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RESEARCH ARTICLE

Impact of High-Rise Commercial Buildings on the Regional Symbolism, Collective Identity and Cultural Heritage in Nigeria

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Abstract

This paper investigates how high-rise commercial buildings in Nigerian cities reshape urban skylines and spatial identities, examining their influence on cultural continuity and urban image within the context of postcolonial African urbanism. Drawing on Lynch's imageability, Nora's sites of memory, environmental psychology, and critical regionalism, the study explores the tensions between imported Eurocentric skyscraper typologies and context-responsive design rooted in local traditions. A mixed-methods approach was adopted, combining a quantitative survey of 411 participants across Benin City, Lagos, Ibadan, and other Nigerian cities with semi-structured interviews and comparative case studies of three local high-rises (Cocoa House, Palm House, and King Tower) contrasted against international models. The analysis is further informed by fundamental theories of nature. The results reveal that Nigerian high-rises function not just as economic containers, but as multi-faceted cultural artefacts, landmarks, and spaces of identity struggle. Survey data—predominantly from mature, well-educated, long-time residents—indicates a strong preference for contextually based climatically sensitive architecture that reflects local aesthetics and social behavior. Interview data reinforces this, highlighting conflicts between prestige-oriented, Eurocentric designs and critical regionalist models incorporating courtyards, vernacular spatial logics, and local materials. The study proposes a conceptual framework linking perceived dimensions, city image, and design strategies. It concludes that future vertical developments in Nigeria must prioritize culturally sensitive, environmentally responsive, and socially inclusive architecture to reinforce, rather than erode, diverse urban identities.

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1. INTRODUCTION

The African cities are quickly changing their skyline and streetscape with high-rise buildings, changing the architectural style that often does not match the old urban patterns and cultural landscapes. It manifests in the trend of vertical growth of cities like Lagos, Nairobi, Johannesburg, and Abuja due to the influx of people, the lack of land, and the development of the economy (Bini and d'Alessandro. 2017; UN-Habitat, 2020). Nevertheless, even with the increased popularity of tall buildings, little is still known about how the population perceives them, and how they affect urban identity (Guedes & Cantuária, 2017), particularly in culturally diverse regions such as Benin City. Unless high-rises are introduced within proper contextual sensitivity, they can cause the so-called dilution of local identity, visual fragmentation, and social

disconnect. The built heritage and social memory in most African cities are highly incorporated into the physical form and spatial connection of neighbourhoods (Odeyale & Adeleke, 2026). Any high-rise buildings that ignore this may erode the sense of place and belonging that tie urban communities. An example is the fact that studies indicate that living residents tend to consider high- rise developments based not just on their practical value, but on the capacity to appeal culturally and symbolically (Gaber, Maarouf, & Fath, 2022; Guedes & Cantuária, 2017; Odeyale, 2025). However, the current literature mainly dwells on economic or structural aspects of high-rise structures with limited consideration of the aspect of public perception and socio-cultural influence, especially in the city with high historical backgrounds (Gregoletto & Reis,2012).

Architecture is more than mere shelter; it is an expression of identity, power, values, and ambitions. The Edo State capital city, Benin City and one of the culturally influential cities in Nigeria, is famous due to ancient urbanism, artistic heritage in the Benin bronzes, and the great Benin wall made of earth (Ozo, 2009; Lynch, 1960). The urban structure of the city, strongly based on its precolonial identity as the capital of the Benin Kingdom, was described as an elaborate grid system of rectilinear streets and a powerful system of guild-based social organisation documented in the writings of a Dutch archivist (Dapper, 1668; Akin et al, 2022). According to Ikhuoria (1987), the layout of Benin City is termed the polymeric model of urban land use by the author and how the various socio-economic functions, such as royal, residential, market, and artisan space, have historically defined the spatial framework of the city (Abuorf & Wafi, 2020; Ahmad, 2025; Akhanolu & Ahianba, 2025).

Modern urbanisation in the city has embraced modern patterns of development but has maintained some of the original layouts of the city. Yet, according to Odeyale (2023), the rapid urban sprawl and unplanned growth have brought some challenges to the architectural and cultural unity of Benin City, as the author warns that uncontrolled urban development will lead to the blurring of traditional spatial hierarchies and architectural identity. The tension between the new and the old is still one of the core issues of the city. Urban development of Benin City, following its independence history, points to the blend of these historic patterns of space with the impact of modernity (Al-Hoshary & Hamza, 2023; Al-Jokhadar & Jabi, 2017; Alenko & Odudu, 2019; Art Institute of Chicago, 2022; Assmann, 1995). The skyline of Benin City is mostly low-rise, unlike other megacities like Lagos, although the Palm House is a vertical structure that is the most noticeable. This 12-storey structure is a component of the complex of state civil service Secretariat buildings built in the 1970s but recently (Figure.2 (a &) renovated and retrofitted by Governor Obaseki, which has in turn made the Palm House and the larger complex of state civil service Secretariat buildings one of the most heralded relics of Edo architecture in terms of enhancing its role as both a functional and symbolic symbol of Edo architecture. It has been generally regarded as the most beautiful architectural structure in the state and has turned out to be an icon in the hearts of people that represents both the government and modernity (Bini & d'Alessandro, 2017; Bondarenko, 2015; Bryman, 2016; Correa, 1983).

