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SCALING THE INADEQUACIES OF HOUSING AVAILABILITY AND DELIVERY ASSOCIATED WITH TRADITIONAL LAND OWNERSHIP SYSTEM ACROSS STATES IN THE NIGER DELTA REGION, NIGERIA

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Abstract: This study examined the inadequacies of housing availability and delivery associated with traditional land ownership system in different states across the Niger Delta of region, Nigeria. The cross-sectional research design was adopted in the study. The data for this study was elicited from 400 household heads in the study area determined through the use of Taro Yamane's and Kumar stratum allocation formulas whereas the Kruskal–Wallis test was employed for analysis. Housing availability was found to be inadequate with only 36% affirming that housing units are sufficient, while 52.7% disagreed (WM = 2.99). Accessibility also scored low (WM = 2.90), and population growth was consistently seen as a constraint, with 79% agreeing it reduces availability (WM = 4.16). Infrastructure deficits were critical, with 80.5% strongly agreeing that lack of basic services limits housing expansion (WM = 4.19). Effectiveness of housing development recorded weak results, with most weighted means below 3.0, including project timeliness (WM = 2.90), affordability (WM = 2.86), infrastructure provision (WM = 2.86), and policy support (WM = 2.86). The result revealed no statistically significant differences (at $p > .05$), indicating uniformity of perceptions across respondents. It is concluded from the findings that land ownership system is a major constraint affecting housing development and delivery. Consequently, holistic policy reforms that enhance affordability, and strengthen infrastructure provision were strongly recommended.

Keywords: *Housing Availability, Accessibility, Affordability, Delivery, Effectiveness.*

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Introduction

The concept of housing has been appreciated as a varied and complex phenomenon and from the American perspective, the concept of housing is considered as an item of aspiration and expectation that every family regardless of income and status aspires to have the opportunity to live in decent housing in a suitable neighborhood. This presupposes the existence of an established, efficient and sustainable framework of provision and delivery of dwelling units with a defined ownership structure that allows for choice of tenure, location, house type, financing options, management as well as quality, comfort and security of a house to live in. Such provides for all aspects of living (social, economic, political and environmental) and working together to promote suitable living neighbourhoods and environment. The issues of the concept of housing are political, technological, social, economic and environmental and therefore expected to influence the policy formation with respect to constructability, liveability and sustainability which are essentially factors of housing delivery. The Nigerian concept, according to the National Housing Policy, 1991, seeks to provide decent, safe and sanitary housing accommodation for all to either "own or have access to at affordable cost" and its thrust, is "home ownership." Housing, the act of providing shelter or lodging ensures that members of society have a place to live, whether it is a home or some kind of physical structure for dwelling, lodging or shelter and it includes a range of options from apartments and houses to temporary shelters and emergency accommodations.

The population are growing faster than the provision of new houses and housing infrastructure. This has resulted in intensive usage of the existing stock of housing and deterioration of housing environments. Olotuah and Bobadoye (2019) stated that housing is one of the basic necessities of man and has no doubt a profound impact on the health, welfare and productivity of the individual, others are clothing and food. Housing must not be considered purely as shelter but against lifestyle which encompasses with economic, social and educational needs which must be able to meet the need and aspiration of the residents as well as contribute to the physical, mental, social wellbeing of the people and provide maximum quiet environment, living and

outdoor space, privacy, cleanliness, safety and aesthetic satisfaction.

Housing delivery has several determinants ranging from anthropological, social, economic, human and natural resources, technology, ownership structure, land tenure and security systems, networking/connectivity and communication, stakeholders (users, promoters, producers, dealers, etc) and the environment. The efficiency of decision making and the factors of planning, design, production, provision and delivery affect the totality of its constructability and sustainability (life-cycle period and performance). These and other relevant factors of delivery are essentially the product of the type, quality and efficacy of policy formulated (theory, concept, information and implementation strategy), the processes of production (concepts, plans, designs, production, technology, resources, programmes, implementation strategies) and management of the delivery frameworks to produce dwelling units (houses) for the wards, villages, towns, cities or settlements. These make up the environment – natural and/or built and bring to the fore the issues of resources, lands, materials, men, money and technology, methods and management to produce and deliver housing. Onibokun, Agbola & Labeodan, (2023) asserted that housing delivery is a systemic and dynamic process of managing the complex phenomenon of housing into sustainable living environments within the provisions of an articulated housing policy - a social public policy. Similarly, Onwioduokit, (2015) noted that housing delivery is the totality of efforts, pecuniary and non-pecuniary commitments that result in the production of the built environment and decent living spaces for human beings. Thus, it is linked with housing demand which can be explained as the willingness and ability of housing consumer to pay for a particular dwelling depending upon such consumer's income, house type, location preferences and local prices (Otubu, 2007). The availability of housing improves the quality of life of residents by leading to better health, adequate jobs, financial stability, and population diversity. Meeting the housing needs of residents is profound and capable of transforming the entire society, especially when the houses are designed to meet the specific and general needs of the residents. Unfortunately, the current housing sector development in Niger Delta Region presents a grim picture and an irredeemable decay of an otherwise vibrant and economically viable sub-sector of the society due to years of neglect by the government and intangible investment by the private sector. The resultant effect is the increasing dearth of affordable and decent houses, and in some instances the total unavailability of houses particularly for renting, forcing many to take refuge in unhabitable places such as under bridges, under trees, houses under construction etc.

