

An Assessment of Factors Influencing Residential Property Values in Port Harcourt Urban Sprawl.

DEEYAH, CHRISTOPHER L¹, PERRI, PRECIOUS², OBA, PETER TOMONIDIE S³

^{1,2}*Department of Estate Management, Rivers State University, Port Harcourt*

³*Department of Estate Management, Kenule Beesor Saro-Wiwa Polytechnic, Bori*

Abstract- Rapid urban expansion has become a defining feature of many Nigerian cities, with significant implications for land use and property markets. This study examines the impact of urban sprawl on residential property values in Port Harcourt, Nigeria. Specifically, it identifies the spatial characteristics of urban sprawl, evaluates differences in property values between sprawled and non-sprawled areas, and analyzes the factors influencing these values. A descriptive research design was adopted, and data were collected from residents and property owners across selected communities in Port Harcourt. Using a stratified random sampling technique, five communities -Elekahia, Nkpolu Orogbum, Oromenike, Ogbunabali, and Abuloma were selected from sprawled areas of the metropolis. A total of 399 respondents were surveyed through structured questionnaires, while secondary data were obtained from planning documents and property records. The data were analyzed using descriptive statistics, including frequencies, percentages, and mean scores. The findings show that urban sprawl in Port Harcourt is characterized by informal housing, low-density development, poor transportation networks, rapid unplanned growth, and inadequate infrastructure. The study also reveals that residential property values are significantly higher in central areas compared to peripheral sprawled areas. However, property values in the urban fringe have increased in recent years due to growing housing demand. Key factors influencing property values include security, neighborhood planning, transportation accessibility, road networks, proximity to social amenities, and infrastructure availability. The study concludes that improved urban planning and infrastructure provision are essential for managing urban sprawl and supporting sustainable residential property development in Port Harcourt.

Index Terms- Urban Sprawl, Residential Property Values, Urban Planning, Infrastructure, Port Harcourt.

I. INTRODUCTION

Urbanization is a global phenomenon characterized by the expansion of cities and the rapid increase in urban population. While it brings about development and modernization, it often leads to a spatial growth pattern known as urban sprawl a low-density, unplanned, and uncoordinated expansion of urban areas into adjoining rural lands (Ewing, 1997; Brueckner, 2000). Urban sprawl is typically driven by factors such as population growth, rural-to-urban migration, weak land-use planning, and the increasing demand for affordable housing (Bhatta, 2010; UN-Habitat, 2020). In developing countries like Nigeria, urban sprawl is becoming a major urban planning concern due to its profound social, economic, and environmental consequences.

Port Harcourt, the capital of Rivers State and a major economic hub in Nigeria's oil-rich Niger Delta region, has experienced significant urban expansion over the last few decades. This growth, fueled by population influx, industrialization, and economic opportunities, has resulted in an outward push of the city's boundaries into peri-urban and rural settlements such as Iriebe, Rumuagholu, Eneka, and Eleme (Obinna, Owei, & Mark, 2010). The absence of a coherent urban development plan and ineffective enforcement of planning regulations have contributed to the uncontrolled and sprawling nature of this urban expansion (Owei & Ikpoki, 2006).

One of the key impacts of urban sprawl is its influence on residential property values. As urban areas extend into peripheral lands, land and property markets undergo spatial transformation. In some cases, property values in these newly urbanizing zones appreciate due to improved accessibility and development potential. In other instances, values

decline due to inadequate infrastructure, environmental degradation, and poor service delivery (Aluko, 2011; Adedeji, Arum, & Ajayi, 2011). These fluctuations create uncertainty for investors, developers, and policymakers.

In Port Harcourt, the dynamics of residential property values in sprawled areas remain underexplored. While previous studies have addressed general urban growth patterns and land use changes, there is limited empirical evidence on how urban sprawl specifically affects residential property values across the city. This gap necessitates a focused investigation into the relationship between urban sprawl and property valuation outcomes.

Therefore, this study seeks to examine the impact of urban sprawl on residential property values in Port Harcourt. It aims to identify the spatial characteristics of sprawl, evaluate trends in property values across sprawled and non-sprawled areas, and analyze the factors that mediate these effects. The findings of the study are expected to provide insights that support evidence-based urban planning, investment decision-making, and sustainable land management practices in Port Harcourt and other rapidly growing urban areas.

