Assessment of Risk and Policy Implications of Uncompleted Buildings in Calabar, Cross River State, Nigeria

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Abstract: Calabar, the capital of Cross River State in Nigeria is getting progressively blighted by an urban proliferation of half-finished and unfinished buildings. The risks and causes of this urban dilemma are multifaceted, and this literature review is a systematic evaluation of the underlying factors and risk of this urban problem. This paper utilizes the systematic review methodology to summarize the available scholarly and grey literature to develop a comprehensive perspective. Results indicate that the issue of uncompleted buildings in Calabar is not caused by one factor, but instead, a multi-layered and dynamic combination of economic factors, deep-rooted governance failures, political instability, technical deficiencies, and legal entanglements. Although the economic conditions, including the lack of funds and cost overruns are often named as the main causes, the analysis shows that they are often instigated and aggravated by the institutional weaknesses and political interference. The dangers of these structures are also a serious threat to the overall health of the population by supporting the spread of vectors, negative impacts on the overall economic performance and property prices, and inflicting social dissatisfaction on populations. The paper combines theoretical models of urban studies, project management, and political economy to provide a critical analysis of the failure in the system. It concludes by giving a strong, multi-stakeholder framework of action policy suggestions against the socio-economic and political situations of Calabar with focus on preventative interventions, strategic actions and community-based interventions to prevent future abandonment. Thus contributing to sustainable urban development in Calabar.

Keywords: Abandoned Buildings, Urban Risk, Public Policy, Calabar, Sustainable Development, Nigeria.

I. INTRODUCTION

The rapid and often unplanned urbanization that characterizes many cities in the Global South has led to urban challenges of which the case of uncompleted and abandoned buildings is a particularly visible and intractable problem (Ifediora, 2021). In Nigeria, this problem is not only aesthetic eyesore, but it is also a symbol of economic destitution, institutional failure and urban decay (Ede, 2011; Ibem et al., 2011; Olubi, 2019). Despite the fact that the narrative of urbanization in Nigeria is frequently dominated by the sprawling megacities of Lagos and Abuja, the situation in smaller, but strategically significant, regional capitals such as Calabar provides a critical and understudied lens through which to understand the dynamics of urban development and decline (Fourchard, 2011; Myers, 2011).

The administrative capital of Cross River State, Calabar, presents a striking contradiction; it is a city that is famous for its cleanliness, its deep history, and its potential as a tourist destination. However, amidst its legendary greenery and order is a mounting number of skeletal concrete structures, such as uncompleted residential homes, commercial complexes and public projects, that are a testament to broken development trajectories (Adenuga et al., 2010; Adelaja-Adams, 2018; Cross River State Government, 2025). These abandoned projects represent frozen capital, halted ambitions, and a tangible manifestation of development trajectories gone awry. They are not passive entities, on the contrary, they actively transform the urban setting into sites of risks, fear, and economic loss (Ayodele & Alabi, 2022; Nwafor & Uwadiegwu, 2024).

The predominance of these structures is indicative of systemic pathologies that are deeply rooted throughout the building and governance ecosystems of Nigeria (Iroha, Watanabe, & Satoshi, 2024). The reasons for the abandonment of a structure are not often straightforward;

rather, they are rooted in an intricate network of circumstances that are interconnected with one another. Macroeconomic instability, which is exhibited in hyperinflation in construction materials as well as limited access to credit, often combines with micro-level shortcomings such as poor project feasibility studies as well as poor financial planning by individual developers (Nchor, 2022; Wakwe, Onyema, & Wakwe, 2025).

Dimuna & Omatsone (2010) and Okon & Agan (2015) both demonstrate that this economic dimension is inextricably linked to a governance context that is characterized by weak enforcement of regulations, corruption, and the disruptive impact of political succession cycles, during which new administrations frequently abandon projects that were initiated by their predecessors. Adding to these problems are technical failures, such as poor structural designs and poor site management, and a complex, often controversial land tenure system that can bring projects to a dramatic halt through legal disputes and disputed ownership (Ibem et al., 2011; Ukwayi et al., 2012). The complexity of this causal matrix indicates that explanations that focus on one aspect alone are inadequate when it comes to comprehending the continued existence of this issue in Calabar.

The consequences of this mass abandonment are deep, multidimensional and form the central research problem of this paper. These incomplete buildings are not simply idle structures, but are active risk generators. As such, they present direct public health hazards, as they are prolific mosquito-breeding grounds, and in turn, they contribute to the malaria burden within a tropical city where such diseases are endemic (Efenudu, 2010; Olagunju et al., 2019). They pose security threats and are refuge for criminal activities that destabilize communities and make residents fearful (Osuizugbo et al., 2015). The economic consequences are also severe and include direct economic losses to developers, lowered property values for adjacent homeowners, and financial burdens for municipal authorities (Adenuga et al. 2010; Ede 2011).

These structures may have an even more insidious effect, since they impose psychological discomfort and social stigma on the communities that host them, which leads to a deterioration in social cohesion and a reduction in the feeling of place (Dimuna & Omatsone, 2010). Even while the existing research on the subject is significant, it has frequently been divided into segments that concentrate on distinct components—such as the causes, the economic effects, or particular case studies—without giving a comprehensive, synthesized risk assessment that is specific to Calabar's distinctive socioeconomic and environmental situation. There is a notable gap in the literature to categorize, evaluate, and prioritize these interrelated risks in a systematic way. Furthermore, policy responses are critically analyzed and little attention is paid to the reasons for the consistent failure of existing regulatory frameworks in Cross River State, such as the Urban Development Law, resulting in a significant enforcement gap (Ukwayi et al., 2012; Amusan et al., 2018).

Therefore, this paper seeks to fill these critical gaps by making a thorough evaluation of the risks posed by uncompleted buildings in Calabar, Cross River State. It aims to go beyond a siloed analysis, to provide an integrated analysis that dynamically connects the causes of root issues, multifaceted impacts, and documented policy failures. To do so, the study is guided by four specific objectives:

- To identify and critically analyze the interlinked economic, governance, political, technical, and legal root causes of building project abandonment in Calabar.
- To systematically categorize, assess and prioritize the various risks (health, environmental, security, economic and socio-psychological) related to these uncompleted structures.
- To assess the capacity of current policy and regulatory responses in Cross River State and to draw comparative lessons from other Nigerian and international experiences.
- To make a coherent and evidence-based set of context-specific policy recommendations aimed at reducing existing risks, and preventing building abandonment in the future.