According to Onwubiko, (2017), since housing development is one of the land-based activities, the urban housing problem is often partly blamed on the existence and operation of the traditional landownership system. Olatubara (2022) questioned the capacity of the traditional system of landownership operating in the Niger Delta Region to provide solutions to the problems faced by the market mechanism; the system is believed to be adversely affecting the housing sector. Oduro (2000) observed that the traditional system of landownership restricts the opportunities for obtaining and parting with land rights, which does not provide the right environment for mass housing development to arrest the acute housing shortage in the urban centres.

According to Babalola (2019) housing is used to describe any place where people live that provides the basic human need for shelter and it is obvious that housing demand has witnessed unprecedented increase in the past decades, while land ownership pattern, low level of economic development, physical, social and cultural factors have created, among others, immense obstacles to housing development to the majority of population. Housing production is at approximately 100,000 units per year and this is highly inadequate with statistics establishing that at least 1 million units are needed yearly to bridge the 17 million housing shortage. Estimates project that the sum of US$363 billion will be required to curb Niger Delta region current housing shortfall, and this is expected to continue growing annually (Coker, Awokola, Olomolaiye & Booth, 2017). Olotuah and Taiwo, (2015) reported that in the Niger Delta cities, even under the enabler approach the private sector has failed to provide sufficient housing units especially for the masses that need and demand it. It is against this backdrop that the study seeks to examine the inadequacies of housing availability and delivery linked with traditional land ownership system in the study area.

Materials and Methods

The Niger Delta region located within latitudes 4° 0' to 8° 0' N and longitudes 4° 0' to 9° 0' E (Figure 1) falls within the tropical rainforest climate or the equatorial monsoon, designated by the Koppen climate classification as "A_f" which is influenced by the monsoon running from the South Atlantic Ocean, (maritime tropical) air mass, a warm moist sea to land seasonal wind. It also has warm and high humidity characteristics which gives it a strong propensity to rise and produce abundant rainfall as an evidence of the condensation of water vapour in the swiftly rising air (Ayoade, 2004). The Niger Delta which is in the southern part of Nigeria experiences heavy and abundant rainfall characterized with storms that are usually convectional in nature due to the regions proximity, to the equatorial belt. The annual rainfall received in this region is very high, usually above the 2,000 mm totals given for tropical rainforest climates worldwide and over 4,000 mm within the coastal area (Nwoke and Okoro, 2012).

Geologically, the Niger Delta region is located in the natural delta area of the Niger River which is a vast sedimentary basin. The main deltaic deposits of the area comprises medium to coarse unconsolidated sands, silt, clay, shale and peat. The delta is mostly a flat, low-lying swampy basin crisscrossed by a dense network of meandering rivers and creeks. The region is characterized with four outstanding ecological zones based on both relief and hydrological features. Namely, The coastal sandy barrier zone: As the name implies, it consists of a chain of sandy barrier islands, alienated by various estuaries and inlets. The islands are usually less than one meter above the sea level at high tide. They extend along the outer coastline from the Benin River to the Imo River and are naturally 16 to 20 kilometers wide. They are also relatively high in topography, this helps to keep them from the tidal influence of the marine and brackish waters; the coastal barrier islands support freshwater forests and associated fauna. These islands are also often flooded during the year when rainfall is heavy (UNDP, 2006). The Niger Delta region is ecologically endowed with mangrove forest rich in composition of different species of flora and fauna. It is massively swampy and bounded with islands of dry land covering about 10,240 square kilometers (UNDP, 2006). The elevation of most of the zones is less than one meter, and it is usually muddy and under tidal influence. There are

feeder channels within the zones that move tidal waters into the swamp, connecting channels and inter-fluxes. The location of the mangrove swamps is ecologically significant and sensitive and therefore plays an important role to the fishing industry, and the local economy of the Niger Delta people.

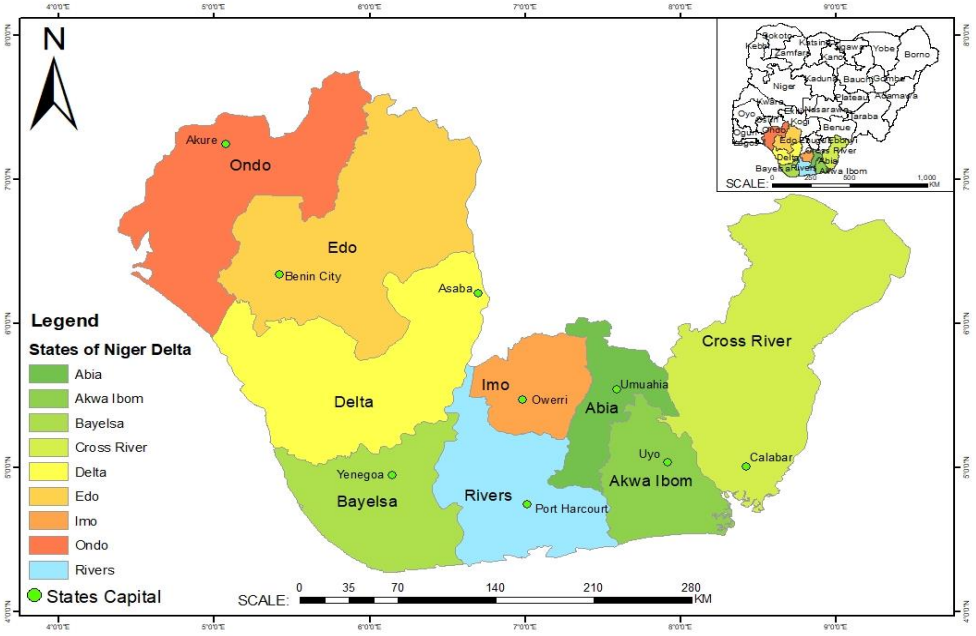

Figure 1: Niger Delta Region showing the States

The population of the study consists of 22,989 household heads across the study area. The Taro Yamane's (1967) and Kumar (1976) stratum allocation formulas were applied accordingly to derive the sample size and the stratum of the cities as shown in Table 1

$$n = \frac{N}{1 + N(e)^2}$$

Where n = sample size

N = Overall population size (22,989)

e = 0.05

n= 400

$nh = n(N_H)/N$……(2).