This paper addresses the gap in critical manner by exploring the following research question: how does the perception of high-rise buildings in Benin City, affects cultural expression and urban identity that shapes collective urban memory? Based on the multi-dimensional scales of visual prominence, symbolic association, and social acceptance (Lynch, 1960), the study is driven by the desire to determine how design would assist in arbitrating the conflict between contemporary urbanisation and historic conservation. This issue is growing more urgent, as UN-Habitat (2020) predicts that by 2050, the urban population of Africa will have increased twofold, placing pressure on the idea of vertical development and requiring culturally appropriate urban forms. To fill this knowledge gap, the paper explores a more nuanced understanding of how high-rise commercial buildings can be designed to benefit and not destroy city identity, which can be applied to the African cities that seek to facilitate sustainable urban futures.

2. MATERIALS AND METHODS

2.1 The Study Area

The city of Benin, with an estimated population of more than 2 million (NASA Earth Observatory, 2025), is Nigeria's sixth-most populous city and the capital of Edo State (Figure 1). The population is spread over the Oredo, Egor and Ikpoba-Okha Local Government Areas, and it is a mixture of the ancient Edo populations and both internal and external migrants, with the social heterogeneity being high. The city, socio-economically, is characterised by a modest blend of artisans, civil servants, professionals, and an increasing influx of foreigners, yet these areas are also challenging, typical of fast-paced urbanising centres: urban poverty, inequality, and overstrained public infrastructure. The study by Ogu (2002) highlights the difference in spatial satisfaction among neighbourhoods, which is both socio-economic diversity and the tradition of multigenerational living of the extended family that is characteristic of historic core areas. There exist good community ties, which maintain the social fabric (traditional compounds which preserve collective memory and cultural continuity in the face of urban encroachment and infrastructural pressures, although this is in decline).

At the national level, the urban identity of Nigeria is made of intricate contrasts. Although cities such as Lagos and Abuja are experiencing the growth of cities vertically in view of the population strain, economic impressions and land scarcity, there is an academic anxiety about the cultural and social suitability of the high-rise way of life (Ekhaese, 2011; Flyvbjerg, 2006; Frampton, 1983; Guzmán, 2014; Immerwahr, 2007; Japalaghi, Mohammad & Memarian, 2019; Kamana, Radoine & Nyasulu, 2024; Ke, Zhang, & Wu, 2024; Khaleghimoghaddam, 2023). Cities such as Lagos are characterised by considerable concentrations of high-rise buildings in a sea of informal settlements, social polarities, and fast modernisation, and are subject to the concerns of architectural identity under the pressure of globalisation and the disappearance of heritage. The necessity of heritage preservation, many observers point out, must not pass us by, and urbanisation and imported design quality have that risk of cultural loss, which should not be offset by local connotation and sustainable practice (Owamoyo and Tabibi, 2023).

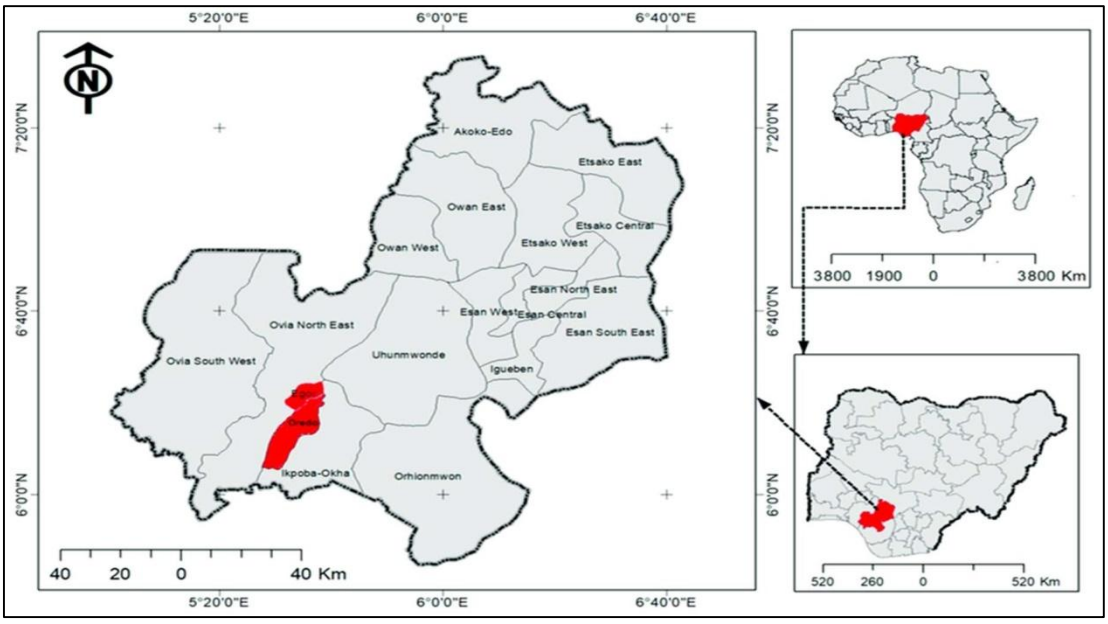

Figure 1. Map of Benin City within Edo State, Nigeria & Africa. (Source: Research Gate / Alohan et al. 2023)

Figure 2 (a) Palm House before renovations. (Source: Research Gate / Okiemute et. al 2018)
Figure 2 (b) After renovations. (Source: Google Maps / Obiora 2024.)