The significance of this study is two-fold. As an academic contribution, it strengthens the study of Nigerian cities by explicitly changing the focus from the three megacities to a secondary city in order to understand the diversity of manifestations of urban challenges in the country's varied landscape (Gandy, 2006; Fourchard, 2011). Furthermore, it contributes to the ongoing theoretical arguments concerning urban risk society (Beck, 1992), resource reliance (Pfeffer & Salancik, 2003), and the management of project lifecycles by applying and evaluating these frameworks in the particular, under-theorized setting of Calabar. In a practical sense, the purpose of the findings and recommendations is to function as an important tool for policymakers working in the Cross River State Ministry of Lands and Urban Development, urban planners, and community advocates. They offer a clear, evidence-driven framework for transformative measures aimed at restoring, rejuvenating, and safeguarding the urban environment for all residents.

II. METHODOLOGY

The research design used in this study was a systematic literature review, which was used to identify, appraise, and synthesize the available literature on the risks of uncompleted buildings in Calabar, Cross River State, Nigeria. The methodology was designed to be transparent, reproducible, rigorous and overcome the limitations of the previous studies by giving a step-by-step description of the search, selection and analysis procedures. The PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) framework was used to guide the approach in order to achieve methodological integrity and completeness (Shaheen et al., 2023).

> *Search Strategy*
Between October 12th and October 24th, 2025, a systematic search was done to identify published and grey literature that was relevant to the objectives of the research.

The search strategy was aimed at maximizing coverage and at the same time, focusing on a combination of electronic databases and manual searches. The main electronic databases were searched through Google Scholar, African Journals Online (AJOL), Scopus, and ScienceDirect.

The search used a systematic combination of keywords and Boolean operators to achieve precision and recall (see Appendix 4). Thematic search terms were divided into two clusters: the ones related to the area of interest (abandoned building, uncompleted building, incomplete construction, project abandonment, construction abandonment, derelict building) and the ones that defined the geographical context (Calabar, Cross River State, Nigeria, urban Nigeria). The "AND" operator was used to combine these clusters to make them relevant. As an illustration, one such search query was (abandoned building or uncompleted building) AND (Calabar or Cross River State). No limit was put on the date of publication of the literature, as it was necessary to capture the entire history of the problem, but the analysis focused on the literature published from 2015 to 2025 to capture the current situation.

Recognizing that the information about local contexts was not available in peer-reviewed journals, a systematic grey literature search was also carried out. This involved the review of policy documents of the Cross River State Ministry of Lands and Urban Development, Calabar Municipal Council, and Cross River State Urban Development Agency (CRUDA). Additionally, the search was conducted in the archives of the key Nigerian newspapers (The Guardian, Vanguard, and The Punch) published from 2000 to 2024 to find the reports about the particular abandoned projects in Calabar. The institutional repositories of the Nigerian universities, specifically the University of Calabar and the Cross River University of Technology, were used to find project reports and theses.

➢ *Inclusion and Exclusion Criteria.*
The inclusion of studies was done according to pre-determined criteria in order to make sure that they were directly related to the research objectives. The inclusion criteria were as follows: (1) empirical or theoretical interest in the causes, risks, impacts or policy responses to building abandonment; (2) geographical interest in Calabar, Cross River State or, in case such studies were limited, in other similar urban settings in Nigeria to facilitate inferential analysis; (3) publication in English; and (4) full-text access.

To keep the focus and quality, the exclusion criteria were applied: (1) studies focusing on construction delays without being eventually abandoned; (2) literature on building collapse with no connection to governance or economic issues; (3) opinion pieces, editorials, or non-empirical commentaries, which did not include any methodological basis; and (4) studies conducted in settings not similar to Nigeria (e.g., Global North countries with no similar governance or economic problems) with limited applicability.

➢ *Study Selection and Screening Procedure*
The selection of the studies was done independently. A multi-stage and systematic screening process was utilized to reduce bias and include the most pertinent and strong studies (see Appendix 1). The first search of the database provided 412 records. However, screening was done on 354 unique records that were left after the removal of 67 duplicates with the help of EndNote reference management software. The screening was done in two stages.

During the initial stage, the 354 records were filtered by their titles and abstracts against the inclusion and exclusion criteria. This procedure resulted in the removal of 278 records that were obviously duplicated and irrelevant (i.e. about agricultural projects, non-building infrastructure in unrelated areas or studies in completely different geographical settings). The second step was a complete text evaluation of the rest of the 76 articles to determine eligibility. Out of these, 67 were filtered out on grounds; 38 because they did not specifically address Calabar or similar urban settings in Nigeria, 19 because they were entirely theoretical with no empirical evidence or clear description of methodology, and 10 because they did not address definitive abandonment but only construction delays. This meticulous procedure led to a final set of 9 important studies on which the systematic review and synthesis were based (see Appendix 1).

➢ *Data Extraction and Analysis*
The data of the 9 studies included were extracted through a standardized data extraction template that was designed to extract data for this review. The template was used to record the following important details; author(s) and year of publication; geographical area of interest; methodology (e.g., quantitative, qualitative, mixed-methods); key findings in terms of causes, risks, and impacts; and conclusion (see Appendix 2).

Thematic synthesis approach was used in the analysis, and it consisted of three steps (Rebelo et al., 2017). First, to determine initial concepts, results of individual studies were coded line-by-line. Second, the codes were combined into descriptive themes that summarized the key findings of the studies directly in line with the research objectives (e.g., "economic causes," "health risks," "policy gaps). Lastly, analytical themes were formed which transcended the content of the original studies to create new interpretive constructs and explanations, like the idea of predatory governance or urban risk amplifiers.

The quality of the evidence was critically reviewed during the analysis (see Appendix 3). Research with robust methodologies (e.g., defined sampling strategies, validated instruments, and suitable statistical analysis, e.g., Ishaq, 2021; Adedokun et al., 2019) received a greater weight in the synthesis.

III. FINDINGS

This review is a synthesis of empirical data from the selected studies to provide an insight into the causes, risks, and policy issues related to uncompleted buildings in Calabar, Nigeria (see Appendix 5). The causes of the building abandonment in this review are not isolated but they are in a synergistic relationship. To begin with, economic and financial vulnerabilities constitute a basis of project failure. Ishaq (2021) study quantitatively determines that economic-related factors, with a group mean score of 3.87 are the most important category of risk that affects the cost of project completion. Certain elements like rising prices of materials (MS=4.25) and cost of labor (MS=4.11) were found to be the most critical ones, which directly undermined the viability of the project.