Where nh = stratum allocation

n = sample size (400)

N = Overall population (22,989)

Table 1: Population and Sample Size of the study

S/N	Names of States	Urban Area	Population	Sample Size
1	Akwa Ibom	Uyo	2,700	47
2	Bayelsa	Yenagoa	2,800	49
3	Cross River	Calabar	2,760	48
4	Delta	Warri	2,742	48
5	Edo	Benin	2,970	52
6	Ondo	Akure	2,200	38
7	Rivers	Port Harcourt	3,000	52
8	Imo	Owerri	1875	33
9	Abia	Umuahia	1942	34
	Total		22,989	400

Source: Researcher's Field Work Computation (2025)

Presentation of Results

Table 2. The availability of houses in the study area

Statement	SA(%)	A(%)	D(%)	SD(%)	U(%)	Total(%)	WM
There are adequate housing units available in this community.	60 (15.1)	80 (20.1)	100 (25.1)	110 (27.6)	48 (12.1)	398 (100)	2.99
The supply of houses meets the population demand in this area.	55 (13.8)	75 (18.8)	110 (27.6)	108 (27.1)	50 (12.6)	398 (100)	2.89
Most residents can easily find accommodation within the community.	58 (14.6)	82 (20.6)	108 (27.1)	105 (26.4)	45 (11.3)	398 (100)	2.9
Housing units are evenly distributed across different neighbourhoods.	50 (12.6)	78 (19.6)	110 (27.6)	110 (27.6)	50 (12.6)	398 (100)	2.87
Availability of land encourages the construction of more houses in the area.	65 (16.3)	90 (22.6)	100 (25.1)	95 (23.9)	48 (12.1)	398 (100)	2.95
Private developers contribute significantly to housing availability in this community.	60 (15.1)	85 (21.4)	110 (27.6)	100 (25.1)	43 (10.8)	398 (100)	2.93
Government housing schemes have increased the number of available houses.	58 (14.6)	88 (22.1)	105 (26.4)	100 (25.1)	47 (11.8)	398 (100)	2.93
Most houses in this area are occupied, indicating limited vacant housing units.	150 (37.7)	120 (30.2)	70 (17.6)	35 (8.8)	23 (5.8)	398 (100)	3.85
Lack of infrastructure affects the availability of houses in this area.	200 (50.3)	120 (30.2)	45 (11.3)	20 (5.0)	13 (3.3)	398 (100)	4.19
There are affordable housing options for low-income earners in this community.	55 (13.8)	80 (20.1)	108 (27.1)	105 (26.4)	50 (12.6)	398 (100)	2.9
High population growth reduces the availability of houses in the area.	195 (49.0)	120 (30.2)	50 (12.6)	20 (5.0)	13 (3.3)	398 (100)	4.16
There is a balance between housing construction and population increase in this community.	52 (13.1)	82 (20.6)	115 (28.9)	105 (26.4)	44 (11.1)	398 (100)	2.88
The presence of real estate companies has improved housing availability.	65 (16.3)	90 (22.6)	105 (26.4)	95 (23.9)	43 (10.8)	398 (100)	2.99
Availability of rental houses meets the needs of temporary residents in this community.	60 (15.1)	95 (23.9)	105 (26.4)	90 (22.6)	48 (12.1)	398 (100)	2.96
Limited housing availability has led to overcrowding in some parts of the area.	185 (46.5)	125 (31.4)	55 (13.8)	20 (5.0)	13 (3.3)	398 (100)	4.12

The data on the availability of houses in the study area (Table 2) reveals a mixed but generally challenging situation. A central theme is that housing supply does not adequately meet the population's demand, and this shortfall is clearly reflected in the figures across several statements. On the issue of adequacy of housing units, only 15.1% of respondents strongly agreed and 20.1% agreed, while a larger proportion either disagreed (25.1%) or strongly disagreed (27.6%). With a weighted mean of 2.99, this indicates that most residents believe housing supply is insufficient to serve the community. A similar pattern is seen when respondents were asked if supply meets population demand. Just 32.6% agreed in total, while 54.7% disagreed or strongly disagreed, producing a weighted mean of 2.89. This shows that housing demand consistently outstrips available stock. When considering accessibility, 14.6% strongly agreed and 20.6% agreed that residents can easily find accommodation. However, 27.1%

disagreed and 26.4% strongly disagreed, with a mean of 2.90. This suggests that finding suitable housing remains difficult for many, particularly when compounded by affordability and distributional challenges. The distribution of housing across neighborhoods is also skewed, as seen in the 27.6% who disagreed and another 27.6% who strongly disagreed that houses are evenly distributed. This indicates clustering in certain areas while others remain underserved.