II. LITERATURE REVIEW

2.1 Concept of Urban Sprawl

Urban sprawl refers to the outward, low-density, and often unplanned expansion of urban areas into surrounding rural or undeveloped land. It is characterized by dispersed residential developments, heavy reliance on automobiles, fragmented land use, and inefficient infrastructure provision (Brueckner, 2000; Bhatta, 2010). This phenomenon typically results from rapid population growth, increased demand for housing, and economic development pressures that outpace urban planning capacities (Ewing, 1997). The key features of urban sprawl include leapfrog development, where new constructions skip over intervening land; strip development along major roads; and scattered, disconnected settlements that lack coherent planning (Galster et al., 2001). Urban sprawl often leads to

increased travel distances, loss of agricultural and natural lands, higher infrastructure costs, and environmental degradation (Ewing, 1997; Bhatta, 2010). While some argue that urban sprawl can provide affordable housing options and economic opportunities by opening up new areas for development, the negative consequences generally outweigh the benefits if sprawl is unmanaged (Brueckner, 2000). It is important to note that urban sprawl manifests differently across cities and countries depending on local socio-economic, political, and environmental contexts (UN-Habitat, 2020). Urban sprawl represents a complex urban growth pattern with significant implications for land use, environmental sustainability, and property values, necessitating effective planning and management approaches to balance growth with sustainability.

2.2 Spatial Extent of Urban Sprawl

The spatial extent of urban sprawl is typically characterized by the outward spread of urban areas into surrounding peri-urban zones, often leading to an increase in land consumption per capita. This spatial expansion is influenced by various factors, such as population growth, changes in land-use policies, availability of transportation networks, and economic opportunities (Burchfield, Overman, Puga, & Turner, 2006). As cities expand, the density of development decreases, resulting in more land being used for residential purposes, even as the population continues to grow in a dispersed manner (Ewing, 1997). The process of urban sprawl can also be described by patterns that exhibit leapfrog development, edge cities, and urban corridors, all of which contribute to the fragmentation of urban space and the loss of agricultural and natural land (Seto, Fragkias, Güneralp, & Reilly, 2011).

Urban sprawl is often mapped using remote sensing and GIS technologies to track its spatial extent. Studies have demonstrated that in many global cities, sprawl extends beyond the boundaries of traditional urban centers and permeates surrounding rural areas, thus contributing to the development of extensive suburban landscapes (Jat, Garg, & Khare, 2008). The continuous expansion of cities into previously rural

areas can lead to challenges related to urban planning, infrastructure provision, and environmental sustainability (Glaeser, Kahn, & Rappaport, 2008).

2.3 The Causes of Urban Sprawl

Urban sprawl, the uncontrolled expansion of urban areas into surrounding rural or undeveloped land, is driven by a multitude of factors that interplay to shape the spatial growth patterns of cities. These factors are economic, social, demographic, and policy-related, and they influence the nature and extent of sprawl in urban regions. Understanding these drivers is essential for developing strategies to manage and mitigate the negative effects of sprawl, such as environmental degradation, increased traffic congestion, and the loss of agricultural land. A number of factors driving urban sprawl are discussed as follows:

Population Growth and Urbanization: This is one of the primary drivers of urban sprawl, particularly in metropolitan areas. As cities experience an influx of people due to natural population increases or migration, there is an increasing demand for housing, which often leads to urban expansion (Glaeser, Kahn, & Rappaport, 2008). In many rapidly growing cities, this demand for housing has been met by expanding outward, rather than concentrating growth within existing urban boundaries (Burchfield, Overman, Puga, & Turner, 2006). As a result, residential developments spread into the surrounding countryside, leading to the consumption of land that was previously agricultural or undeveloped.

Economic Factors and Affordability of Housing: Economic factors play a significant role in driving urban sprawl. In particular, the affordability of housing in suburban areas compared to central urban regions is a key element that pushes people to seek residences on the periphery of cities (Ewing, 1997). Over time, rising land and housing prices in city centers, coupled with the availability of cheaper land on the outskirts, have incentivized both developers and homebuyers to opt for suburban and even exurban locations (Glaeser et al., 2008). The promise of more affordable and spacious housing has contributed to the rise of suburbanization, with many people preferring the suburban lifestyle, which offers

larger homes and yards at lower prices than those found in central urban areas.

