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Research article

MAKESHIFT HOUSING AND THE URBAN POOR IN OBUDU, NIGERIA AFFORDABILITY, ENVIRONMENTAL QUALITY AND POLICY OPTIONS

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ABSTRACT

This study examines the shelter contribution, environmental conditions and affordability role of makeshift housing occupied by low-income households in Obudu Urban, Cross River State, Nigeria. A cross-sectional survey covered 107 makeshift structures across seven neighbourhoods using questionnaires, observation, interviews and descriptive statistics. Rental ranges were compared across building types, and the original Pearson correlation based on five aggregated response categories was reinterpreted cautiously. Fifty-five per cent of respondents earned below ₦15,000 monthly, 66% depended on farming and 49% lived in households of six to eight persons. Wood and grasses were the most frequently reported materials. Environmental quality was rated poor by 57%, while government neglect, insecure tenure and high material costs were leading supply constraints. Makeshift rooms consistently rented below conventional rooms and flats, supporting an affordability function, but not evidence of adequate housing quality. The aggregated correlation was positive, $r = .69$, yet non-significant, $t(3) = 1.65$, $p > .05$. Implications: Policy should combine in-situ upgrading, tenure-sensitive assistance, basic services and incremental low-cost housing rather than indiscriminate clearance. The article distinguishes affordability from adequacy and frames makeshift housing as a constrained household adaptation requiring risk-reducing public intervention.

KEYWORDS

Makeshift housing; Urban poor; Housing affordability; Environmental quality; Tenure; Incremental upgrading; Obudu Urban; Nigeria

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Introduction

Housing is both shelter and a bundle of services, tenure conditions and neighbourhood attributes. A structure may protect occupants from immediate homelessness while remaining inadequate in ventilation, durability, sanitation, access or security. This distinction is central to the analysis of makeshift housing. Such structures can perform a real affordability function for households excluded from formal housing, but affordability alone does not make them safe or sustainable. Obudu Urban attracts households through commerce, public employment, education and connections to surrounding rural livelihoods. Formal housing supply and household incomes do not always align. Where land, building materials and conventional rents are unaffordable, households may construct or rent temporary structures using wood, grasses, raffia, mud, zinc or other available materials. These choices are constrained adaptations rather than simple preferences. The policy debate is often polarised between tolerance and clearance. Tolerance without upgrading can leave residents exposed to poor services and environmental risk. Clearance without realistic alternatives can deepen homelessness and disrupt livelihoods. Evidence is therefore needed on who occupies makeshift housing, what it costs, the quality of the surrounding environment, how land is accessed and what residents identify as the main barriers to better housing.

Recent scholarship from Cross River State demonstrates that environmental and built-environment questions are inseparable from service location, livelihoods and local governance. Spatial work on petrol filling stations and eateries shows that facilities concentrate in response to access and market conditions, while studies of tourism support services, entrepreneurship and riverine livelihoods show that infrastructure and environmental management shape economic opportunity (Eneyo & Ekpenyong, 2018; Eneyo et al., 2023; Eneyo & Archibong, 2024; Eneyo, 2026a, 2026b; Eneyo et al., 2026). Eneyo's environmental science and tourism texts further emphasise the need to connect resource use, service systems and sustainability in place-specific analysis (Eneyo, 2025a, 2025b, 2025c). These publications do not substitute for evidence in the present study, but they provide an appropriate regional frame for interpreting planning institutions, environmental change and household adaptation.

Makeshift housing remains a major challenge in rapidly urbanizing regions of Nigeria, where low-income households often rely on informal settlements due to limited access to affordable and adequate housing. The growth of informal housing is closely associated with poverty, high construction costs, inadequate housing policies, and limited access to basic infrastructure and services. Olotuah and Taiwo (2015) emphasized that the failure of formal housing delivery systems in Nigeria has increased dependence on low-cost and self-built housing among urban poor populations, highlighting the need for affordable housing strategies that consider the economic realities of vulnerable groups. Similarly, Odoyi and Riekkinen (2022) reported that existing public housing policies in Nigeria have largely failed to address the needs of low-income earners because of affordability constraints, institutional weaknesses, and limited implementation capacity. The sustainability of housing development in Nigeria is further challenged by poor governance, inadequate planning frameworks, and environmental concerns, as noted by Jiboye (2011), who argued that sustainable housing requires integrated approaches combining affordability, social equity, and environmental quality.