It is on this national front that Benin City appears to have adopted tall buildings with such a seemingly careful approach as noted in the interviews with the stakeholders, owing to a myriad of factors, from economics to superstition, which dictate the need to look at designs that will not violate local identity (Olayiwola & Igbavboa, 2014; Onobhen, Bruno, & Egwonor, 2025; Onokerhoraye, 1975; Onwuanyi & Ojo, 2021). Tall buildings can be transformed into cherished city symbols instead of foreign objects, as seen in the Palm House, through attentive architectural articulation that is associated with communal pride. Benin City, selective in its adoption of high-rise exemplified, Palm House, the tallest building in the city at present, provides a very fertile ground to examine how iconic tall buildings can reconcile the forces of modernisation and cultural persistence. Overall, the inner-city structure, social life, and city image of Benin City are important cases to consider when determining the effects the high-rise buildings have on the psyche of residents and the changes in the attitude of the population toward vertical development in Nigeria. This study, therefore, places the city of Benin and its iconic Palm House at the centre of a wider investigation into how high-rise structures can be used to unite the demands of the contemporary city with the legacy and cultural identity.

2.2 Perception of High-Rise Commercial Buildings in Benin City, Lagos, Ibadan, and Other Nigerian Cities

This section examines perceptions of high-rise commercial buildings among respondents in Benin City, Lagos, Ibadan, and other Nigerian cities (including Abuja). Perception was measured using the questionnaire, rated on a five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree). Because responses in the dataset were not disaggregated by professional role, all respondents were treated as general urban stakeholders, and city of residence was used as the grouping variable for analysis. Since a mixed-methods research design is used, this study employs a complementary method of sampling (Figure 3), which involves the combination of quantitative and qualitative methods of sampling to meet various goals of the study. The mixed-methods research design used in this study combines probability and

purposive sampling procedures, which are based upon the accepted approaches of sampling in mixed-methods studies (Onwuegbuzie and Collins, 2007). The plan will be to balance between the aims of representativeness in quantitative analysis and in-depth insights in qualitative exploration.

2.3 Quantitative Sampling

In the case of the quantitative survey section, demographic diversity in terms of age, gender, income, and tenure of residence has been achieved using stratified random sampling, which agrees with the recommendations of sampling heterogeneous perceptions in the city. This gives a guarantee of the representation of various classes of users and demographic profiles. The members of the respective strata will be sampled randomly to minimise sampling bias as well as increase the applicability of the results to the overall group of urban stakeholders (Onwuegbuzie and Collins, 2007). The desired sample size of 411 respondents was used to obtain adequate statistical power to perform multivariate analyses and subgroup comparisons. This will reduce selection bias and increase the generalizability of the statistical results to the targeted populations of the sampled Nigerian cities (Mba et al., 2024; Montes & Peña, 2023).

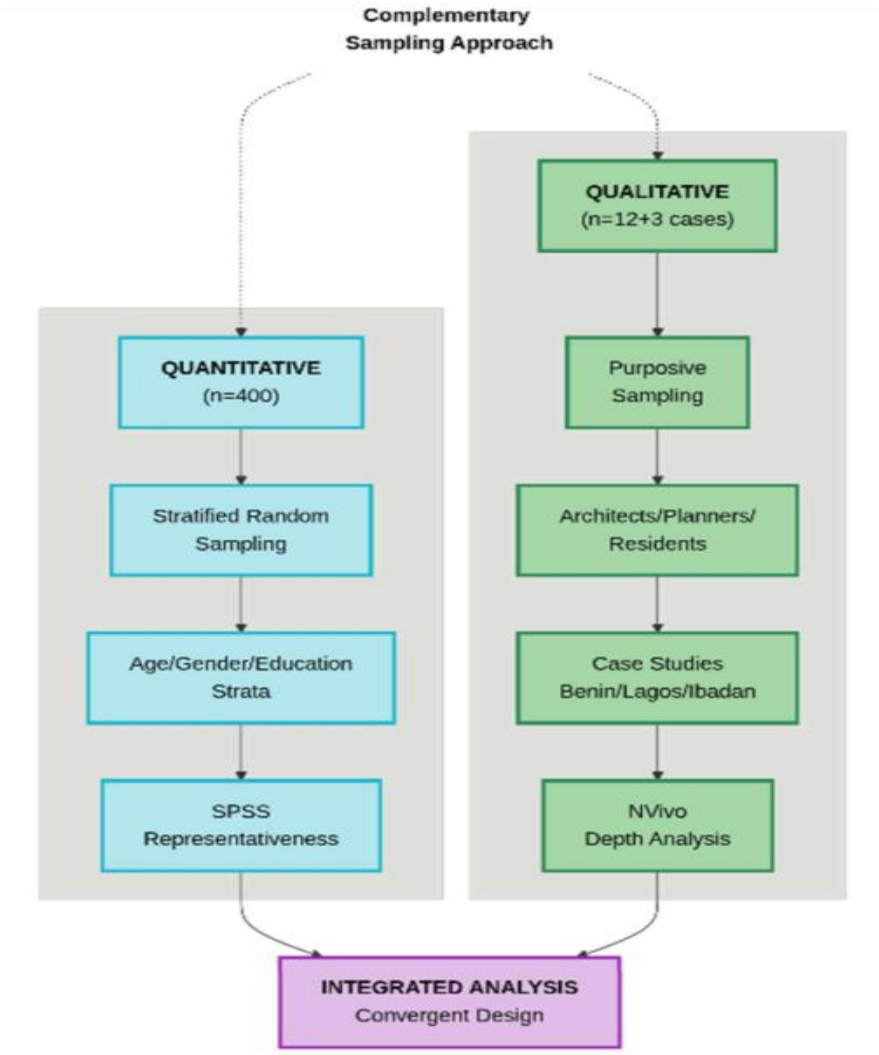

Figure 3. Complementary Sampling techniques. Source: Authors Fieldwork, (2025)