Transportation and Mobility: The development of transportation infrastructure is another crucial factor driving urban sprawl. The advent of the automobile, combined with the expansion of road networks, has made it easier for people to live farther from city centers while still maintaining access to employment, education, and other amenities (Garreau, 1991). The widespread availability of automobiles allows individuals to commute long distances between their suburban homes and central urban workplaces. This increased mobility has led to a spread of urban areas beyond traditional boundaries, as people are no longer constrained by proximity to public transit systems or city centers (Burchfield et al., 2006). In cities like Los Angeles, for instance, extensive highway networks have facilitated sprawl, transforming previously rural areas into sprawling suburban developments (Ewing, 1997).

Land Use and Zoning Policies: Government policies, particularly land-use and zoning regulations, significantly influence the extent and pattern of urban sprawl. Many suburban areas have historically adopted policies that promote low-density development, such as single-family zoning laws, which prevent the construction of multi-family housing and encourage large lot sizes (Nelson & Duncan, 1995). These zoning practices, combined with the availability of land at the urban fringe, have facilitated the spread of development into previously rural areas. Additionally, developers often seek to take advantage of less restrictive regulations in suburban areas, where building codes are often more lenient compared to city centers. These policy choices often promote sprawling, low-density neighborhoods, which contrast sharply with the denser, more compact urban centers.

Tax Incentives and Subsidies: In many regions, local governments offer tax incentives and subsidies to promote suburban development, further driving urban sprawl. For example, tax breaks for homebuilders or subsidies for infrastructure development in suburban areas often make it more financially attractive for developers to invest in suburban land rather than redeveloping or densifying urban areas (Glaeser et

al., 2008). These incentives can create a feedback loop, where sprawl is perpetuated as new developments spur further demand for infrastructure, such as roads, schools, and utilities, which are often funded by local taxes or public-private partnerships. Changing Lifestyles and Preferences: Socio-cultural factors, including changing lifestyles and preferences, also contribute to urban sprawl. The desire for a suburban lifestyle, characterized by larger homes, bigger yards, and a perceived higher quality of life, is a powerful motivator for individuals and families to move away from crowded urban areas (Frumkin, 2002). Suburban areas are often seen as safer and quieter, with greater access to recreational spaces and less congestion, factors that appeal to many homebuyers. This shift in preferences has led to increased demand for suburban properties, further contributing to the spread of urban development into rural zones.

Real Estate Development and Speculation: Real estate developers play a significant role in fueling urban sprawl. Developers seeking to maximize profits often purchase large tracts of undeveloped land at the periphery of cities and convert them into residential or commercial developments (Garreau, 1991). With demand for suburban housing continuing to grow, these developers have an economic incentive to continue expanding urban areas outward. Speculation on land prices, combined with a growing demand for housing, often results in the expansion of urban boundaries even when central city areas still have vacant land available for development (Nelson & Duncan, 1995).

Globalization and Economic Restructuring: In some cases, globalization and economic restructuring have influenced the pattern of urban sprawl. As cities become more connected to global markets, certain industries, such as manufacturing, may relocate to suburban or exurban areas in search of lower costs or better access to transportation networks. These economic shifts can drive suburban development, as businesses seek lower costs and more space, further spreading the urban footprint (Seto, Fragkias, Güneralp, & Reilly, 2011). This process often results in the decentralization of both economic and residential activities, contributing to the growth of sprawling urban areas.

2.4 Urban Sprawl and Residential Property Values

Urban sprawl significantly influences residential property values, but its effects are complex and context-dependent. On one hand, urban sprawl can increase property values in newly developed suburban areas by providing affordable land, larger housing units, and a perceived higher quality of life away from congested urban centers (Adedeji, et al, 2012). Such peripheral areas often attract homebuyers seeking more space and tranquility, which can drive demand and raise prices.

However, the quality of infrastructure and availability of amenities are critical in determining whether sprawl positively affects property values. In many sprawling regions, inadequate public services, poor road networks, and limited access to schools, healthcare, and employment centers can suppress property values (Aluko, 2011). In developing countries, including Nigeria, rapid and unplanned sprawl often results in informal settlements with substandard infrastructure, leading to depreciation in residential property values (Owei & Ikpoki, 2006).

Urban sprawl can also reduce property values in inner-city areas due to the out-migration of middle- and upper-income residents to suburban fringes, resulting in urban decline and increased vacancy rates (Brueckner, 2000). This phenomenon affects the urban real estate market by shifting investment focus away from central locations.