Land availability, often a driver of housing expansion, appears to have some influence. Here, 38.9% agreed that land encourages more housing construction, but 36% disagreed or strongly disagreed, giving a mean of 2.95. This balance suggests that while land exists, its effective use for housing development is constrained by other barriers such as tenure security and infrastructure. The role of private developers and government schemes is modest. About 36.5% acknowledged private developers' contribution, while nearly 52.7% disagreed. Similarly, for government housing schemes, only 36.7% agreed while 51.5% disagreed. Both scored a mean of 2.93, implying that institutional contributions have not been impactful enough to bridge the housing gap. Real estate companies appear to play a slightly stronger role, with 38.9% in agreement versus 34.7% in disagreement, giving a mean of 2.99, though this still falls short of a strong positive influence. Despite these shortages, the data shows that most houses are occupied, leaving limited vacancy. A total of 67.9% agreed that occupancy rates are high, with only 17.6% disagreeing. The weighted mean here is 3.85, which reflects the pressure on available housing and the lack of surplus units. The consequence of this is evident in that 77.9% agreed that limited housing has led to overcrowding, reflected in a high weighted mean of 4.12. This points to the social implications of constrained housing supply.

Infrastructure and population growth emerge as critical determinants. Half of the respondents (50.3%) strongly agreed and 30.2% agreed that lack of infrastructure affects housing availability. This is the highest-rated factor with a mean of 4.19, showing how roads, water supply, electricity, and related services directly constrain housing development. Similarly, high population growth is seen as a major pressure point. Nearly half (49%) strongly agreed and 30.2% agreed that population growth reduces housing availability, giving a weighted mean of 4.16. This indicates that rapid population expansion consistently outpaces housing construction. Affordability remains another concern. Only 33.9% agreed that low-income earners have access to affordable housing, while a majority (53.5%) disagreed. With a mean of 2.90, the data highlights a clear affordability gap. For rental housing catering to temporary residents, the figures are more balanced, with 39% agreeing and 34.7% disagreeing, giving a mean of 2.96. This suggests some adequacy in rentals but not enough to meet all needs. Finally, the balance between population increase and housing construction was rated poorly, with only 33.7% in agreement while 55.3% disagreed, producing a mean of 2.88. This confirms the overarching issue that housing development is lagging behind demographic growth, resulting in overcrowding, affordability challenges, and spatial inequality in housing distribution. Generally, it is evidently clear that housing availability in the study area is constrained by high population growth, lack of infrastructure, weak government and private interventions, affordability issues, and poor distribution. The relatively high occupancy rates and overcrowding further reinforce the urgent need for expanded and equitable housing provision.

Table 3. Kruskal Wallis test summary on housing availability in the study area

Statement	n	df	Kruskal Wallis H	Asymp. Sig	Remark
There are adequate housing units available in this community.	398	397	4.215	0.241	No significant difference
The supply of houses meets the population demand in this area.	398	397	3.642	0.303	No significant difference
Most residents can easily find accommodation within the community.	398	397	4.001	0.256	No significant difference
Housing units are evenly distributed across different neighbourhoods.	398	397	3.888	0.274	No significant difference
Availability of land encourages the construction of more houses in the area.	398	397	4.52	0.21	No significant difference
Private developers contribute significantly to housing availability in this community.	398	397	3.332	0.342	No significant difference
Government housing schemes have increased the number of available houses.	398	397	4.765	0.189	No significant difference
Most houses in this area are occupied, indicating limited vacant housing units.	398	397	5.104	0.164	No significant difference

Lack of infrastructure affects the availability of houses in this area.	398	397	3.765	0.289	No significant difference
There are affordable housing options for low-income earners in this community.	398	397	4.456	0.216	No significant difference
High population growth reduces the availability of houses in the area.	398	397	3.998	0.257	No significant difference
There is a balance between housing construction and population increase in this community.	398	397	4.632	0.201	No significant difference
The presence of real estate companies has improved housing availability.	398	397	4.214	0.241	No significant difference
Availability of rental houses meets the needs of temporary residents in this community.	398	397	3.876	0.285	No significant difference
Limited housing availability has led to overcrowding in some parts of the area.	398	397	4.341	0.227	No significant difference

The Kruskal Wallis test was used to examine whether perceptions of housing availability in the study area significantly varied among respondents. As shown in Table 3, the results consistently revealed no statistically significant differences across all statements, as all p-values were above the 0.05 threshold. For example, respondents did not significantly differ in their views about the adequacy of housing units in the community (H = 4.215, p = .241) or whether housing supply meets population demand (H = 3.642, p = .303). Similarly, opinions on the ease of finding accommodation (H = 4.001, p = .256) and the even distribution of housing units across neighbourhoods (H = 3.888, p = .274) were uniform. The availability of land for housing construction also showed no significant variation (H = 4.520, p = .210), while private developers' role in housing availability produced a comparable result (H = 3.332, p = .342).

Government housing schemes were perceived in a relatively consistent manner across respondents, with no significant difference recorded (H = 4.765, p = .189). Likewise, the occupancy rate of houses, which suggested limited vacant units, did not vary significantly among participants (H = 5.104, p = .164). Issues linked to infrastructure availability (H = 3.765, p = .289) and affordability of housing for low-income earners (H = 4.456, p = .216) were also uniformly reported. Other factors, such as the effect of population growth on housing availability (H = 3.998, p = .257), the balance between construction and population increase (H = 4.632, p = .201), and the contribution of real estate companies (H = 4.214, p = .241), all showed non-significant results. Similarly, availability of rental houses for temporary residents (H = 3.876, p = .285) and overcrowding due to limited housing (H = 4.341, p = .227) reflected no statistically meaningful differences. Collectively, these findings demonstrate a striking uniformity in the perceptions of housing availability within the study area. The absence of significant differences suggests that challenges such as limited housing supply, affordability constraints, inadequate infrastructure, and population pressure are experienced broadly and consistently across the community, rather than being concentrated within specific groups or neighbourhoods. This outcome underscores the systemic nature of housing availability issues in the Niger Delta Region and reinforces the view that housing challenges cut across social, economic, and demographic boundaries.

