure, which often leads to compromised

building standards and regulatory failures. The increasing frequency of building collapse incidents has raised concerns about the effectiveness of built environment agencies responsible for development control and enforcement.

Built environment agencies, including planning authorities, building control agencies, and regulatory bodies, are mandated to ensure compliance with planning standards, building codes, and safety regulations. However, persistent building failures suggest systemic inefficiencies within these institutions. This study therefore, examines the roles, effectiveness, and limitations of these agencies in addressing building collapse in Lagos State.

The objectives of the study are to: (i) examine the roles of built environment agencies; (ii) assess their effectiveness in controlling building collapse; and (iii) identify challenges affecting their performance.

2. Literature Review

2.1 Concept of Building Collapse

Building collapse refers to the structural failure of a building resulting in partial or total failure. Previous studies attribute building collapse to factors such as poor design, substandard materials, lack of supervision, and regulatory failures.

2.2 Role of Built Environment Agencies

Built environment agencies are responsible for development control, approval of building plans, site inspections, and enforcement of regulations. Their effectiveness is crucial in ensuring safe and sustainable urban development.

2.3 Institutional Challenges

Studies have identified key challenges including corruption, political interference, inadequate funding, and weak enforcement mechanisms.

2.4 Gap in Literature

While previous studies have examined causes of building collapse, limited research has focused on evaluating the performance of regulatory agencies. This study bridges this gap by providing empirical evidence on institutional effectiveness in Lagos State.

3. Methodology

This study adopts a mixed-method research design. Primary data were collected through structured questionnaires administered to professionals including town planners, architects, and engineers. Secondary data were obtained from government reports and documented cases of building collapse.

A stratified sampling technique was employed to ensure representation of different professional groups. Data were analyzed using descriptive statistics such as frequency distribution and mean scores, as well as inferential statistics where applicable.

4. Results and Discussion

Findings indicate that built environment agencies perform essential roles in regulating construction activities; however, their effectiveness is constrained by several factors. Respondents identified poor enforcement of building regulations as a major issue. Inadequate staffing and a lack of modern monitoring technologies further weaken regulatory oversight.

Table 1: Level of Significance of Perceived Suggestion for Improvement

	Chi-Square	df	Asymp. Sig.
Agencies should adopt digital monitoring tools (e.g., drones, GIS).	1.473 ^a	1	0.225
Periodic training and capacity building for agency staff should be mandatory.	4.091 ^a	1	0.043*
Penalties for non-compliance with building regulations should be strictly enforced.	26.436 ^b	2	0.001**
Community reporting channels should be created to flag illegal constructions.	25.564 ^b	2	0.001**
Collaboration between agencies and professional bodies should be strengthened.	37.782 ^b	2	0.001**
Independent audit units should be established to monitor agency performance.	41.218 ^c	3	0.001**
Public education campaigns on building safety should be regularly conducted.	29.709 ^b	2	0.001**
Regulatory agencies should be granted autonomy to operate without political interference.	46.455 ^c	3	0.001**
An integrated digital platform should be developed for building approval and site monitoring.	52.909 ^d	4	0.001**

** Significant Level at 0.01, * Significant Level at 0.05

Source:²⁶ Author's Field work, 2025

Corruption and political interference were also highlighted as significant barriers to effective performance. The study reveals that many building collapse incidents occur due to non-compliance with approved plans and lack of proper supervision.