Empirical studies highlight the importance of accessibility in shaping property values in sprawling contexts. Properties closer to major transport routes or with good connectivity to employment hubs tend to maintain or appreciate in value, while those isolated in poorly connected peripheral areas may depreciate (Aluko, 2011; Adedeji et al., 2011).

In sum, urban sprawl's impact on residential property values is mediated by factors such as infrastructure provision, accessibility, and planning effectiveness. Sustainable urban growth policies that integrate land use and infrastructure planning can help stabilize and enhance property values amid expanding urban footprints.

2.5 Factors Affecting Residential Property Values in Sprawled Areas

Several factors influence residential property values in sprawled areas. These include the availability of infrastructure, the quality of services, and the impact of government policies. In many cases, the development of sprawl results in a mismatch between housing supply and demand, which can lead to fluctuations in property values.

2.5.1 Infrastructure and Accessibility

Availability of infrastructure is one of the most significant factors affecting residential property values in sprawled areas. Urban sprawl often leads to the expansion of road networks, public transportation systems, and utility services into suburban and exurban regions. Properties located near well-developed transportation corridors, such as highways and public transit systems, tend to have higher property values due to improved accessibility (Burchfield et al., 2006).

However, infrastructure development in sprawling areas is often slower than in urban centers, which can create disparities in property values. Areas that are poorly connected to the city center or lack basic infrastructure, such as reliable public transport, may experience stagnant or declining property values. The distance from the central business district (CBD) is another key determinant of property values, with homes located farther from the city center typically being less valuable (Glaeser, Kahn, & Rappaport, 2008).

2.5.2 Environmental and Social Amenities

Environmental quality, including the availability of green spaces, parks, and recreational facilities, can also influence property values in sprawled areas. Suburban and exurban areas that are surrounded by natural amenities tend to attract higher property values, as residents seek the benefits of living in close proximity to nature (Seto et al., 2011). On the other hand, areas where sprawl has led to environmental degradation or the loss of natural landscapes may see property values decline.

Social amenities, such as schools, hospitals, and shopping centers, also play a critical role in shaping

property values. The lack of these amenities in suburban areas can hinder the appreciation of property values, as potential homeowners and renters are less likely to invest in locations that do not offer a high quality of life (Ewing, 1997). In many cases, suburban areas that are in close proximity to urban centers or have strong local amenities see faster increases in property values than those that are more isolated or underdeveloped.

2.5.3 Zoning and Land-Use Policies

Zoning and land-use regulations are key determinants of residential property values in sprawled areas. Local governments often adopt zoning laws that restrict land use, dictate building density, and define the types of developments allowed in suburban and exurban areas. These regulations can either facilitate or hinder property value growth, depending on the extent to which they allow for mixed-use development, affordable housing, and other types of residential development (Nelson & Duncan, 1995).

In many cases, sprawling suburban areas are characterized by restrictive zoning laws that limit the construction of multi-family housing, which can reduce the overall housing supply and drive up prices for single-family homes. On the other hand, more flexible zoning policies that encourage higher-density developments and mixed-use projects can increase the supply of housing and contribute to more stable property values (Frumkin, 2002).

2.6 Empirical Review of Related Studies

Several empirical studies have investigated the relationship between urban sprawl and residential property values, highlighting varied outcomes depending on geographic, socio-economic, and infrastructural contexts. Ige and Ohio (2020) investigated peri-urban residential land price determinants in Oda community (peri-urban Akure, Ondo State) using questionnaire data from landowners alongside price information from property valuers. They applied a hierarchical semi-log hedonic regression and found that access/location factors are the strongest drivers of peri-urban land values. In particular, road network explained the largest share of price variation closest to the city (about 1 km), while general accessibility

(around 2 km) and distance to children's schools (around 3 km) became more influential further out.

In a related study, Aluko (2011) examined how location and neighbourhood characteristics influence housing values in metropolitan Lagos, testing whether prices vary systematically across valuation zones. Using data organized by Lagos sub-areas, the study applied ANOVA to identify spatial differences in housing prices and multiple regression to estimate the contribution of locational and neighbourhood variables. The findings indicate that neighbourhood and locational factors significantly explain price variation, with effects becoming stronger at finer geographic scales, suggesting that micro-neighbourhood conditions—such as planning quality, amenities, and infrastructure shape market values, and that poorly serviced, poorly planned sprawl areas tend to record lower property values than better planned suburban locations. Owei and Ikpoki (2006) conducted a land use dynamics study in Port Harcourt, revealing that rapid urban sprawl led to fragmented land use patterns and a decline in property values in certain inner-city districts as residents moved toward newly developing suburbs. This spatial shift underscored the challenges of uncoordinated urban growth.