Table 4: The effectiveness of housing development in the Niger Delta Region

Statement	SA(%)	A(%)	D(%)	SD(%)	U(%)	Total(%)	WM
Housing development projects meet the needs of the community.	60 (15.1)	85 (21.4)	110 (27.6)	100 (25.1)	43 (10.8)	398 (100)	2.94
The rate of housing development is sufficient to address population growth.	55 (13.8)	80 (20.1)	115 (28.9)	110 (27.6)	38 (9.5)	398 (100)	2.9
Modern housing designs are being adopted in new developments.	70 (17.6)	90 (22.6)	110 (27.6)	90 (22.6)	38 (9.5)	398 (100)	2.96
Housing development projects are completed within scheduled timeframes.	58 (14.6)	85 (21.4)	115 (28.9)	95 (23.9)	45 (11.3)	398 (100)	2.9
Infrastructure (roads, water, electricity) is provided alongside housing developments.	50 (12.6)	90 (22.6)	115 (28.9)	100 (25.1)	43 (10.8)	398 (100)	2.86

Housing developments are affordable for low- and middle-income earners.	55 (13.8)	82 (20.6)	110 (27.6)	105 (26.4)	46 (11.6)	398 (100)	2.88
Government policies have improved the effectiveness of housing development.	52 (13.1)	85 (21.4)	115 (28.9)	100 (25.1)	46 (11.6)	398 (100)	2.86
Private sector involvement enhances housing development efficiency.	60 (15.1)	90 (22.6)	110 (27.6)	95 (23.9)	43 (10.8)	398 (100)	2.92
Housing developments comply with approved planning and building regulations.	65 (16.3)	88 (22.1)	115 (28.9)	90 (22.6)	40 (10.1)	398 (100)	2.96
There is proper monitoring and evaluation of housing development projects.	55 (13.8)	85 (21.4)	115 (28.9)	95 (23.9)	48 (12.1)	398 (100)	2.87
The quality of houses constructed meets standard specifications.	65 (16.3)	90 (22.6)	110 (27.6)	95 (23.9)	38 (9.5)	398 (100)	2.95
Public-private partnerships have contributed to effective housing delivery.	58 (14.6)	88 (22.1)	110 (27.6)	95 (23.9)	47 (11.8)	398 (100)	2.9
Housing development projects consider environmental sustainability.	50 (12.6)	85 (21.4)	120 (30.2)	95 (23.9)	48 (12.1)	398 (100)	2.83
The housing development process is transparent and free from corruption.	48 (12.1)	80 (20.1)	115 (28.9)	100 (25.1)	55 (13.8)	398 (100)	2.78
Housing development effectively reduces overcrowding and slum formation in the area.	55 (13.8)	85 (21.4)	115 (28.9)	100 (25.1)	43 (10.8)	398 (100)	2.88

The data on the effectiveness of housing development in the Niger Delta Region (Table 4) presents a rather mixed and generally weak outlook. On whether housing development projects meet the needs of the community, only 15.1% strongly agreed and 21.4% agreed, while a larger proportion of 27.6% disagreed and 25.1% strongly disagreed, with another 10.8% undecided. This indicates that more than half of the respondents (52.7%) believe that housing projects are not adequately meeting community needs, compared to just 36.5% who think otherwise. The weighted mean of 2.94 reinforces this finding, showing an overall tendency towards dissatisfaction. When asked if the rate of housing development is sufficient to address population growth, 13.8% strongly agreed and 20.1% agreed, making up 33.9% positive responses. On the other hand, 28.9% disagreed and 27.6% strongly disagreed, totaling 56.5%. This gap clearly indicates that the current pace of housing provision lags behind population increase, a serious challenge for sustainable urban development in the region. The weighted mean of 2.9 further suggests inadequacy. Modern housing designs appear to be slowly entering the system, with 17.6% strongly agreeing and 22.6% agreeing, giving 40.2% in favour. Yet, 27.6% disagreed and 22.6% strongly disagreed, accounting for 50.2%. This suggests that while some new projects incorporate modern designs, the majority of developments still fall short of meeting contemporary standards, with a weighted mean of 2.96 indicating a neutral but slightly leaning negative perception.

Timeliness in project completion also appears problematic. Only 36% (14.6% strongly agree and 21.4% agree) think projects are completed within scheduled timeframes, compared to 52.8% (28.9% disagree and 23.9% strongly disagree) who say they are not. This is further reflected in the weighted mean of 2.9, again showing inefficiency. Infrastructure provision alongside housing projects shows a similar pattern. Just 35.2% (12.6% strongly agree and 22.6% agree) feel infrastructure such as roads, water, and electricity are adequately provided, while 54% (28.9% disagree and 25.1% strongly disagree) think otherwise. The weighted mean of 2.86 confirms this inadequacy, which undermines the sustainability of housing projects. Affordability also emerged as a challenge. While 34.4% (13.8% strongly agree and 20.6% agree) view housing as affordable, a higher 54% (27.6% disagree and 26.4% strongly disagree) disagree, indicating that most developments are out of reach for low- and middle-income earners.