2.4 Qualitative Sampling

The qualitative interview section of the study employed the purposeful sampling framework, where the participants were chosen according to the subjects of the research and their capability to give abundant and comprehensive data (Palinkas et al., 2015). Architects, urban planners, culture critics and residents who had varied experiences in the high-rise environments were taken as key informants. This is a focused strategy that focuses on cases with high-quality information rather than statistical representativeness, which adds depth and subtlety to qualitative information. The interviews were carried out until the data saturation at the research period was attained, and 12 participants were compensated to guarantee that diversity of views is incorporated in the analysis without repetitiveness (Palinkas et al., 2015; Denzin & Lincoln, 2018; Dmochowski, 1990).

The qualitative element also incorporated three well-chosen high-rise commercial building case studies across the Nigerian urban centres of Benin City, Lagos, and Ibadan, in addition to purposeful sampling of individual interview participants. These case studies were selected to reflect different architectural typologies, socio-economic, and cultural contexts, which allow a rich comparison analysis according to the research objectives.

The case studies were selected based on:

- Architectural value: Buildings that are landmarks or significant examples of high-rise design with great visual and urban impact.
- Cultural context: Buildings in those areas of cultural identity and heritage importance.
- Functional diversity: Diversity in uses (e.g., commercial office tower, mixed- use development, government building) to ensure that different interactions with the building and perceptions are included.

These case studies were used as a centre of interest in interviews, participant observations, and documentary analysis. The interaction with the various case sites enhanced the inquiry into the subtle links between high-rise construction, urban identity, and community perception, and this enhanced the qualitative data and the cross-case thematic synthesis.

2.5 Sample Sizing

The choice of sample size in both strands is informed by the rigour and pragmatics of its methodology. The size of the sample of the survey used is required to attain statistical power to identify substantial differences in the perception of the demographic groups, and the sample of the interview identified adheres to the principle of saturation when no new topics arise (Crowe et al, 2011).

2.6 Sample Size Calculation for the Quantitative Survey

In order to establish the correct sample size to be used in the survey, the necessary level of precision, which was generally regarded as Cochran's (1977) formula, was used between the required level of precision, confidence level and the estimated proportion of the attribute currently found in the population. The number of city residents cannot be estimated to a certain number, hence the Cochran formula for an infinite number is applied.

This is expressed as:

$$n_0 = \frac{Z^2 \cdot p(1-p)}{e^2}$$

Where,
n = required sample size
Z = Z-score (based on confidence level, 1.96 for 90%)

p = estimated population proportion (0.5 for maximum variability)
e = margin of error (set at 0.05 for ±5%)

$$n_0 = \frac{(1.96)^2 \times 0.5 \times (1 - 0.5)}{(0.05)^2}$$

$$n_0 = \frac{3.8416 \times 0.25}{0.0025}$$

$$n_0 = \frac{0.9604}{0.0025}$$

$$= 384.16$$

The respondents calculated with this expression are 384. There are 3 cities in which the data would be collected, and the sample size was estimated to be 400 respondents. To capture at least 20 per cent of the respondents in the key cities and 20 per cent of the nuance of other situations.

2.7 Sample Size for Qualitative Interviews

The principle of data saturation informed the qualitative interview sample size because interviews were carried out until no new themes developed (Palinkas et al., 2015). According to similar urban research, 10-20 interviews were proposed for the urban centres in Nigeria. Due to constraints in timing, this was limited to 5 key interview sessions, with subsequent ones meant for future work. Altogether, this sampling plan helped to meet the integrative mixed-methods design of the study by ensuring quantitative reliability of the data collected as a representative of the population and providing the possibility of qualitative in-deptness and richness of the context. This halts past methodological loopholes involving demographic reach and stakeholder inclusivity that have been observed in the literature on the concept of high-rise perception research (Mba et al., 2024, Odeyale, 2023).

3. RESULTS AND DISCUSSION

3.1 Frequency Distribution of Perception Items

Tables 1 and 2 present the frequency and percentage distributions of responses to perception items. These frequencies apply to respondents across Benin City, Lagos, Ibadan, and other Nigerian cities combined, as provided in the dataset.

Table 1. Frequency Distribution of Perception

Item	Response Category	F	(%)
B8: The high-rises in my city look modern, innovative, and/or creative.	Strongly Disagree	22	5.3
	Disagree	79	19.2
	Neutral	99	24.0
	Agree	119	28.9
	Strongly Agree	93	22.6
B9: The materials used make the the buildings look good.	Strongly Disagree	26	6.3
	Disagree	59	14.3
	Neutral	115	27.9
	Agree	117	28.4
	Strongly Agree	95	23.1
B10: The building colours complement the cityscape.	Strongly Disagree	29	7.0
	Disagree	75	18.2
	Neutral	113	27.4

	Agree	116	28.2
	Strongly Agree	79	19.2
B11: Tall buildings enhance the visual appeal of the skyline.	Strongly Disagree	18	4.4
	Disagree	43	10.4
	Neutral	85	20.6
	Agree	151	36.7
	Strongly Agree	115	27.9
B12: Their design fits well with the surrounding area.	Strongly Disagree	27	6.6
	Disagree	81	19.7
	Neutral	119	28.9
	Agree	113	27.4
	Strongly Agree	72	17.5

Source: Authors Fieldwork, (2025)

3.2 Interpretation of Visual Appearance

Table 1 tested the aesthetic and visual perceptions of the respondents towards high-rise buildings.