Internationally, Brueckner (2000) provides an evidence-informed analysis of the economic logic and implications of urban sprawl, arguing that outward expansion is largely driven by population growth, rising incomes, and declining commuting costs, and is not inherently inefficient when it reflects these fundamentals. He notes, however, that sprawl becomes problematic where market failures—such as underpriced driving and road use, unpriced open-space loss, and other externalities—encourage excessive land consumption, leading to inefficient land use and higher public service/infrastructure costs that can undermine urban efficiency and potentially weaken property values over time.

Burchfield et al. (2006) developed a satellite-based (“portrait from space”) measure of sprawl for U.S. metropolitan areas—conceptualizing sprawl as the amount of undeveloped land surrounding the average urban dwelling—and showed that sprawl varied widely across metros while remaining roughly stable

from 1976 to 1992. Their econometric results identify several factors associated with more scattered development, including groundwater availability, temperate climate, rugged terrain, decentralized employment, early public transport infrastructure, uncertainty about metropolitan growth, and the presence of unincorporated land on the urban fringe. Similarly, Ewing (1997) synthesizes empirical and planning literature on the characteristics, causes, and costs of urban sprawl, questioning the desirability of Los Angeles-style low-density expansion. He argues that sprawl is associated with fragmented development and reduced accessibility, often reinforced by policy distortions and market imperfections (such as subsidies and unpriced externalities), and that these dynamics contribute to higher transportation and public service costs, environmental degradation, and loss of resource land—factors that can ultimately shape neighbourhood desirability and property values.

Irwin and Bockstael (2001) empirically addressed how nearby open/undeveloped land (open space) is reflected in residential property values and crucially why this “open space premium” can be difficult to detect if land-use patterns are endogenous (i.e., open space tends to be located where prices and development pressures are already different). Using a hedonic pricing framework with residential sales data, they emphasize the identification problem created by spatial spillovers and unobserved neighborhood effects, arguing that careful model specification is required to isolate the true value of proximity to undeveloped land.

Carruthers and Ulfarsson (2002) examined urban sprawl and fragmentation through an interregional empirical analysis of U.S. metropolitan areas, focusing on how development spreads outward in low-density, discontinuous patterns. Their results support the idea that metropolitan growth dynamics and planning/institutional conditions are closely tied to where housing demand concentrates and how cities expand—often implying that when outward expansion is constrained or costly, development pressure can translate into denser patterns.

More recently, UN-Habitat (2020) highlighted the global trends in urban expansion, stressing that

unplanned sprawl in developing cities frequently results in informal settlements with limited infrastructure, adversely impacting residential property values and urban sustainability.

These studies collectively demonstrate that the impact of urban sprawl on residential property values is nuanced and contingent on factors such as planning quality, infrastructure provision, accessibility, and socio-economic dynamics. They also underscore the necessity for integrated urban policies to manage growth and protect property investments.

III. RESEARCH METHODOLOGY

This study adopted a descriptive research design to examine the influence of urban sprawl on residential property values in Port Harcourt, Nigeria. The design enabled the study to document current patterns of urban expansion and assess how these patterns affect residential property values across different parts of the city. The study population comprised residents and property owners within the Port Harcourt metropolis, particularly those living in areas experiencing varying levels of urban sprawl. A stratified random sampling technique was employed to ensure adequate representation of different zones of the city, including both core urban areas and peripheral neighborhoods experiencing rapid expansion. Port Harcourt contains several sprawled communities, from which 20% (five communities) were randomly selected for the study. The selected communities were Elekahia, Nkpolu Orogbum, Oromenike, Ogbunabali, and Abuloma. The projected population of these communities was estimated at 751,857 persons based on population projections (NPC, 2006). Using an average household size of six persons (NPC, 2006), the estimated number of households was 87,818. From this population, a sample size of 399 respondents was determined to ensure adequate representation and statistical reliability. Questionnaires were distributed proportionally across the selected communities based on their household sizes, and respondents were selected using simple random sampling within each community. Data for the study were collected through structured questionnaires administered to residents and property owners to obtain information

on urban sprawl characteristics and perceptions of residential property values. The collected data were analyzed using descriptive statistical techniques, including frequencies, percentages, and mean scores, to examine the relationship between urban sprawl characteristics and residential property values. The analysis was conducted using the Statistical Package for the Social Sciences (SPSS) to facilitate data processing and interpretation.