The influence of government policies also received poor evaluation. Only 34.5% (13.1% strongly agree and 21.4% agree) consider them effective in improving housing development, while 54% think otherwise. Private sector involvement was not much better, as 37.7% agreed that it enhances efficiency, while 51.5% disagreed. Both issues recorded low weighted means (2.86 and 2.92), showing weak institutional and private sector support respectively. In terms of compliance with planning and building regulations, 38.4% agreed, while a majority of 51.5% disagreed, producing a weighted mean of 2.96. Similarly, monitoring and evaluation of housing projects was rated poorly, with 35.2% agreeing and 52.8% disagreeing, weighted mean 2.87. The quality of constructed houses was viewed in the same light, with 38.9% positive and 51.5% negative responses, weighted mean 2.95. Public-private partnerships show limited success. Just 36.7% agreed they contribute positively, while 51.5% disagreed. Environmental sustainability was also weak, with 34% positive

responses against 54.1% negative. The housing development process was rated least effective in terms of transparency and corruption-free practices, as only 32.2% were positive while 54% were negative. Finally, the role of housing development in reducing overcrowding and slum formation was judged poorly. Although 35.2% agreed, a larger 52.7% disagreed, confirming that housing supply is not adequately addressing urban density challenges. Overall, across all indicators, none of the weighted means reached 3.0, and most ranged between 2.78 and 2.96, which reveals a widespread perception of ineffectiveness. The high percentages of disagreement compared to agreement across all items clearly demonstrate that housing development in the Niger Delta Region remains insufficient, unaffordable, poorly monitored, lacking in sustainability, and ineffective in addressing the needs of the growing population.

Table 5. Kruskal Wallis test summary on the effectiveness of housing development in the study area

Statement	n	df	Kruskal Wallis H	Asymp. Sig	Remark
Housing development projects meet the needs of the community.	398	397	4.212	0.24	No significant difference
The rate of housing development is sufficient to address population growth.	398	397	3.876	0.285	No significant difference
Modern housing designs are being adopted in new developments.	398	397	2.95	0.4	No significant difference
Housing development projects are completed within scheduled timeframes.	398	397	4.568	0.217	No significant difference
Infrastructure (roads, water, electricity) is provided alongside housing developments.	398	397	5.32	0.151	No significant difference
Housing developments are affordable for low- and middle-income earners.	398	397	3.426	0.331	No significant difference
Government policies have improved the effectiveness of housing development.	398	397	4.11	0.25	No significant difference
Private sector involvement enhances housing development efficiency.	398	397	3.002	0.392	No significant difference
Housing developments comply with approved planning and building regulations.	398	397	2.876	0.41	No significant difference
There is proper monitoring and evaluation of housing development projects.	398	397	4.689	0.196	No significant difference
The quality of houses constructed meets standard specifications.	398	397	3.564	0.313	No significant difference
Public-private partnerships have contributed to effective housing delivery.	398	397	2.998	0.393	No significant difference
Housing development projects consider environmental sustainability.	398	397	5.102	0.165	No significant difference
The housing development process is transparent and free from corruption.	398	397	4.455	0.215	No significant difference
Housing development effectively reduces overcrowding and slum formation in the area.	398	397	3.876	0.285	No significant difference

The Kruskal–Wallis H test was conducted to examine whether perceptions of the effectiveness of housing development in the study area significantly varied among respondents. As presented in Table 5, the results consistently revealed no significant differences across all measured indicators, with all p-values above the .05 threshold.

Specifically, respondents did not differ significantly in their views that housing development projects meet community needs

(H = 4.212, p = .240) or that the rate of development addresses population growth (H = 3.876, p = .285). Similarly, opinions on the adoption of modern housing designs (H = 2.950, p = .400) and the timely completion of housing projects (H = 4.568, p = .217) were statistically uniform. Infrastructure provision, such as roads, water, and electricity, also showed no significant variation among respondents (H = 5.320, p = .151). Housing affordability for low- and middle-income earners yielded comparable non-significant results (H = 3.426, p = .331), as did perceptions of government policies enhancing housing effectiveness (H = 4.110, p = .250). The contribution of private sector involvement (H = 3.002, p = .392) and compliance with building regulations (H = 2.876, p = .410) similarly reflected consistent responses. Moreover, monitoring and evaluation practices were seen in a uniform manner (H = 4.689, p = .196), while the perceived quality of constructed houses (H = 3.564, p = .313) also showed no statistical difference across groups.

Public–private partnerships (H = 2.998, p = .393), environmental sustainability considerations (H = 5.102, p = .165), and transparency of the housing development process (H = 4.455, p = .215) were likewise reported with no significant variation. Finally, perceptions of housing development's role in reducing overcrowding and slum formation did not differ significantly among respondents (H = 3.876, p = .285). Taken together, the absence of statistically significant differences across all indicators suggests a uniform perception of housing development effectiveness in the study area. This uniformity implies that the challenges and opportunities associated with housing development, such as affordability, infrastructure provision, adherence to regulations, and transparency, are experienced broadly and not confined to specific groups or sub-populations. This reinforces the notion that systemic issues in housing development cut across the entire community, requiring holistic policy responses rather than localized interventions.