This is compounded by fundamental financial mismanagement at the project level, with "inadequate cost estimate" emerging as the single most critical risk factor overall (MS=4.39) and "poor cash flow management" (MS=4.04) further crippling ongoing operations (Ishaq, 2021). This suggests a widespread culture of initiating projects with grossly optimistic or unfounded financial planning, which is also supported by Ezeabasili et al. (2021), who found that such issues as cash flow challenges and foreign exchange policy are the most significant economic risks. Calabar is aggravated by its own urban land dynamics. Obongha, Agbor & Upuji (2022) study shows that the pressure on urban land is intense due to population growth (35.7%), commercial development, which results in overcrowding and high rent. Such an environment is likely to encourage the start of projects by developers who lack adequate capital and are speculating on a quick payoff only to drop them when macroeconomic headwinds such as inflation materialize (Obongha, Agbor & Upuji (2022).

Nevertheless, economic reasons alone are not sufficient to explain the cause of uncompleted buildings in Calabar. The results show another strong indication that the failure of governance and political instability are catalysts that convert financial vulnerability into some abandonment. The study by Adedokun, Aje & Agboola (2019) highlights "excessive approval procedures in administrative government departments" as a top-tier risk factor (MS=3.87), pointing to a bureaucratic environment that hinders rather than facilitates development. More importantly, Ishaq (2021) identifies "risk incurred due to bribery and corruption" as the second most significant factor nationwide (MS=4.30), suggesting that rent-seeking behavior within regulatory institutions fundamentally undermines project integrity. This governance deficit is compounded by a volatile political climate. Ogunnusi, Salman, & Laing (2021) explicitly associate change in government with the infrastructure abandonment, which is especially acute in publicly funded projects in Calabar, where political transitions can result in the cancellation or disregard of the projects initiated by the predecessors. This leaves the policy environment discontinuous and unpredictable in which long term projects are not able to survive.

Technical and managerial incompetence at the operational level plays another role in the cascade towards abandonment. The criticality of "inadequate contractor experience" (MS=3.87) and "contractors' poor site management and supervision" (MS=3.82), as found by Adedokun et al. (2019), reveals a supply-side failure within the local construction industry. This is further evidenced by technical shortcomings such as "mistakes/errors in design" (MS=4.03, Ishaq, 2021) and "defective design" (Ogunnusi et al., 2021), which introduce costly rectifications and delays mid-construction. Ichendu, Ejike & Irimiagha (2024), from an architectural viewpoint, supports this by citing a triad of regulatory frameworks, construction materials and skilled labor as some of the factors that are hostile to successful building project implementation. In Calabar, this implies that even the projects that have relatively good initial funding can be hindered due to lack of professional skills and bad project management, which results in cost overruns and delays that eventually trigger abandonment.

The effects of such a system failure are far-reaching and multidimensional and form a widespread urban risk. Especially acute are the environmental and health effects. The study by Atamewan (2020) places the defacing of the aesthetics of the urban environment (RII=0.970) and distortions of the landscape/urban planning (RII=0.960) at the top of the list of the impacts of the housing project abandonment. In addition to aesthetics, the structures turn to be active hazards. They are recognized as places of environmental pollution by waste dumping (RII=0.934) and as places for hazardous animals (RII=0.920), which cause physical health nuisance to the people. The security consequences are also very serious as projects that have been left behind serve as hideouts to criminals, leading to insecurity (RII=0.894). This observation is in line with the literature on the topic at large, which proves that these buildings undermine the safety and quality of the city fabric.

The economic consequences are much worse than the original loss of investor funds. Atamewan (2020) reports a direct negative change in property values (RII=0.908) and reduced economic activities (RII=0.890) in the area of abandoned projects, which form economic black holes. The macro-economic effect is enormous, expressed as the "wastage of valuable resources" (RII=0.932) and a reduction in government revenue (RII=0.840) essentially tying capital up in unproductive assets and robbing the state of much-needed tax revenue. Moreover, the social and psychological cost is high, and it results in disappointing the end-users (RII=0.920) and lack of trust towards the government by the citizenry (RII=0.904). This loss of trust in the population is, perhaps, one of the most pernicious long-term consequences because it weakens the social contract and the trust of the citizens in the possibility of orderly development (Atamewan, 2020).

An analysis of policy responses reveals an environment characterized by enforcement gap and a lack of innovative, preventive measures. The reviewed studies all lead to the same implication that the current regulatory frameworks are either inadequate or ineffective. The suggestions that research

provides are always directed towards the necessity of structural changes. Some of them, such as Ishaq (2021) and Ichendu et al. (2024), implicitly demand more robust regulatory frameworks and effective enforcement mechanisms to fight corruption and guarantee compliance. One of the most salient themes is the necessity to have financial protection; the criticality of the "inadequate cost estimate" and "poor cash flow" suggests a pressing need for mechanisms like mandatory completion bonds, which were notably absent in the literature as existing practices. Ogunnusi et al. (2021) directly recommend "changing procurement methods" and "designing with deconstructability in mind" as innovative strategies, while also highlighting "refurbishment of abandoned projects" as a viable path forward.

This indicates a shift in scholarly thinking from mere demolition towards adaptive reuse and circular economy principles. The landscape of policy has been further complicated for Calabar by the changes in land use that have been documented by Umoren & Udoudoh (2017) and Obongha et al. (2022). These changes include the transformation of residential areas into commercial areas, which was driven by an increase in commercial activities (17%). The policy landscape therefore requires integrated land-use and construction regulatory planning, which is currently lacking.

IV. DISCUSSION OF FINDINGS

The results, analyzed from the lens of the current theoretical frameworks, create an image of urban development in crisis. The Calabar case is not just an instance of failed projects but a systemic state in which the processes of urbanization, governance, and capital investment are pathologically interconnected to create an atmosphere of abandonment that actively creates risk.

➤ *Interlocking Pathology of Causes*
A superficial examination of the results may lead to the assumption that economic aspects, especially cost overruns and insufficient funding, are the main causes of abandonment. Nevertheless, a more detailed examination shows a more complicated and intersecting pathology. The project lifecycle theory (Kog & Loh, 2012) is instructive here, as it posits that abandonment is a failure that occurs during the execution phase due to a confluence of issues. The findings validate this, showing that failure is rarely due to a single event but a cascade. For instance, an "inadequate cost estimate" (Ishaq, 2021) at the inception phase sets the project on a precarious financial path. This initial vulnerability is then aggravated in the execution by adding the factors of "increased material prices" (an economic factor) and error in construction (a technical factor), forming a cost-pressure vortex.