IV. STUDY AREA

Port Harcourt, the capital city of Rivers State, Nigeria, serves as the study area for this research. It is a major urban center in the Niger Delta region and plays a pivotal role in Nigeria's economy due to its status as the hub of the country's oil and gas industry. The city's strategic importance has attracted significant population growth, industrial development, and urban expansion over the past few decades.

Geographically, Port Harcourt lies along the Bonny River and covers an estimated area of approximately 375 square kilometers. It is bordered by Obio/Akpor, Oyigbo, and Eleme Local Government Areas, which have increasingly become part of the metropolitan sprawl due to rapid urbanization and infrastructural developments. The climate is tropical with high rainfall, which also influences land use and urban development patterns.

The city has witnessed substantial urban sprawl characterized by the outward expansion of residential neighborhoods into formerly rural or undeveloped lands. Areas such as Rumuagholu, Iriebe, Eneka, Eleme, and Oyigbo have experienced significant changes in land use, shifting from agricultural or undeveloped land to residential and commercial uses. This sprawl has been driven by factors including population pressure, economic activities linked to the oil sector, and limited enforcement of land use regulations.

Port Harcourt's complex mix of formal and informal housing developments, alongside varying levels of infrastructure provision, makes it an ideal setting to study the impact of urban sprawl on residential property values. Understanding the dynamics within

this area will provide insights into the spatial and economic challenges posed by rapid urban growth in similar emerging cities.

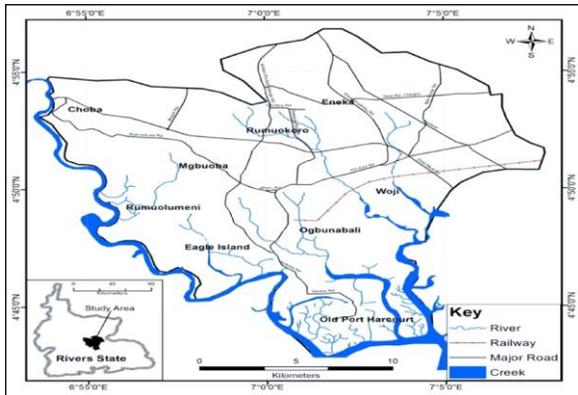


Figure 1.0: Map of Port Harcourt Metropolis
 Source: URP GIS Lab, Rivers State University, Port Harcourt

V. PRESENTATION AND ANALYSIS OF RESULTS

This section presents the findings on the spatial characteristics of sprawl, trends in property values

Table 4.1: Respondents' Perception of Characteristics of Sprawled Areas

Characteristic	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Mean
Low-density housing	123	57	38	17	16	4.01
Poor transportation networks	116	64	38	18	15	3.99
Rapid, unplanned development	132	48	23	26	22	3.96
Lack of essential infrastructure	109	76	25	21	20	3.93
Informal housing	145	54	28	11	13	4.22

Source: Field Survey, 2026

Table 4.1 shows the respondents' perception of characteristics of sprawled areas. The characteristic that received the highest mean score of 4.22 is informal housing. This indicates a strong consensus that informal housing is a common feature in sprawled areas of Port Harcourt, with a majority of respondents agreeing (145 strongly agreeing and 54 agreeing). Low-density housing also emerged as a notable characteristic with a mean score of 4.01. This implies that the majority of respondents agree that sprawl in Port Harcourt is marked by low-density housing (123 strongly agreeing and 57 agreeing).

across sprawled and non-sprawled areas, and the factors that mediate these effects.

4.1 Characteristics Common in Sprawled Areas of Port Harcourt

This analysis examines the characteristics commonly found in sprawled areas of Port Harcourt based on a survey. The responses were collected across five different categories, each representing a key feature of urban sprawl: low-density housing, poor transportation networks, rapid, unplanned development, lack of essential infrastructure, and informal housing. Respondents rated their agreement with each characteristic on a scale from Strongly Agree to Strongly Disagree, allowing us to evaluate the prevalence and impact of each feature in the city's sprawl.