Discussion of Results

The availability of houses in the study area

The results on the availability of housing in the study area clearly reveal a mismatch between demand and supply, creating a systemic housing crisis that is widely acknowledged by the respondents. The analysis shows that the adequacy of housing stock remains one of the weakest points in the system, as only 35.2% of respondents agreed that the available housing units were sufficient, while a majority, totaling over 52.7%, disagreed or strongly disagreed. The weighted mean score of 2.99 further emphasizes the general perception that housing units are grossly inadequate relative to the population size. Similar patterns were observed when respondents were asked whether housing supply meets population demand, where only 32.6% agreed compared to 54.7% who disagreed, yielding a weighted mean of 2.89. These results suggest that demand consistently outpaces supply, a finding consistent with broader urban housing studies across Sub-Saharan Africa which highlight chronic housing deficits (UN-Habitat, 2020; Akinmoladun & Oluwoye, 2007). Accessibility also emerges as a major issue. Although 35.2% agreed that residents could easily find accommodation, a larger 53.5% disagreed or strongly disagreed, reflected in the weighted mean of 2.90. This illustrates that finding adequate housing is challenging, especially when affordability and distribution are factored in. The spatial distribution of housing across neighbourhoods is uneven, with 55.2% of respondents disagreeing that housing is equitably spread. This indicates clustering in certain high-demand zones while peripheral areas remain underserved, aligning with findings in urban inequality research in Nigeria and other developing contexts (Ibem & Amole, 2010).

Land availability, although often a critical enabler of housing development, shows a mixed perception. While 38.9% agreed that land availability encourages construction, nearly 36% disagreed, producing a mean of 2.95. This suggests that while land may exist in theory, its effective deployment is constrained by other structural barriers such as tenure insecurity, lack of infrastructure, and weak planning frameworks. The contribution of institutional actors such as private developers, government schemes, and real estate companies was perceived as modest. For private developers, only 36.5% agreed they contribute meaningfully, while 52.7% disagreed (WM = 2.93). Similarly, government housing schemes were rated poorly, with 51.5% disagreeing compared to 36.7% in agreement (WM = 2.93). Even real estate companies, though perceived slightly better, garnered only 38.9% agreement, balanced against 34.7% disagreement (WM = 2.99). These results suggest that neither private nor public initiatives are meeting housing needs, corroborating research which has long documented the failure of government-led housing programmmes and the market's inability to serve low-income earners (Olotuah, 2019; UN-Habitat, 2011). Occupancy rates further reinforce the scarcity of housing. A total of 67.9% agreed that housing occupancy is high, with only 17.6% disagreeing, producing a weighted mean of 3.85. This demonstrates that available units are almost fully utilized, leaving limited vacancy. The social consequence of this is overcrowding, acknowledged by 77.9% of respondents (WM = 4.12), which reflects the strain on existing housing stock and mirrors conditions in other rapidly urbanizing regions (World Bank, 2017).

Infrastructure and population growth stand out as the strongest determinants of housing inadequacy. Half of respondents (50.3%) strongly agreed and another 30.2% agreed that inadequate infrastructure limits housing availability, producing the highest weighted mean of 4.19. This shows that deficiencies in roads, drainage, electricity, and water supply hinder expansion of residential estates. Similarly, population growth was seen as a critical driver of scarcity, with 49 percent strongly agreeing and 30.2% agreeing (WM = 4.16). These findings emphasize how rapid demographic changes outpace housing development, a trend that has been observed in many Nigerian cities (Nubi, 2008; UNDESA, 2019). Affordability remains a central challenge. Only 33.9% of respondents agreed that low-income earners have access to affordable housing, while 53.5% disagreed, giving a mean of 2.90. This affordability gap reflects the disconnect between income levels and the cost of housing, which has been widely acknowledged in housing policy literature (Oladapo & Oni, 2013). For rental housing targeting temporary residents, perceptions were more balanced (39% agreed versus 34.7% disagreed, WM = 2.96), suggesting that while rentals are relatively more accessible, they are insufficient to absorb overall demand. The relationship between housing construction and population growth was particularly poor, with 55.3% of respondents disagreeing that construction has kept pace with population increase. The weighted mean of 2.88 underscores the imbalance between demographic expansion and housing delivery, a mismatch that has been repeatedly linked to informal settlements and slum proliferation (UN-Habitat, 2014).

Statistical testing using the Kruskal-Wallis model confirmed the uniformity of these perceptions. Across all variables, no statistically significant differences were found, as p-values consistently exceeded the 0.05 threshold. For example, adequacy of housing units ($H = 4.215$, $p = .241$), supply-demand balance ($H = 3.642$, $p = .303$), accessibility ($H = 4.001$, $p = .256$), and affordability ($H = 4.456$, $p = .216$) all revealed non-significant variation. This demonstrates that the housing challenges are systemic and broadly shared across demographic categories rather than localized or restricted to specific groups. Overall, the data provides compelling evidence that housing in the study area is constrained by rapid population growth, inadequate infrastructure, high occupancy rates, overcrowding, affordability issues, and uneven spatial distribution. Institutional interventions from both government and private developers have been insufficient, leaving households to grapple with systemic shortages. The uniformity of responses across the population highlights that these issues are not isolated but deeply structural, calling for urgent, inclusive, and multi-stakeholder interventions to address the housing deficit in the Niger Delta region.