Izeogu (1993) highlighted the difficulties of providing affordable housing for the urban poor due to economic limitations and ineffective public policy interventions. Furthermore, Oduwaye (2011) identified socio-economic factors such as income level, land accessibility, and infrastructure availability as key determinants influencing housing conditions among disadvantaged urban communities in Nigeria. Olubi and Aseyan (2022) further emphasized that sustainable housing delivery requires alternative approaches, including community participation, improved financing mechanisms, and locally appropriate construction strategies. Urban expansion and land-use transformation have also intensified pressure on housing resources, with Awuh et al. (2018) demonstrating how rapid urban growth and changing land-use patterns create additional challenges for sustainable spatial development. From a broader urban planning perspective, Mabogunje (1990) highlighted institutional and administrative limitations affecting Nigerian urban development, particularly the inability of conventional planning systems to adequately respond to the housing needs of growing populations. Globally, informal settlements and inadequate housing have been recognized as major urban challenges, with UN-Habitat (2003) identifying affordability, poor environmental conditions, and lack of basic services as central characteristics of slum environments.

More recently, UN-Habitat (2016) emphasized that sustainable urban futures require inclusive housing policies that integrate affordability, environmental sustainability, and improved living conditions for marginalized populations. Collectively, these studies demonstrate that addressing makeshift housing in Obudu, Nigeria requires multidimensional policy interventions focusing on affordable housing provision, environmental improvement, participatory planning, and sustainable urban development strategies. This article analyses a 107-structure survey across seven Obudu neighbourhoods. It distinguishes shelter contribution, rental affordability and environmental adequacy; it also reinterprets the original statistical test using defensible terminology. The main contribution is to frame makeshift housing as a household risk-management strategy that requires upgrading and transition pathways rather than romanticisation or indiscriminate removal.

Literature review

Housing demand reflects household formation, income, migration, tenure expectations and access to finance. Supply depends on land, infrastructure, regulation, construction costs and the capacity of public and private actors. In many developing cities, formal supply does not reach low-income households at the required scale or price. Incremental and informal housing then becomes the practical route to shelter (Abrams, 2010; Angel, 2000; Davis, 2006).

Makeshift housing sits at the most precarious end of incremental development. Materials may be temporary, structures may lack approved layouts and occupants may have weak tenure security. Yet the category is heterogeneous. Some structures are owner-built on family land, some are rented, and others are located close to farms, markets or transport routes. Policy should therefore begin with diagnosis rather than assuming a single cause or remedy.

Affordability is usually assessed in relation to household income and competing needs. A low rent can be affordable because the dwelling provides fewer services, is located on insecure land or transfers maintenance and health costs to the household. The relevant comparison is not simply rent. It includes water, transport, energy, exposure to hazards and the possibility of eviction. A makeshift room may be the only immediately affordable option while still imposing significant non-rent costs.

Environmental quality is a neighbourhood as well as a building issue. Congestion, absent drainage, poor waste management and erosion can affect residents regardless of the material used for an individual structure. The study therefore appropriately included both physical materials and environmental conditions. This broader view aligns with the understanding of housing as part of the social and infrastructural fabric of a settlement (Agbola & Adegoke, 2007).

Tenure is another key mechanism. Secure rights can encourage investment and enable households to improve structures over time, while insecurity can discourage durable construction. Formalisation alone is not sufficient if fees, documentation or service requirements are unaffordable. Tenure-sensitive upgrading can range from occupancy recognition and community mapping to leases, serviced plots and incremental title, depending on local law and risk.

Public housing programmes have often struggled to reach the poorest households because unit costs, allocation practices and mortgage requirements exceed household capacity. Sites-and-services, assisted self-help, rental support and public-private partnerships are alternative approaches, but their design must prevent displacement and speculative capture (Aribigbola, 2008; Aribigbola & Ayeniyo, 2012). The survey's policy preferences should therefore be interpreted as directions for programme design rather than proof that any single model will succeed.

The study tested a relationship between grouped housing-supply challenges and grouped socio-economic development responses. Because the analysis used only five category totals, the resulting correlation is ecological and exploratory. It does not represent 107 independent household pairs. Reframing this limitation is essential: a positive coefficient can describe similarity between grouped response patterns, but it cannot establish a household-level development effect.

The research gap concerns the dual function of makeshift housing in a secondary Nigerian town. The structures reduce immediate shelter costs, yet the same survey documents poor environmental quality and service deficits. Analysing both sides prevent policy from treating the housing either as a complete solution or as a condition that can be removed without replacement.

Terminology has policy consequences. Labels such as slum, squatter and makeshift may describe visible conditions, but they can also collapse differences in tenure, material, location and resident agency. Gilbert (2007) cautioned that language can legitimise interventions that treat settlements as problems rather than households as rights-bearing residents. In this article, makeshift housing refers to the construction form recorded by the source survey. It does not imply that every occupant is unlawful, that every structure has the same risk or that removal is the appropriate response. Assessment must separate tenure, structural condition and service access.