Poor transportation networks, with a mean score of 3.99, highlights a significant concern for many respondents. With 116 strongly agreeing and 64 agreeing, this feature indicates that despite the spread of the urban area, connectivity and accessibility remain significant challenges. The characteristic of rapid, unplanned development scored 3.96 on average. With 132 strongly agreeing and 48 agreeing, this points to a perception that development in Port Harcourt is occurring at a fast pace but without the proper planning needed to ensure sustainable growth. Lack of essential infrastructure, with a mean score of

3.93, suggests that the surveyed areas are facing significant challenges in providing key amenities like water supply, sewage systems, electricity, and roads. With 109 strongly agreeing and 76 agreeing, it is evident that urban sprawl in Port Harcourt has outpaced the development of necessary infrastructure, further stressing the need for coordinated urban planning and resource allocation.

From the analysis, it is clear that informal housing and low-density housing are the most commonly agreed-upon characteristics of urban sprawl in Port Harcourt. This suggests that the city is experiencing rapid growth, but without the necessary planning and infrastructure to support sustainable development. Poor transportation networks and lack of essential infrastructure are also critical issues, pointing to the need for a more strategic approach to urban planning to manage the effects of urban sprawl effectively. Rapid, unplanned development further exacerbates the challenges, highlighting the importance of regulated and strategic growth to prevent future urban challenges.

4.2 Current Residential Property Values in Sprawled and Non-Sprawled Areas of Port Harcourt

This analysis focuses on the current residential property values in different areas of Port Harcourt, comparing Central (non-sprawled) areas with Periphery (sprawled) areas. Respondents were asked to rate property values in these areas on a scale from Very High to Very Low, allowing us to assess the perception of property value disparities between the core and peripheral regions of the city.

Table 4.2: Respondents' Rating of Residential Property Values

Area Type	Very High	High	Moderate	Low	Very Low	Mean
Central (non-sprawled)	159	71	21	0	0	4.55
Periphery (sprawled)	0	11	54	123	63	2.05

Source: Field Survey, 2026

Table 4.2 shows respondents' rating of residential property values in sprawled and non-sprawled areas of Port Harcourt. The table revealed that Central (non-sprawled) areas have the highest mean score of 4.55, indicating that respondents generally perceive property values in these areas to be Very High or High. Specifically, 159 respondents rated the property values as Very High, and 71 rated them as High. This suggests that the central regions of Port Harcourt are considered prime locations for residential properties, with high demand due to factors such as proximity to business hubs, amenities, and infrastructure. Central areas typically experience higher property values due to their accessibility, status, and established development. In contrast, Periphery (sprawled) areas received a significantly lower mean score of 2.05. This indicates that property values in these areas are mostly rated as Low or Very Low, with 123 respondents selecting Low and 63 selecting Very Low. Only 11 respondents rated the property values as High, and 54 rated them as Moderate. The lower property values in the periphery likely reflect factors such as less infrastructure, longer commute times, and fewer amenities compared to the central areas. Urban sprawl often leads to decreased property values in peripheral regions, as they may lack the development, services, and accessibility that make central areas more attractive to homeowners and investors. From the analysis, it is evident that there is a significant disparity between property values in central and periphery areas of Port Harcourt. The central, non-sprawled areas are perceived as prime residential locations with high property values, supported by infrastructure and proximity to key services. On the other hand, the sprawling periphery areas are seen as less desirable, with low property values likely due to insufficient infrastructure, limited access to amenities, and longer commuting distances.

4.3 Perceived Change in Property Values in Sprawled Areas (Past 5 Years)

This section presents the respondents' perceptions of changes in residential property values within sprawled areas of Port Harcourt over the past five years. The purpose is to assess whether these areas have experienced any significant growth or decline in

real estate value, which can reflect development trends, demand patterns, and investment confidence.

Table 4.3: Perceived Change in Property Values in Sprawled Areas

Response Category	Frequency	Percentage (%)
Increased significantly	108	43.0%
Increased moderately	87	34.7%
Stayed the same	23	9.2%
Decreased	5	2.0%
I don't know	28	11.2%
Total	251	100.0%

Source: Field Survey, 2026

The data reveals that a combined 77.7% of respondents believe that property values in sprawled areas of Port Harcourt have increased in the past five years by 43.0% significantly, and 34.7% moderately. This suggests that despite infrastructural and planning challenges commonly associated with sprawl, there is a rising demand and appreciation in property values within these peripheral zones. Only

2.0% of respondents reported a decline in property values, while 9.2% indicated that values have remained the same. This minority response suggests that depreciation is not a dominant trend in the periphery, although pockets of stagnation may exist due to locational or developmental deficiencies. Notably, 11.2% of respondents selected "I don't know," which may reflect a segment of participants who are not directly involved in property investment or lack sufficient information about value trends in peripheral locations.