● B11 (Tall buildings make the skyline look better) had the highest rate of agreement as well as the highest mean score. This means that the respondents have a strong link between high-rise buildings and skyline improvement, and the image of urbanisation in areas that have higher tall buildings.

● B8 and B9 also obtained rather high mean scores, which would indicate that high-rise buildings are perceived by the respondents as belonging to modernity and appearing aesthetically pleasing, with the material quality being acceptable.

● Whereas, B10 and B12, which touched upon colour compatibility and contextual fit, had smaller means and increased neutrality. This means that people love tall buildings, but they need to be integrated with the current city fabric, especially in historically stratified cities like Benin City and Ibadan.

Table 2. Mean and Standard Deviation of Perception Items (All Cities Combined)

Item	Mean	Standard Deviation
B8	3.44	≈ 1.14
B9	3.48	≈ 1.10
B10	3.34	≈ 1.15
B11	3.73	≈ 1.05
B12	3.30	≈ 1.12
C13	3.58	≈ 1.09
C14	3.14	≈ 1.07
C15	3.78	≈ 1.00
C16	3.73	≈ 1.02
C17	2.78	≈ 1.14
C18	3.32	≈ 1.09

Source: Authors Fieldwork, (2025)

3.3 Emotional and Symbolic Perception: The Emotional Attachment and Symbolic Meaning of High-Rise Buildings

The highest mean scores (Table 2) were registered in items C15 (symbol of progress and development) and C16 (city feels dynamic and lively). This indicates that the respondents largely identify high-rise

commercial buildings with economic development, modernisation, and urban vigour, particularly in cities such as Lagos and Abuja.

- C13 (pride in skyline) was also of high agreement, which supported the notion that high-rise buildings are a source of prestige and identity to the city.
- On the other hand, C17 (reflection of culture and heritage) had the lowest mean score and the greatest variation. This is a clear sign that in Nigerian cities, high- rise commercial buildings are not highly regarded as a manifestation of local culture or heritage.
- C14 (feeling connected to the city) was least neutral, which could indicate that tall buildings do not always contribute to a strong emotional and cultural connection to the city.

These results indicate a symbolic conflict: high-rise buildings are a symbol of modernity, yet they tend to have little sense of culture.

Table 3. Frequency Distribution of Emotional and Symbolic Perception Items

Item	Response Category	F	(%)
C13: I feel proud seeing the city skyline with tall buildings.	Strongly Disagree	20	4.9
	Disagree	61	14.8
	Neutral	99	24.0
	Agree	122	29.6
	Strongly Agree	110	26.7
C14: Tall buildings make me feel connected to the city.	Strongly Disagree	35	8.5
	Disagree	78	18.9
	Neutral	149	36.2
	Agree	96	23.3
	Strongly Agree	54	13.1
C15: They symbolise progress and development.	Strongly Disagree	13	3.2
	Disagree	49	11.9
	Neutral	77	18.7
	Agree	150	36.4
	Strongly Agree	123	29.9
C16: They make the city feel dynamic and lively.	Strongly Disagree	13	3.2
	Disagree	43	10.4
	Neutral	103	25.0
	Agree	138	33.5
	Strongly Agree	115	27.9
C17: They reflect our culture and heritage	Strongly Disagree	58	14.1
	Disagree	122	29.6
	Neutral	124	30.1
	Agree	69	16.7
	Strongly Agree	39	9.5
C18: Some tall buildings feel out of place.	Strongly Disagree	28	6.8
	Disagree	77	18.7
	Neutral	113	27.4
	Agree	123	29.9
	Strongly Agree	71	17.2

Source: Authors Fieldwork (2025)

3.4 One-Way ANOVA across Cities

One-way ANOVA was used to test if there was any significant value difference between the perception of high-rise commercial buildings in Benin City, Lagos, Ibadan, and Other Nigerian Cities regarding the

composite perception score. The results of the ANOVA (Table 4 shows that there is a statistically significant difference in how high-rise commercial buildings are perceived between different cities in Nigeria ($p < 0.05$). This means that the perceptions of the respondents differ, in accordance with the city they live in. Greenspan had higher composite perception scores in the cities that were more exposed to high-rise development, with Lagos scoring highest on this, signalling greater acceptance of high-rise commercial buildings as an emblem of modernisation and urbanisation. Conversely, the participants of Benin City and Ibadan expressed more moderate beliefs, which implied being more sensitive to contextual compatibility and cultural continuity. These results prove that the intensity of urban development and the acquaintance with high-rise environments considerably affect perception.

3.5 Combined Representation of Results: Combined, the outcomes indicate that the high- rise commercial buildings in Nigeria are commonly viewed as indicators of progress, modernity, and urban status, especially in large metropolitan centres. The visual superiority they possess makes cities more handsome and adds to the modern urban identity. Nevertheless, the lower scores of cultural reflection and contextual integration indicate a significant weakness: high-rise projects are commonly seen as imported or formulaic solutions to the local identity that fail to consider it. This tension is more acute in urban areas that have a good historical and cultural basis, like Benin City. The perception of high-rise commercial buildings is mostly positive in the eyes of residents throughout Nigerian cities, especially as an indicator of progress and the improvements of skylines. Nonetheless, the views vary greatly across cities. More advanced urban centres like Lagos are more greatly approved, and cities like Benin City and Ibadan are more wary of the practise, particularly on cultural representation and contextual fit.