This cascade can also be explained by the role of the resource dependency theory (Pfeffer and Salancik, 2003). A construction project is a web of dependencies on continuous streams of capital, materials and approvals. This network is essentially weak in Calabar. Public projects, according to the literature, are vulnerable to changes in politics because they rely on federal allocations, which is confirmed by Ogunnusi

et al. (2021). For private developers, the dependency on a corrupt and bureaucratic approval system (Adedokun et al., 2019) and unstable material supply chains (Ishaq, 2021) creates constant friction and uncertainty. Abandonment, therefore, becomes the eventual outcome when multiple resource dependencies are simultaneously disrupted. This is a common occurrence in an environment of weak institutions and macroeconomic volatility (Ogunnusi et al., 2021).

Findings show that the unique place of governance and politics is not only a contributing factor but also, in many cases, the key determinant of the future of a project. The criticality of the two factors of bribery and corruption (Ishaq, 2021) and excessive approval procedures (Adedokun et al., 2019) indicate an extractive regulatory environment as opposed to an enabling one. This transcends the issue of institutional weakness to what can be described as predatory governance whereby the process of getting approvals required becomes a source of rent-seeking which consumes project resources and morale. Moreover, the effect of change in government (Ogunnusi et al., 2021) brings out the issue of clientelistic political system where the public project is viewed as an asset of patronage of a given administration instead of a long-term asset of the population. This leaves a disjointed developmental path with the successive governments having a motivation to begin their own visible projects and forgetting those of the previous ones, resulting in the cyclical neglect that afflicts Calabar. Such a combination of predatory regulatory environment and a clientelist political cycle sets the governance environment that systematically disrupts the project lifecycle and breaks the key resource dependencies.

➤ *Uncompleted Buildings as Urban Risk Amplifiers*
The effects of abandoned buildings eloquently support the hypotheses of the urban risk theory (Beck, 1992; Myers, 2011). These spaces are noted to be not just passive spaces but active spaces that enhance and multiply urban vulnerabilities in various dimensions. The prioritization of aesthetic defacement and environmental distortion as the top impacts by Atamewan (2020) is highly significant. It means that immediate loss of urban identity and order is the most evident effect. The degradation of the visual environment is the initial indicator of a failure in the social and economic order, and is directly related to the stigma and loss of community pride in the larger literature.

Public health hazards also show a direct bio-physical amplification of risk, particularly as mosquito breeding grounds. This is a major change to the disease ecology of the region, which is significant especially in Calabar's tropical environment. These places are not just dangerous buildings but also active sites of insecurity that reorganize the safety geography of entire neighborhoods since they serve as havens for harmful animals and criminals (Atamewan, 2020). This directly confirms the previous observation by Efenudu (2010) of a 2.5x rise in crime rates, which indicates that abandoned buildings are fixed capital of criminal enterprise, reducing the transaction costs of the criminal activities, thus making them more frequent.

The economic effects as outlined in the findings show a vicious cycle of devaluation. The "decline in property values" and "decreased economic activities" (Atamewan, 2020) create a spatially concentrated poverty trap. When the prices of properties diminish, the municipal tax base is eroded, which reduces the very resources that are required for intervention ("decrease in government revenue"). The abandonment results in a decrease in public funding, which in turn limits the capacities of enforcement and rehabilitation and leads to an increase in abandonment and a decrease in value. As a result, a negative feedback loop is formed. The amount of capital that is locked up in these structures, has been established by previous research, such as the work of Ede (2011). This signifies a significant opportunity cost, or the diversion of resources that could have led to the creation of jobs and constructive economic activity, so further weakening the city's economic resilience.

The socio-psychological impact is, perhaps, the most significant, but the least measurable. A critical finding is the lack of trust in the government (Atamewan, 2020). When the physical manifestation of broken promises and institutional incompetence constantly faces the citizens, they become cynical and politically apathetic and the civic bond becomes undermined. These buildings become fixed, physical reminders of state failure, which normalize neglect and undermine the efficacy needed to make community-led improvement efforts. This mental effect, in combination with the social stigma of residing in places full of failed projects, is a severe form of social exclusion, shunning whole communities and reducing their chances of future investment or government services.

➢ *Policy Evaluation and the Path Forward*

The discussion of the results related to the policy responses indicates a basic mismatch between the nature of the problem and the existing solutions. The recurrent focus of research on the need for a more stringent regulation, financial protection and innovative procurement demonstrates that there is a consensus that the existing methods are insufficient. The documented laxity in the implementation of the available laws, including the Cross River State Urban Development Law, is symptomatic of an underlying problem, which is a lack of political will and institutional capacity. Occasional demolition campaigns, as noted in literature, are not only economically inefficient but also politically convenient means of action without addressing the root causes.

The findings have revealed that there is a need for a transition to take place from a reactive to a preventive approach. The continued identification of financial miscalculation as the core cause presents a strong argument in favor of the adoption of financial instruments designed to prevent such errors. According to Kog and Loh (2012), Singapore uses mandatory completion bonds, which would require developers to prove that they are financially credible and to protect their projects from failure. This would result in a transfer of risk from the public sector to the private sector. This approach would provide a direct response to the problems of "inadequate cost estimate" and "poor cash flow management" that were identified by Ishaq (2021).

Furthermore, the recommendation by Ogunnusi et al. (2021) to incorporate "designing with deconstructability in mind" is a radical and forward-thinking proposal. It applies the principles of the circular economy to the construction industry, where it plans how to reuse the materials in the future in case of project failure. This does not only minimize the waste of valuable resources, but it also minimizes the obstacles and expenses of the refurbishment of abandoned projects, which forms a more adaptable and resilient model of urban development.

Ultimately, the significant land use pressure and commercial conversions shown in Calabar-specific studies (Umoren & Udoudoh, 2017; Obongha et al., 2022) suggest that the problem of abandonment extends beyond the construction sector. It also necessitates integrated urban government. Policies for the prevention of abandonment should be incorporated into broader land-use planning, transportation research, and economic development strategies. The failure to do this suggests that the well intentioned construction policies will be overwhelmed by the market dynamics and speculative land transactions characterizing the Calabar urbanization process, which would ensure the continuation of project initiation and abandonment cycles.