VI. FACTORS INFLUENCING RESIDENTIAL PROPERTY VALUES IN PORT HARCOURT

This section presents and analyzes the extent to which selected physical and infrastructural factors influence residential property values in Port Harcourt. Respondents rated their level of agreement using a 5-point Likert scale ranging from Strongly Disagree (1) to Strongly Agree (5). The mean scores were computed to determine the overall influence of each factor.

Table 4.4: Influence of Selected Factors on Residential Property Values

Factor	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Mean
Security and neighborhood planning	167	44	17	12	11	4.37
Availability of public transportation	129	76	25	11	10	4.21
Road network quality	145	47	30	17	12	4.18
Proximity to markets and schools	144	45	37	13	12	4.18
Electricity and water infrastructure	130	61	23	18	19	4.06
Distance from city center	106	74	38	18	15	3.95

Source: Field Survey, 2026

Table 4.4 presents the analysis of the influence of selected factors on residential property values in sprawled areas of Port Harcourt. From the table above, security and neighborhood planning emerged as the most influential factor in determining residential property values, with the highest mean score of 4.37. 167 respondents strongly agreed, and 44 agreed that security and well-planned

neighborhoods play a major role in property valuation. A secure and well-planned environment increases the desirability of a location, making it more attractive to potential buyers. Availability of public transportation follows closely with a mean score of 4.21, reflecting that 129 strongly agreed and 76 agreed on its importance. This implies that efficient public transportation makes a location more accessible, which enhances its appeal to homeowners

and renters alike. Road network quality received a mean score of 4.18, with 145 respondents strongly agreeing and 47 agreeing, implying that properties in areas with good roads are more attractive to potential buyers, thereby increasing their value. Proximity to markets and schools also scored 4.18 on average, indicating a strong influence on residential property values. 144 respondents strongly agreed, and 45 agreed that being near markets and schools increases property desirability. These facilities are essential for everyday living, and easy access to them enhances the convenience and functionality of a location, leading to higher property demand. Electricity and water infrastructure ranked next with a mean score of 4.06, where 130 respondents strongly agreed, and 61 agreed on the importance of this factor. This shows that a reliable electricity and water supply are fundamental to any residential area's livability, and areas with consistent access to these basic services are more attractive to homeowners and are likely to have higher property values. Distance from the city center had the lowest mean score of 3.95, with 106 strongly agreeing and 74 agreeing. While proximity to the city center generally increases property value due to access to jobs, services, and infrastructure, it appears to have a relatively lesser influence compared to the other factors. The analysis clearly demonstrates that security and neighborhood planning are the most significant factors influencing residential property values in Port Harcourt. This is closely followed by public transportation, road network quality, and proximity to essential services such as markets and schools. Electricity and water infrastructure are also crucial for enhancing property desirability, while distance from the city center appears to be a somewhat less influential factor in comparison to the others.

VII. CONCLUSION AND RECOMMENDATIONS

The study shows that urban sprawl has significantly influenced the development pattern and residential property values in Port Harcourt. The findings indicate that informal housing, low-density development, poor transportation networks, rapid unplanned development, and lack of essential infrastructure are the major characteristics of sprawled areas. The results also reveal a clear

difference in property values between central and peripheral areas. Central (non-sprawled) areas have significantly higher residential property values due to better infrastructure, accessibility, and availability of services, while peripheral (sprawled) areas generally have lower property values. The study found that property values in sprawled areas have increased over the past five years, suggesting growing demand for housing in the urban fringe. Furthermore, factors such as security and neighborhood planning, transportation availability, road network quality, proximity to markets and schools, and access to electricity and water were identified as key determinants of residential property values. The study concludes that proper urban planning and improved infrastructure are essential for managing urban sprawl and enhancing sustainable residential property development in Port Harcourt. The study recommends effective enforcement of urban planning to control unplanned expansion in Port Harcourt, provision of essential infrastructure such as roads, electricity, and water in peripheral areas, improving transportation systems to enhance connectivity between central and peripheral locations, and encouraging planned housing development to reduce informal settlements. Additionally, improving security and neighborhood planning and promoting public-private partnerships are necessary to support housing and infrastructure development.

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