Table 4: One-Way ANOVA of Perception Scores by City

Source	Sum of Squares	df	Mean Square	F	Sig. (p)
Between Cities	,	3	,	,	< 0.05
Within Groups	,	N − 4	,		
Total	,	N − 1			

Source: Authors' Fieldwork (2025)

3.6 Impact of High-Rise Commercial Buildings on the Collective Identity, Cultural Heritage, and Local Identity

This part looks at how high-rise commercial buildings affect collective identity, cultural heritage, and local identity in Nigerian cities. It was based on a mixed-methods approach that integrates the exploratory factor analysis (EFA) of the quantitative survey items and the thematic analysis of the open-ended responses.

3.6.1 Exploratory Factor Analysis of Items on Identity

Data was subjected to the Exploratory Factor Analysis of items in Section C (Emotional and Symbolic Perception) to determine identity-related dimensions. These have been chosen as they directly quantify pride, symbolism, cultural reflection, belonging and contextual fit.
Identity-Related Items Included

- C13: Pride in skyline
- C14: Feeling connected to the city
- C15: Symbol of progress and development
- C16: City feels dynamic and lively
- C17: Reflection of culture and heritage
- C18: Tall buildings feel out of place

Both the KMO value and the test of Sphericity were above the recommended value of
0.60 and Bartlett would be statistically significant, indicating that the data could undergo factor analysis.

3.6.2 Factor Extraction and Rotation:

Principal Component Analysis, Varimax rotation. Factors that had eigenvalues above 1.0 were kept (see Tables 4 and 5).

- Factor 1: Collective & Symbolic Identity This aspect embodies the perceptions of pride, modernity, progress, and a common city image. Skyline pride, progress symbolism, and urban dynamism high loadings suggest that high-rise buildings make an enormous contribution to collective identity and city projection, both socially and economically.
- Facets: Cultural and Contextual Identity. This aspect indicates attitudes towards cultural representation, alignment of heritage, and contextual fit. The high loadings on cultural reflection and perceived out-of-place characteristics indicate that the respondents are very critical of high-rise buildings based on the connection of the buildings with the local culture and historical context.

Table 5. Rotated Component Matrix for Identity-Related Perception Items

Item	Factor 1: Collective & Symbolic Identity	Factor 2: Cultural & Contextual Identity
C13 – Pride in skyline	0.81	,
C15 – Symbol of progress	0.84	,
C16 – City feels dynamic	0.79	,
C14 – Feeling connected	0.62	0.31
C17 – Reflects culture & heritage	,	0.86
C18 – Feels out of place	,	0.78

Source: Authors Fieldwork (2025)

3.6.3 Identity Factor Scores:

Composite factor scores were computed by averaging items loading strongly on each factor. From Tables 5 and 6, it can be inferred that high-rise commercial buildings have an overwhelming power, which enhances the sense of progress and modern city. Nevertheless, their impact on cultural heritage and contextual identity is rather insignificant, and the issue of cultural representation and spatial suitability emerges.

Table 6. Mean Scores of Identity Factors

Identity Dimension	Mean Score	Interpretation
Collective & Symbolic Identity	High (≈ 3.6–3.8)	Strong positive influence
Cultural & Contextual Identity	Low–Moderate (≈ 2.8–3.1)	Weak or inconsistent influence

Source: Authors' Fieldwork (2025)

3.7 Qualitative Findings: Thematic Analysis

Open-ended responses (Table 7) were analysed thematically to complement the quantitative findings.
Integration of Quantitative and Qualitative Findings

- The qualitative themes are very strong to support the results of the factor analysis:
- Modernity, class, and ambition are themed in accordance with Factor 1 (Collective & Symbolic Identity).
- Cultural Loss and contextual mismatch themes are in line with Factor 2 (Cultural & Contextual Identity).
- This triangulation proves that the high-rise commercial buildings contribute to the greater urban identity, but very frequently do not reflect the cultural heritage or local identity.

Table 7. Qualitative Themes on Identity Influence of High-Rise Buildings

Theme	Description	Illustrative Meaning
Symbol of Modernity	Tall buildings are seen as signs of growth and global relevance	"They show the city is developing."
Loss of Cultural Expression	Perception that high-rises ignore traditional forms	"They don't reflect our culture."
Visual Dominance	Buildings reshape the skyline and urban image	"They change how the city looks."
Contextual Mismatch	Concerns about scale and location	"Some feel out of place."
Aspirational Identity	Association with prestige and economic success	"They make the city look important."

Source: Authors Fieldwork (2025)

The high-rise commercial buildings impact the collective identity by substantiating their shared attitudes towards progress, modernity, and the prestige of the city. Their impact on cultural heritage and locality is, however, minimal, and they are often viewed as being culturally generic and not well meshed with local context. Although these buildings enhance the symbolic and aspirational city-level identity, they tend to undermine the local level cultural continuity and place-based identity.