V. CONCLUSION

This paper has made a thorough assessment of the risks of uncompleted buildings in Cross River State, Calabar, Nigeria. The research has provided a composite analysis of the causes, effects and policy failures that encircle this pervading urban issue through a systematic review and critical synthesis of existing literature. The results indicate that building abandonment in Calabar does not happen by chance but is the systematic result of a multifactorial, interrelated pathology. There are economic weaknesses including, poor cost estimation and inflationary forces on construction materials, that offer fertile ground for failure. These economic determinants are however critically facilitated and enhanced by a predatory governance environment of corruption, bureaucratic bottlenecks and political clientelism, where projects are considered as patronage assets. This unhealthy relationship is also enhanced by technical and managerial incompetence in the local construction industry that results in a series of failures in project development all the way to the project implementation.

One of the main and original contributions of the research is the conceptualization of the unfinished buildings as active sources of urban risk. The paper shows that these structures are not inert shells of empty spaces but dynamic objects that actively transform the city. They physically increase the dangers to the health of the population through breeding grounds for disease vectors; they distort the security environment by offering sanctuaries to crime; they cause a vicious circle of economic devaluation, reducing property value and draining the municipal tax base; and they cause devastating socio-psychological effects by undermining the community pride and instilling a sense of deep-seated distrust of the institution of the state. Such framing takes the

discussion of abandonment as an aesthetic or economic problem and puts it rather as a multi-faceted crisis that undermines the very principles of urban life and city governance.

This study proposes a tripartite policy framework based on the evidence synthesized. First, introduce preventive financial measures, including obligatory completion bonds, so that developers can have the necessary financial capability when permits are issued. Second, pass governance and regulatory reforms that facilitate the approval mechanisms, take anti-corruption steps and protect public projects against the disruption cycle of political successions. Third, facilitate adaptive reuse and the principles of a circular economy, such as deconstruction design and enabling the reuse of old abandoned buildings for new purposes, thus transforming liabilities into community assets.

For future research, this study has identified a number of key pathways. One of the major suggestions is to perform a detailed GIS-based census and mapping of all the abandoned buildings in Calabar to create a clear baseline of the extent of the issue and its geographical coverage. Additionally, empirical, quantitative research on the specifics of the effects of abandonment on the health of people, including the association between the number of abandoned buildings and the rates of malaria occurrence in the area, is urgently required. Lastly, longitudinal studies that followed the lifecycle of the abandoned projects, i.e., the process of initiating the project, possible revival, or demolition, would be invaluable to understand what actually decides the fate of the latter, as well as provide essential lessons to use in the specific intervention strategies. Only through such a concerted effort in both policy and research can the cycle of abandonment be broken, paving the way for a more sustainable, secure, and prosperous urban future for Calabar.

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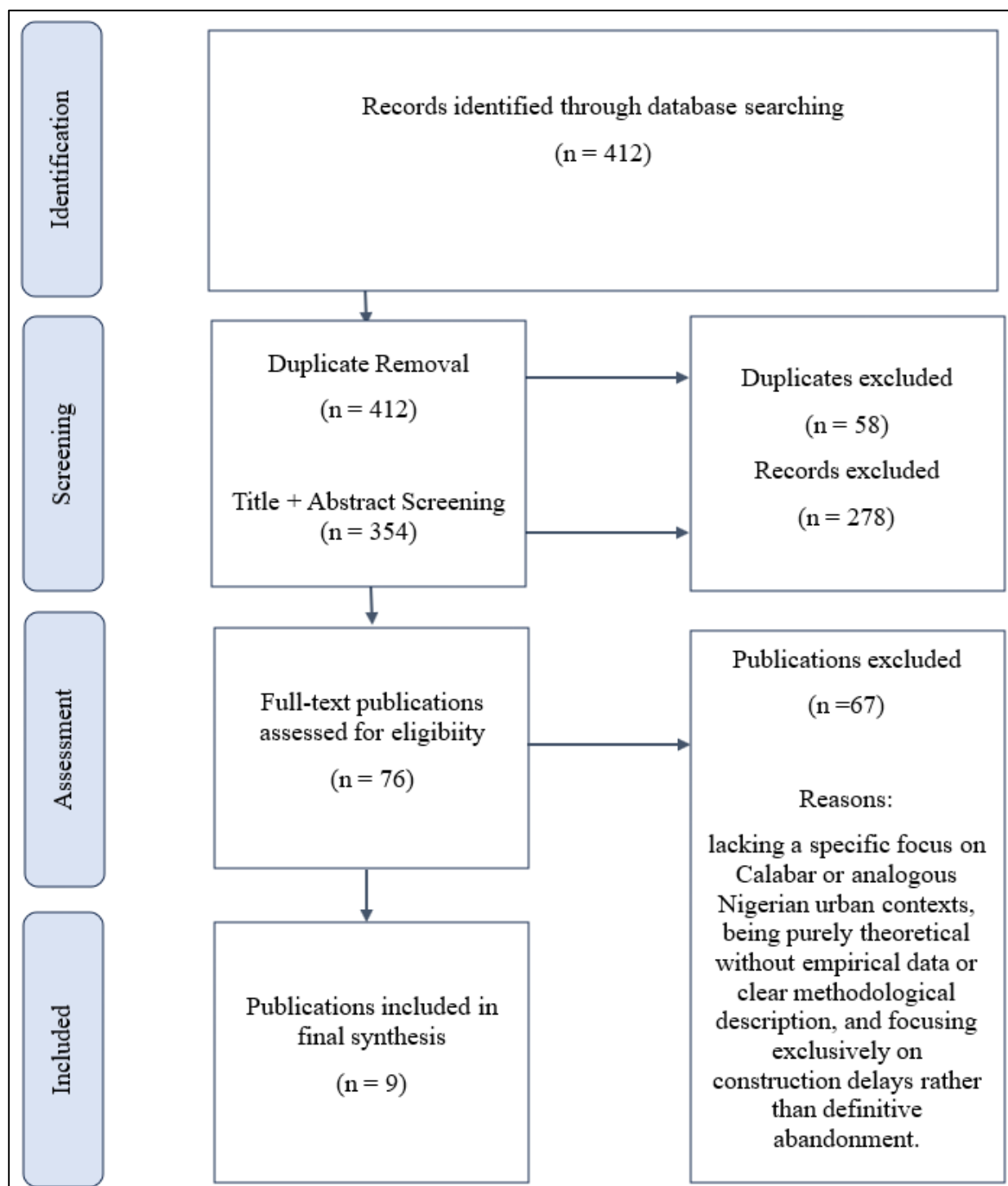
APPENDIX

APPENDIX 1:

Fig 1 PRISMA Flow Chart

APPENDIX 2

Table 1 Summary Table of Reviewed Literature

Bibliographic Details	Methodological Characteristics	Context	Key Findings	Conclusions and Recommendations
Ishaq, Z. H. (2021). Impact of Risk Factors on Construction Projects' Completion Cost in Nigeria. *LAUJOCES, 6(2).*	**Research Design:** Quantitative Survey. **Data Collection:** Structured questionnaires. **Sample Size:** 192 construction practitioners. **Data Analysis:** Descriptive statistics (Mean Score, Standard Deviation).	Nigeria (Nationwide).	**Top risk factors:** Inadequate cost estimate (MS=4.39), bribery/corruption (MS=4.30), material price increases (MS=4.25). - Economic factors had the highest group mean score (3.87), followed by financial and contract administration factors.	**Conclusion:** Economic, financial, and contract administration factors have the highest impact on project completion costs, with corruption being a critical issue. **Recommendations:** Improved financial planning, robust cost estimation, and stringent anti-corruption measures.
Adedokun, O. A., Aje, I. O., & Agboola, O. J. (2019). An Investigation into the Severity of Factors Predisposing Construction Projects to Risks in Nigeria. *Jurnal Teknologi, 10(1).*	**Research Design:** Quantitative Survey. **Data Collection:** Structured questionnaires. **Sample Size:** 284 construction practitioners. **Data Analysis:** Mean Item Score, Percentile, Kruskal-Wallis H Test; Cronbach's Alpha (0.902).	Cross Rivers State, Nigeria.	**Top risk factors:** Excessive bureaucratic approval procedures (MS=3.87), inadequate contractor experience (MS=3.87), poor site management (MS=3.82). Administrative and contractor competency issues are also severe predisposing factors.	**Conclusion:** Administrative bottlenecks and contractor incompetence are the most severe risk factors. **Recommendations:** Reduce bureaucratic bottlenecks, prioritize experienced contractors, ensure adequate site supervision and accurate cost estimation.
Doraisamy, S. V., Akasha, Z. A., & Yunus, R. (2015). A review on abandoned construction projects: causes & effects. *Applied Mechanics and Materials, Vols. 773-774, pp 979-983.*	**Research Design:** Literature Review. **Data Collection:** Analysis of existing theses and journals. **Data Analysis:** Thematic analysis of secondary literature.	Nigeria	**Causes:** Incorrect estimation, unskilled personnel, corruption, poor planning, and external factors like financial crises. **Effects:** Waste of resources (capital, materials), increased crime, aesthetic blight, and negative socio-economic impacts.	**Conclusion:** Abandonment is a global issue with consistent causes and effects across contexts. A thorough, multi-faceted investigation is needed. **Recommendations:** Implement preventive measures like accountability in contractor selection, curb corruption, and establish a construction industry bank.
Obongha, U. E., Agbor, E. A., & Upuji, J. K. (2022). Analysis of the Pattern of Land Use	**Research Design:** Mixed-Methods (Survey & GIS Mapping). **Data**	Calabar Municipality, Cross River	**Key land use changes:** Recreational to residential (33%),	**Conclusion:** Land use change significantly impacts physical development, leading to

Bibliographic Details	Methodological Characteristics	Context	Key Findings	Conclusions and Recommendations
Change in Calabar Municipality... *IJRISS, 05(12).*	**Collection:** Questionnaires and GIS data (2011-2020). **Sample Size:** 60% of professionals in selected neighbourhoods. **Data Analysis:** Descriptive statistics (percentages), GIS analysis.	State, Nigeria.	Residential to commercial (30.8%). **Major problems:** Overcrowding (35.9%), noise pollution (28.7%). **Driving factors:** Population growth (35.7%), road network expansion (30%).	overcrowding and infrastructure pressure. **Recommendations:** Collaboration between planning authorities and government; public awareness on population impacts; ensure proper land use planning compliance.
Ezeabasili, A. C. C., Dim, N. U., Ezeabasili, C. A. C., & Obiefuna, J. J. (2021). The Identification of Risks and its Criticality in the Nigeria Construction Industry. *IJEMR, 11(1).*	**Research Design:** Quantitative Survey. **Data Collection:** Questionnaires. **Sample Size:** 31 valid responses from 60 administered. **Data Analysis:** Descriptive statistics, Chi-Square, SPSS.	Nigeria (Nationwide).	**Most critical risks:** Late payment, corruption, foreign exchange policy, development control permits. Economic and financial risks are also dominant, compounded by political/government risks.	**Conclusion:** Economic and financial risks are the most critical, and they are exacerbated by political and governmental risks. **Recommendations:** [Implied] Address economic instability, ensure timely payment, reform foreign exchange policy, and tackle corruption.
Ogunnusi, M., Salman, H. S., & Laing, R. (2021). Infrastructure development and abandonment. *ISEC Journal, 8(1).*	**Research Design:** Quantitative Survey. **Data Collection:** Questionnaires (multiple-choice, open/closed-ended). **Sample Size:** 80 responses from 129 administered. **Data Analysis:** SPSS Pearson Correlation Analysis.	Nigeria (Nationwide).	**Causes:** Change in government, corruption/politics, inadequate planning, faulty procurement. **Impacts:** Waste of resources, social menace, uneconomical. - Significant correlation between designing for deconstructability and refurbishment.	**Conclusion:** Government should refurbish abandoned projects and integrate deconstructability in design. **Recommendations:** Change procurement methods, design for deconstructability, use innovative management tools, refurbish abandoned projects.
Ichendu, C., Ejike, A., & Irimiagha, G. F. (2024). A Review of Negligible Factors Inimical to Building Failures in Nigeria: Architectural View. *Studies in Art and Architecture, 3(3).*	**Research Design:** Literature Review. **Data Collection:** Review of recent literature and empirical evidence. **Data Analysis:** Thematic analysis.	Nigeria (Nationwide).	**Key factors:** Regulatory frameworks, construction materials, skilled labor, community engagement, technological integration. A holistic approach is required to address these interconnected factors.	**Conclusion:** Addressing building failures requires a holistic approach involving regulation, capacity building, and technology. **Recommendations:** Enhance regulatory enforcement, promote quality materials, invest in skilled labor, foster community engagement, embrace technology (e.g., BIM).