The effectiveness of housing development in the study area

The data on the effectiveness of housing development in the Niger Delta Region reveals a generally weak performance across nearly all measured indicators. On whether housing projects meet the needs of communities, more than half of the respondents (52.7%) expressed dissatisfaction, compared to just 36.5% who agreed, yielding a weighted mean of 2.94. This highlights a significant gap between housing provision and community expectations. Such dissatisfaction mirrors broader housing delivery challenges in Nigeria, where projects are often misaligned with local socio-economic realities (Olotuah, 2019; UN-Habitat, 2020). The rate of housing development relative to population growth further exposes the inadequacy of supply. While 33.9% of respondents agreed that housing projects are keeping pace, a larger 56.5% disagreed, producing a weighted mean of 2.90. This reinforces the reality that rapid urban population growth, especially in oil-producing regions like the Niger Delta, consistently outpaces housing delivery (Nubi, 2008; UNDESA, 2019). The implications are critical, as continued demographic pressure without proportional housing expansion exacerbates overcrowding, informal settlements, and slum formation. Modern housing designs, though somewhat present, remain underwhelming. Only 40.2% of respondents acknowledged their incorporation, while half (50.2%) disagreed, resulting in a neutral-leaning weighted mean of 2.96. This suggests that while some new developments adopt contemporary design standards, the majority of housing projects still reflect outdated models that fail to meet modern living and environmental expectations. Timeliness in project execution is another weakness. Over half of respondents (52.8%) stated that housing projects are not completed within scheduled timeframes, compared to 36% who believed otherwise. The weighted mean of 2.90 confirms persistent inefficiency and delays. These findings echo studies that attribute delays to weak project management, funding shortfalls, and bureaucratic bottlenecks in Nigeria's housing sector (Ibem & Amole, 2010).

Infrastructure provision alongside housing developments also scored poorly. Only 35.2% agreed that adequate infrastructure such as roads, electricity, and water accompany housing projects, compared to 54% who disagreed (WM = 2.86). Without integrated infrastructure, housing developments fail to achieve long-term sustainability and livability, a challenge widely noted in African urbanization literature (World Bank, 2017). Affordability remains one of the strongest barriers. Just 34.4% of respondents considered housing affordable, while 54% disagreed. The weighted mean of 2.90 illustrates the disconnection between prevailing income levels and the high cost of housing units. This aligns with reports showing that most Nigerian housing projects are inaccessible to low- and middle-income groups, who make up the majority of the population (Akinmoladun & Oluwoye, 2007; Oladapo & Oni, 2013). Institutional and private sector support were both rated poorly. Only 34.5% of respondents considered government policies effective (WM = 2.86), while 37.7% acknowledged private sector efficiency (WM = 2.92). The weak evaluation of both actors highlights a systemic governance and market failure in housing delivery. Similar patterns are seen in compliance with building regulations (38.4% positive, WM = 2.96), monitoring and evaluation (35.2% positive, WM = 2.87), and overall housing quality (38.9% positive, WM = 2.95). These results suggest institutional frameworks are insufficiently enforced and oversight mechanisms are weak. Public–private partnerships, often promoted as solutions, were not rated highly, with 51.5% of respondents disagreeing with their effectiveness. Environmental sustainability of housing projects was also judged inadequate, with only 34% positive responses. The lowest-rated factor was transparency in housing development, where just 32.2% agreed while 54 percent disagreed. These results highlight widespread public distrust, inefficiency, and corruption risks that weaken housing outcomes, consistent with prior findings on governance and accountability in the Nigerian housing sector (UN-Habitat, 2014).

The social role of housing development was equally underwhelming. A majority of respondents (52.7%) disagreed that housing projects are reducing overcrowding and slum formation. With none of the weighted means exceeding 3.0 and most ranging between 2.78 and 2.96, the overall picture is one of ineffectiveness, characterized by inadequacy, unaffordability, weak institutional support, and poor governance. The Kruskal–Wallis test reinforced this interpretation. Across all indicators—including housing adequacy, population growth alignment, infrastructure provision, affordability, government policies, private sector contribution, and sustainability—no statistically significant differences were observed (all p-values > .05). This uniformity indicates that the housing development challenges are systemic and consistently experienced across different socio-demographic groups in the region. Thus, the problems are not isolated to specific communities but rather reflect structural inefficiencies affecting the entire Niger Delta housing sector. Generally, the data suggests that housing development in the Niger Delta is far from meeting its intended objectives. With high rates of dissatisfaction, weak institutional frameworks, limited affordability, and inadequate infrastructure, housing development projects have not provided meaningful relief to overcrowding or population-driven housing pressures. Addressing these issues requires comprehensive policy reforms, stronger regulatory enforcement, improved transparency, and inclusive financing mechanisms to ensure that housing development serves the majority of the population rather than a privileged few.

Conclusion and Recommendations

The results revealed that housing development in the Niger Delta is largely ineffective, characterized by low levels of satisfaction, poor alignment with population growth, weak

affordability, and inadequate infrastructure provision. Institutional frameworks are poorly enforced, project execution is delayed, and public trust in both government and private developers remains low due to inefficiency and lack of transparency. Ultimately, without comprehensive policy reform, stronger regulatory enforcement, and innovative financing mechanisms, housing development in the Niger Delta will remain inadequate, unable to address overcrowding, slum proliferation, or the pressing needs of its rapidly growing population. Meanwhile, the following recommendations were made:

1. Housing projects should be guided by strong regulatory oversight to ensure timely completion, affordability, and quality.
2. Public-private partnerships should be strengthened
3. Transparency and accountability mechanisms must be enforced to reduce corruption and inefficiency in housing delivery.

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