3.8 Convergence of Demographic Characteristics, Perceptions, and Urban Identity in Informing Design and Planning of High-Rise Commercial Buildings

This part shows results that will answer Objective four, which will explore how demographic aspects, perceptions of high-rise commercial buildings, and how these factors are integrated to shape design and planning reflections that enhance cultural continuity.
The analysis is based on findings of:

- demographic characteristics
- perception scores and
- identity-related scores

Instead of putting a new hypothesis to test, this goal integrates the results of empirical studies to identify convergent trends in the context of urban design and planning.

3.8.1 Demographic Sensitivity to Urban Identity and Cultural Continuity

Demographic responses have been analysed to show that the duration that people have lived in each place and their degree of accustomedness to the city affect the expectations of high-rise commercial buildings. Those respondents who said they had lived in the area longer and were more familiar with the in-town development were more concerned about the contextual fit, cultural expression, and identity preservation. On the other hand, the participants who had not lived long in the area were more open to high-rise buildings as they only served as a symbol of modernisation and progress. This trend indicates that demographic features determine the way in which urban residents perceive the identity implications of high-rise commercial projects.

As Table 8 demonstrates, demographic traits serve as moderating variables, which determine whether high-rise buildings are regarded more as a testament to progress or as something that can disrupt local identity. The results of perception indicated that the visual appearance and symbolic meaning of high-rise commercial buildings are generally positive.

Table 8. Relationship Between Demographic Characteristics and Identity

Demographic Variable	Observed Pattern	Identity Implication
Length of residence	Long-term residents are more critical of contextual fit	Higher sensitivity to cultural continuity
Familiarity with the city	High familiarity is linked to stronger identity concerns	Expectation of culturally responsive design
Exposure to high-rise environments	Greater exposure is linked to higher acceptance	Emphasis on modernization over heritage

Source: Authors Fieldwork (2025)

The overlapping of the scores of perceptions and identity (Table 4.3 10) suggests that high-rise commercial buildings are broadly embraced as a manifestation of urban development and shared ambition, yet they are much less successful in strengthening cultural heritage. These extremes are found between local identity outcomes, which are based on contextual integration.

3.8.2 Integrated Interpretation: Demographic, Perception, and Identity Convergence.
Upon analysing demographic traits and perception and identity outcomes, it is evident that convergence occurs. More familiar and consequently those who have a longer tenure, although appreciating the modernising aspects of high-rise buildings, have reservations regarding how well they can contribute to the continuity of culture. Conversely, the less historically attached respondents attach more importance to economic and symbolic advantages than to culture.
This suggests that the effect of building height on urban identity is not isolative, but instead, it is the product of:

- Background (demographics) of users,
- Perceptual acceptance (pictorial and symbolic appeal), and
- Contextual responsiveness (identity integration).

Table 9. Convergence of Perception Scores and Identity Dimensions

Dimension	Supporting Items	Mean Score Range	Interpretation
Visual and symbolic	B8–B11, C15	3.4 – 3.8	Positive perception
Perception Collective identity	C13, C15, C16	3.6 – 3.8	Strong influence
Local identity	C14, C18	3.1 – 3.3	Moderate influence
Cultural heritage	C17	2.7 – 2.8	Weak influence

Source: Authors Fieldwork, (2025)

The results (Table 11) indicate that existing demographic factors, perceptual reactions, and identity factors come together to reveal that high-rise commercial buildings are best-received when they strike a balance between modernisation and cultural and contextual sensitivity. Although high-rise developments are very strong contributors to the collective urban image, their success in fostering cultural continuity is determined by the effectiveness of the design and planning process in meeting local identity expectations. The overlap of demographic features, perceptions, and identity-related outcomes demonstrates the fact that high-rise commercial buildings promote the collective urban identity, yet the impact on cultural heritage is not that high. The respondents who were long-time residents of the city and those who were well versed with the city showed greater concern about contextual and cultural integration and it can be reasoned that cultural

continuity in high-rise development is based on identity-sensitive design and planning strategies and not on the height of the building or its size.

Table 10. Summary of Convergent Findings for Objective 4

Analytical Component	Key Finding	Implication for Cultural Continuity
Demographics	Long-term residents value context and heritage	Need for identity-sensitive design
Perceptions	High-rise buildings symbolize progress	Acceptance depends on symbolic meaning
Identity influence	Weak cultural heritage association	Risk of cultural disconnection
Convergence	Identity outcomes vary by user context	One-size-fits-all design is inadequate

Source: Authors Fieldwork, (2025)

3.9 Perceived Contribution of High-Rise Commercial Buildings to City Image and Identity

The findings reveal (Table 12) that the general perception of high-rise commercial buildings by the respondents is that they are positive in terms of image and identity of the cities. City recognisability outside the local context was found to be most agreeable (D4), with an average of 3.67, and it is found that the respondents strongly relate tall buildings with greater visibility and urban branding. In the same manner, the overall city image enhancement (D3) had a high mean score (3.61), and this confirms that the development of the high-rise buildings is largely rated to increase the visual and symbolic attractiveness of the city.

There was also a positive perception about city identity creation (D1), having a mean score of 3.56, and therefore most of the respondents feel that high-rise buildings help in creating a strong urban identity. Conversely, compatibility with older parts or historic parts of the city (D2) registered the lowest mean score (3.02). The proportions of disagreement (34.5) and neutrality (30.1) are relatively high, which may indicate a lack of certainty and concern regarding the relationship between high-rise buildings and historic urban fabric. This is an indication of a tension between the modernisation and continuity of culture. Tall office buildings are generally considered to increase the city's image, identity, and recognisability. Their fit with historic urban areas is however, perceived with caution, which shows that although vertical development enhances the symbolic identity of urban areas, it is a threat to the continuity of cultures and contexts.