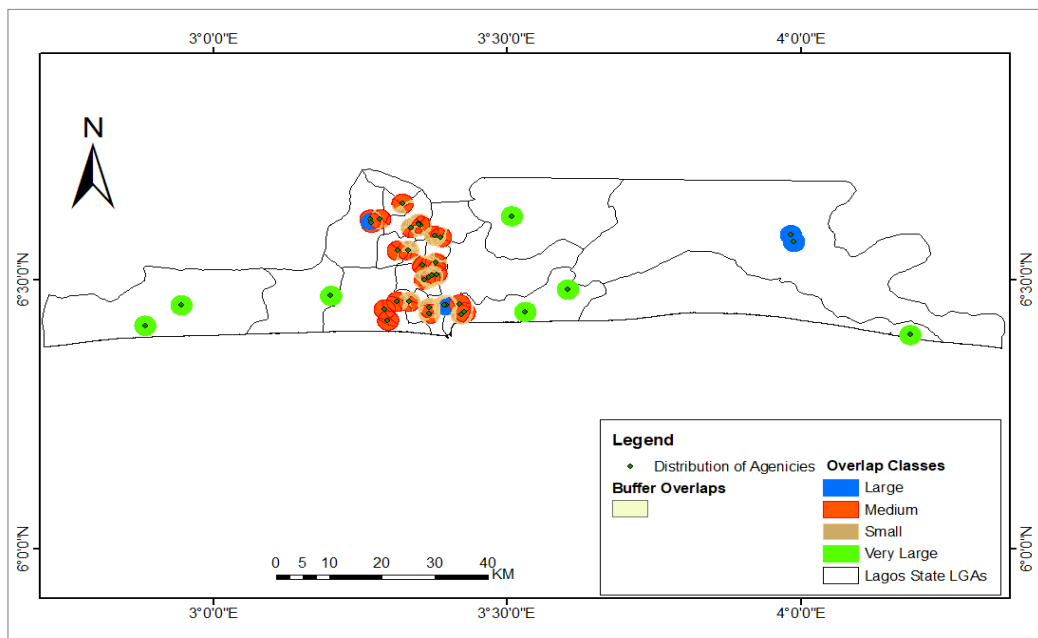
The discussion shows that strengthening institutional frameworks and improving transparency can significantly enhance the performance of these agencies.

Taken together, these findings highlight a paradox. While the wide presence of agencies across Lagos demonstrates strong institutional visibility, the way their jurisdictions overlap reveals inefficiencies that could undermine their effectiveness. The overwhelming dominance of small overlaps implies fragmented coverage, while the fewer Medium to Very Large overlaps suggest that only certain districts benefit from layered institutional monitoring. Without harmonization, such unevenness in spatial coverage can leave large parts of Lagos vulnerable to poor enforcement, thereby perpetuating the cycle of building collapse.

Table 2: Summary of Overlap Zones

Overlap Class	FREQUENCY	Minimum Area (km ²)	Maximum Area (km ²)	Mean Area (km ²)	Sum Area (km ²)
Small	12788	0.000001	0.989462	0.121	1547.603973
Medium	1064	1.019475	4.994266	2.3336	2483.002349
Large	163	5.024076	6.543367	5.5059	897.45449
Very Large	25	12.565537	12.565537	12.5655	314.138433

Author's Fieldwork, 2025



Spatial Classification of Overlap Buffer

Source: Author's fieldwork, 2025

5. Contribution to Knowledge

This study provides empirical insights into the effectiveness of built environment agencies in Lagos State. It advances knowledge by linking institutional performance with urban safety outcomes and offering a framework for evaluating regulatory effectiveness.

6. Limitations of the Study

The study is limited by reliance on self-reported data from professionals, which may introduce bias. Additionally, access to comprehensive government data on building collapse was restricted.

7. Conclusion and Recommendations

The study concludes that while built environment agencies play critical roles in mitigating building collapse, their effectiveness is limited by institutional and operational challenges. To address these issues, the study recommends strengthening enforcement mechanisms, improving inter-agency collaboration, adopting modern monitoring technologies, and enhancing professional accountability.

8. Further Areas of Research

Future studies should explore the integration of digital technologies such as GIS and remote sensing in monitoring building development and preventing structural failures.

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Declarations

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Conflict of Interest: None declared.

Data Availability: Data supporting the findings of this study are available from the corresponding author upon request.

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