Bibliographic Details	Methodological Characteristics	Context	Key Findings	Conclusions and Recommendations
Umoren, V. E., & Udoudoh, F. P. (2017). Implications of changing land uses on physical environment in Calabar Municipality... *Ethiopian Journal of Environmental Studies and Management, 10(1).*	**Research Design:** Quantitative Survey. **Data Collection:** Systematic random sampling with questionnaires. **Sample Size:** 461 from a population of 1,847 buildings. **Data Analysis:** Descriptive statistics (frequencies, percentages).	Calabar Municipality, Cross River State, Nigeria.	**Primary driver of land use change:** Increase in commercial activities (17%). **Key implications:** Traffic congestion (35%), parking problems (33%), decrease in housing stock (34%).	**Conclusion:** Changing land uses have significant negative implications on the physical environment. **Recommendations:** Close land uses without adequate parking; conduct land use/transportation studies; monitor changes; regulate billboards and signposts.
Atamewan, E. E. (2020). Abandonment of Housing Projects in Nigeria: Appraisal of the Environmental and Socio-Economic Implications. *EJGeo, 1(4).*	**Research Design:** Mixed-Methods (Literature, Site Visitation, Quantitative Survey). **Data Collection:** Questionnaires and focal group discussions. **Sample Size:** 125 returned questionnaires from 170 distributed. **Data Analysis:** Relative Importance Index (RII).	Akwa Ibom and Cross River States, Nigeria.	**Top Effects:** Defacing urban aesthetics (RII=0.970), distorting urban planning (RII=0.960), structural failure (RII=0.950). **Other critical effects:** Health problems, criminal hideouts, declining property values, loss of trust in government.	**Conclusion:** Abandonment negatively impacts the environment, economy, and society, threatening sustainability. **Recommendations:** Ensure fund availability before project initiation; ensure transparency in contractor selection; enforce project continuity across political administrations.

APPENDIX 3:

Table 2 Quality Appraisal

Study (Author, Year)	Design	Sampling (Clear? Adequate?)	Data Collection (Described? Reliable?)	Analysis (Rigorous? Appropriate?)	Bias / Limitations (Acknowledged?)	Overall Rating	Notes & Weighting In Synthesis
Ishaq, Z. H. (2021)	Quantitative survey	Sample 192 construction practitioners; strategy described but limited to practitioners (selection bias risk).	Structured questionnaire described; no psychometric validation reported.	Descriptive stats (MS, SD) appropriate for survey aims; no multivariate control for confounding.	Non-random, practitioner-only sample; response/recall bias possible; data collection date not explicit.	**Moderate**	Good topical relevance and moderate sample size. Used for prevalence of perceived risk factors and ranking (e.g., MS results) but avoid strong causal claims; weight = moderate.
Adedokun, Aje & Agboola (2019)	Quantitative survey	Sample 284 practitioners; sampling details adequate for descriptive aims. Cronbach's α = 0.902	Structured questionnaires; instrument reliability reported (α).	Appropriate descriptive measures and non-parametric tests (Kruskal–Wallis) used.	Likely practitioner sampling bias (professionals, not developers/residents); generalisability limited to	**Moderate–High**	Stronger reliability reporting than many peers. Useful for administrative/competency risk claims; weight = higher for administrative/competency themes.

Study (Author, Year)	Design	Sampling (Clear? Adequate?)	Data Collection (Described? Reliable?)	Analysis (Rigorous? Appropriate?)	Bias / Limitations (Acknowledged?)	Overall Rating	Notes & Weighting In Synthesis
		indicates internal consistency.			similar professional populations.		
Doraisamy, Akasha & Yunus (2015)	Literature review	Secondary synthesis of theses/journals; sampling of sources not fully described.	Data drawn from existing literature; method = thematic review.	Thematic analysis appropriate but dependent on comprehensiveness of source selection.	No primary data; potential selection/publication bias; limited detail on search strategy.	**Moderate**	Valuable for cross-context cause-effect patterns; treat as contextual/theoretical support rather than empirical anchor; weight = contextual.
Obongha, Agbor & Upuji (2022)	Mixed-methods (survey + GIS)	Sample: professionals in selected neighbourhoods (60% coverage reported); GIS data 2011–2020.	Questionnaires plus GIS datasets; methods appear appropriate to land-use questions.	Descriptive stats and GIS analysis appropriate; interpretation depends on GIS completeness.	Possible selection/coverage bias in professional sample; uncertainty about representativeness of GIS layers and temporal resolution.	**Moderate**	Strong local relevance for land-use change and spatial patterns; weight = moderate for spatial/land-use evidence.
Ezeabasili et al. (2021)	Quantitative survey	Very small effective sample (31 valid responses from 60); raises serious representativeness concerns.	Questionnaires used; details sparse.	Descriptive stats and chi-square reported but power limited by small n.	High sampling risk; susceptibility to Type II error; limited generalisability.	**Low**	Informative for directional issues (late payment, FX risk) but low weight in synthesis; weight = low.
Ogunnusi, Salman & Laing (2021)	Quantitative survey	Sample 80 responses from 129 administered; moderate response rate.	Mixed closed/open questionnaires; adequate description.	Pearson correlations used; appropriate for associational analysis but limited inference without controls.	Moderate non-response risk; cross-sectional design limits causal inference.	**Moderate**	Useful for identifying correlations (e.g., deconstructability ↔ refurbishment). Weight = moderate for procurement/design policy suggestions.
Ichendu, Ejike & Irimiagha (2024)	Literature review (architectural perspective)	Synthesises recent literature and empirical evidence; selection procedures not fully reported.	Secondary sources reviewed; thematic extraction reported.	Thematic synthesis suitable for architectural framing; depends on scope/selection.	No original empirical data; possible selective emphasis toward architectural issues.	**Moderate**	Good for framing regulatory/technical/architectural arguments; weight = contextual for technical recommendations.
Umoren & Udoudoh (2017)	Quantitative survey	Large sample: 461 buildings sampled from	Systematic random sampling and questionna	Descriptive statistics (frequencies/percentages) appropriate;	Focuses on land-use rather than abandonment directly.	**High–Moderate**	Strong empirical base for land-use impacts/implications in Calabar; weight = high

Study (Author, Year)	Design	Sampling (Clear? Adequate?)	Data Collection (Described? Reliable?)	Analysis (Rigorous? Appropriate?)	Bias / Limitations (Acknowledged?)	Overall Rating	Notes & Weighting In Synthesis
		population 1,847 — systematic random sampling reported.	ires; methods appear robust.	sample size provides statistical strength for prevalence estimates.			for land-use evidence and urban pressures.
Atame wan, E. E. (2020)	Mixed-methods (survey, FGDs, site visits)	125 responses from 170 distributed; FGDs/site visits supplement quantitative data.	RII used with clear indicators; triangulation via FGDs and site visits strengthens validity.	RII gives ranked impacts; qualitative triangulation enhances credibility.	Geographic scope across two states (Akwa Ibom & Cross River) reduces Calabar specificity; some FGD sampling details absent.	**High**	Methodological triangulation and strong RII values make this a key source on impacts and socio-environmental effects; weight = high for impact claims.