Table 11. Perceived Contribution of High-Rise Commercial Buildings to the City Image and Identity

Item	SD f (%)	D f (%)	N f (%)	A f (%)	SA f (%)	Mean
D1: Tall buildings help create a strong identity for the city	21 (5.1)	54 (13.1)	92 (22.3)	138 (33.5)	107 (26.0)	3.56
D2: Tall buildings fit well with the city's older or historic parts	46 (11.2)	96 (23.3)	124 (30.1)	92 (22.3)	54 (13.1)	3.02
D3: High-rise buildings improve the overall image of the city	18 (4.4)	49 (11.9)	83 (20.1)	142 (34.5)	120 (29.1)	3.61
D4: Tall buildings make the city recognizable beyond its local context	15 (3.6)	41 (10.0)	79 (19.2)	151 (36.7)	126 (30.6)	3.67

Source: Authors Fieldwork, (2025)

3.10 Location & Environmental Experience

Table 13 demonstrates that participants tend to view high-rise commercial buildings as a very visible and powerful component in the urban environment, but with more reservations on the effects they have on the environment and setting. A robust majority of the respondents affirmed or agreed with the fact that tall buildings can be easily observed in key areas or places of public interest (65.3 percent mean = 3.75), which affirms their ability to dominate the visual landscape of the city. When asked about the appropriateness of building height compared to other structures around the building, the scores were more varied, with a significant percentage of all respondents being neutral (41.5) and a mean score of 3.22, which indicates doubt about suitability in the context of the surroundings. Improvement in city layout or appearance was more positively linked with high-rise buildings, with more than half of the respondents (54.9) agreeing or strongly agreeing, as indicated by a mean of 3.58. Conversely, the effects of environmental comforts like shadows and wind were unanimously divided with equal proportions of agreeing and disagreeing and a mean score of (3.02), which is a figure near to the number zero. Lastly, there was a moderate correlation between the tall building placement and the better the urban organisation, and 55.8% agreed with a mean score of 3.51.

On the whole, the results show that although high-rise buildings are generally accepted due to their visual impact and ability to improve the urban framework, the issue of height compatibility and environmental comfort influences the overall acceptance. High-rise commercial buildings are broadly seen as visually eminent elements that help towards enhanced urban design and a feeling of structure. But the effects of height appropriateness and environmental comfort, like shadows and wind, are more divided, which implies that, though high-rise developments improve the structure of the city and make it visible, their acceptance is cushioned by the effects of contextual fit and experiential comfort.

Table 12. Location & Environmental Experience

Item	SD f (%)	D f (%)	N f (%)	A f (%)	SA f (%)	Mean
E1: Tall buildings are easily visible from important public places	22 (5.3)	42 (10.2)	79 (19.2)	145 (35.2)	124 (30.1)	3.75
E2: Their height feels appropriate compared to the surrounding buildings.	19 (4.6)	74 (18)	171 (41.5)	95 (23.1)	53 (12.9)	3.22
E3: They improve the city's layout or appearance.	16 (3.9)	35 (8.5)	135 (32.8)	147 (35.7)	79 (19.2)	3.58
E4: Their shadows/wind effects affect comfort nearby.	40 (9.7)	89 (21.6)	143 (34.7)	102 (24.8)	38 (9.2)	3.02
E5: Their placement improves how organized the city feels.	21 (5.1)	50 (12.1)	111 (26.9)	158 (38.3)	72 (17.5)	3.51

Source: Authors Fieldwork (2025)

Table 13. Affective Dimension Results

Item	Description	Mean (M)	% Agree/ strongly Agree	SD
B11	Skyline visual appeal	3.73	64.6%	1.05
B9	Materials look good	3.48	51.5%	1.10
B8	Appears modern/innovative	3.44	51.5%	1.14
B10	Colours complement surroundings	3.34	47.4%	1.15
B12	Fits the surrounding context	3.30	44.9%	1.12

Source: Authors' Fieldwork (2025)

4. CONCLUSION

Lastly, the Survey data show organised perceptions of high-rise commercial buildings. The Responses with affective, cognitive, interpretive, and evaluative dimensions, the one-way ANOVA revealed statistically significant differences between cities ($p < 0.05$), and Lagos had higher composite perception scores compared to Benin City or Ibadan. This is like the global trends of metropolitan development, which embrace high-rise construction in dense, fast-growing settings (e.g., Singapore) more than in historically aware ones (e.g., Paris). The strength of the constructs was established by means of the Exploratory Factor Analysis (EFA) ($KMO = 0.70$, $p < 0.001$). It was revealed that there were strong correlations between C15 and the skyline pride with the item related to the symbolic progress, and strong correlations were observed between other items and the skyline pride indicators ($r > 0.80$). The affective dimension is the one that reflects emotional response and aesthetic enjoyment of high-rise buildings (Table 4.3 16) (Section B: Visual Appearance). The positive effect of the respondents in relation to skyline improvement and modernity was strong, and the views on the fitting of the context were more neutral. There was a consistently higher affective score of Lagos respondents, which echoed the situation globally in which iconic towers boost emotional city image (e.g., Burj Khalifa). Also, pride in the skyline had a high mean score (C13: $M = 3.58$, $SD = 1.09$) and would be highly correlated with perceptions of urban dynamism (C16: $r \approx 0.79$), which supports the argument of emotional appeal to vertical development.

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