APPENDIX 4:

Table 3 Search Strings

SEARCH STRINGS	
General search	(“abandoned building” OR “uncompleted building” OR “incomplete construction” OR “project abandonment” OR “construction abandonment” OR “derelict building”) AND (Calabar OR “Cross River State” OR “Nigeria” OR “urban Nigeria”)
Scopus/ScienceDirect fielded search:	TITLE-ABS-KEY(“abandoned building” OR “uncompleted building”) AND TITLE-ABS-KEY(Calabar OR “Cross River State”)
**Searches combined free-text keywords with database subject headings where available. Grey-literature searches included targeted queries on government websites and site searches of institutional repositories and newspaper archives using the same keyword clusters.	

APPENDIX 5:

Table 4 Synthesis of Empirical Findings Across Included Studies

Theme	Specific Finding	Evidence Across Studies	Interpretation For Calabar
Economic & financial causes	Rising material and labour costs	Ishaq (2021): Material prices (MS = 4.25); Labour cost (MS = 4.11).	Inflationary input-cost shocks reduce margins and raise abandonment risk when contingency funding is inadequate.
	Inadequate cost estimation	Ishaq (2021): Highest-ranked risk factor (MS = 4.39).	Systematic underestimation at project inception produces mid-construction funding shortfalls.
	Poor cash-flow management	Ishaq (2021): MS = 4.04; Ezeabasili et al. (2021): cash-flow challenges noted.	Developers begin projects without robust cash-flow planning or buffers, precipitating stoppages.
	Macroeconomic instability (FX policy, inflation)	Ezeabasili et al. (2021): FX risk significant; Ishaq (2021): economic risk group MS = 3.87.	Exchange-rate and macro shocks distort procurement costs and loan servicing, disrupting schedules.
	Urban land pressure and speculation	Obongha, Agbor & Upuji (2022): population growth (35.7%), rising rents, commercial expansion.	High land demand encourages speculative starts that fail when market or financing conditions worsen.
Governance & political factors	Excessive administrative approval procedures	Adedokun, Aje & Agboola (2019): MS = 3.87 for bureaucratic delays.	Lengthy approvals increase time and carrying costs, making projects fragile to shocks.

Theme	Specific Finding	Evidence Across Studies	Interpretation For Calabar
	Bribery and corruption	Ishaq (2021): Bribery/corruption (MS = 4.30).	Rent-seeking diverts resources, inflates costs, and undermines regulatory credibility.
	Policy discontinuity due to change in government	Ogunnusi, Salman & Laing (2021): link between political transition and abandonment.	Public projects are vulnerable to politicised reprioritisation and cancellation after elections.
	Weak enforcement of regulations	Ichendu et al. (2024); Ishaq (2021): enforcement gaps implied.	Poor oversight permits non-compliant works and diminishes sanctions for abandonment.
Technical & managerial factors	Inadequate contractor experience	Adedokun et al. (2019): MS = 3.87.	Low-capacity contractors struggle with complexity, causing errors and stoppages.
	Poor site management and supervision	Adedokun et al. (2019): MS = 3.82.	Weak operational control produces inefficiencies, rework and cost overruns.
	Design errors and technical defects	Ishaq (2021): Design errors (MS = 4.03); Ogunnusi et al. (2021): defective design.	Technical faults lead to expensive rectifications that often halt projects.
	Poor-quality materials & skills shortage	Ichendu, Ejike & Irimiagha (2024): materials, skills, regulatory gaps.	Material and skills deficits reduce buildability and increase failure risk.
Environmental & urban impacts	Degradation of urban aesthetics and landscape	Atamewan (2020): RII = 0.970 (aesthetics), RII = 0.960 (landscape distortion).	Visual blight erodes place quality and community pride, signalling governance failure.
	Waste dumping and environmental pollution	Atamewan (2020): RII = 0.934.	Abandoned sites become informal dumps, creating localized pollution and health hazards.
	Hideouts for criminals; insecurity	Atamewan (2020): RII = 0.894.	Vacant shells create insecure spaces that raise crime and fear of movement.
	Wildlife infestation & health hazards	Atamewan (2020): RII = 0.920.	Vector habitats and animal hazards increase disease exposure for neighbouring residents.
Economic impacts	Decline in property values	Atamewan (2020): RII = 0.908.	Nearby property markets depreciate, shrinking household wealth and municipal tax base.
	Reduced commercial activity	Atamewan (2020): RII = 0.890.	Abandonment depresses local demand and deters new investment.
	Loss of government revenue & resource wastage	Atamewan (2020): RII = 0.932 (wastage); RII = 0.840 (revenue loss).	Public resources become locked in unproductive assets, reducing fiscal capacity.
Social & psychological impacts	Disappointment of end-users	Atamewan (2020): RII = 0.920.	Failed projects generate frustration and reduce willingness to invest or engage with developers.
	Public distrust in government	Atamewan (2020): RII = 0.904.	Repeated abandonment corrodes trust and weakens the social contract.
Land-use dynamics	Conversion of residential to commercial zones	Umoren & Udoudoh (2017); Obongha et al. (2022): ~17% increase in commercial activity.	Land-use shifts alter demand patterns, exacerbating speculative building and regulatory strain.
	Urban expansion and densification	Obongha et al. (2022): pressure from population growth and road expansion.	Densification increases competition for serviced land and raises the stakes for failed projects.
Policy issues & recommendations	Need for stronger regulatory frameworks	Ishaq (2021); Ichendu et al. (2024).	Reinforced regulation and enforcement required to limit corruption and ensure continuity.
	Mandatory financial safeguards (e.g., completion bonds)	Implied by multiple studies' emphasis on underestimation and cash-flow failure.	Completion bonds or guarantees would transfer risk and reduce abandonment incidence.
	Procurement reform and deconstructable design	Ogunnusi et al. (2021): correlation between	Procurement and design reform can enable adaptive reuse and lower demolition costs.

Theme	Specific Finding	Evidence Across Studies	Interpretation For Calabar
		deconstructability and refurbishment.	
	Refurbishment and adaptive reuse of abandoned structures	Ogunnusi et al. (2021).	Adaptive reuse offers circular-economy solutions and preserves urban capital.
	Integrated land-use + construction planning	Umoren & Udoudoh (2017); Obongha et al. (2022).	Aligning land-use policy with building control reduces speculative mismatches and pressure.