Adequacy is multidimensional. The lowest-cost dwelling may satisfy immediate shelter need while failing on durability, space, water, sanitation, energy, accessibility or security of tenure. Conversely, a structure made from non-conventional materials may be maintained and locally appropriate. The survey provides respondent assessments and observed material categories, but it does not include engineering tests, indoor-air measurements or clinical health data. The findings therefore support concern about environmental and service conditions, not a quantified claim that a particular material directly caused disease or structural failure.

Rental comparisons also require contextual interpretation. A lower annual rent is evidence of monetary affordability relative to the listed alternatives, but it may partly reflect smaller space, fewer services, peripheral location or weaker tenure. Households may also incur transport, water, energy and maintenance costs that are not captured in rent. A complete affordability assessment would compare total housing expenditure with disposable income and would account for household size. The available ranges nevertheless provide useful evidence that makeshift rooms occupied the bottom of the local rental hierarchy.

Incremental housing policy recognises that low-income households often improve dwellings over time as resources permit. This process can be supported through secure occupancy, serviced plots, small loans, technical advice and permission for staged construction. It can also be constrained by uncertain tenure, rigid standards or infrastructure that arrives only after expensive formal development. The source survey's emphasis on land access, government neglect and material costs is consistent with a systems view in which households do not control the main inputs to formal housing supply.

In-situ upgrading is appropriate only where the site can be made reasonably safe. Settlements in severe floodways, unstable slopes or protected corridors may require negotiated relocation, but relocation should be evidence-based and accompanied by affordable alternatives, livelihood access and compensation where applicable. Blanket clearance can transfer rather than solve vulnerability. A settlement-level risk assessment should therefore precede decisions, distinguishing service deficits that can be corrected from hazards that cannot be acceptably mitigated.

Rental housing deserves specific attention because low-income policy often focuses on ownership. Many households need flexible accommodation close to work, family or education and may not be able to purchase land. Small-scale landlords and rooming arrangements can therefore form part of an affordable housing strategy if minimum safety and service standards are practical and enforceable. Support may include simplified registration, improvement grants or loans, and proportionate inspection. Standards that immediately criminalise the existing low-cost stock without financing improvement can reduce supply and raise rents.

The relationship between housing and socio-economic development is reciprocal and difficult to isolate in a cross-sectional survey. Poor housing can constrain wellbeing, while low income and insecure employment constrain housing choice. The original grouped correlation does not determine direction and does not control for confounding factors. A household-level study would require paired measures, a larger sample and multivariable analysis. The present article therefore uses the coefficient only to document that the source test was positive but statistically non-significant under its own calculation.

Theoretical and conceptual framework

The article combines housing-adjustment theory with a vulnerability framework. Households respond to the gap between needs and resources by adjusting location, dwelling quality, tenure and expenditure. Makeshift housing is one such adjustment. It reduces monetary cost and may preserve proximity to work or social networks, but can increase exposure to environmental and tenure risks.

Vulnerability is conceptualised as the interaction of exposure, sensitivity and adaptive capacity. Exposure includes poor drainage, erosion, waste and weak structure. Sensitivity reflects household size, income and dependence on local livelihoods. Adaptive capacity includes tenure security, savings, social networks and access to public programmes. Policy can reduce vulnerability by improving services and enabling incremental upgrading without immediately eliminating the affordable shelter function.

The conceptual pathway therefore links constrained income and formal supply barriers to makeshift occupancy; occupancy to affordability and location benefits; and material, service and tenure conditions to environmental and social risk. Public intervention can alter this pathway through land access, infrastructure, finance, building assistance and inclusive planning.

Methodology

The study adopted a descriptive cross-sectional survey design in Obudu Urban, Cross River State. Seven neighbourhoods were covered: Liberty Road, Down Market, Ogoja Road, Ranch Road, Udige Road, College Road and Okambi Road. The unit of observation was the makeshift housing structure and its adult respondent. A total of 107 questionnaires were administered and analysed.

Questionnaires were distributed across neighbourhoods in proportion to the identified structures: 19 at Liberty Road, 25 at Down Market, 17 at Ogoja Road, 15 at Ranch Road, 13 at Udige Road, eight at College Road and 10 at Okambi Road. The study also used reconnaissance observation and oral interviews to interpret materials, environmental conditions and housing challenges.

Variables included sex, age, marital status, occupation, education, monthly income, construction material, environmental condition, perceived environmental quality, housing-related challenges, household size, land-acquisition method, reasons for occupying makeshift housing, barriers to formal supply, perceived contributions of makeshift structures and preferred policy measures. Frequencies and percentages were reproduced from the archived tables.

Annual rental ranges were recorded for single rooms, self-contained rooms, one- to two-bedroom flats and makeshift rooms in each neighbourhood. For graphical comparison, the midpoint of each reported range was calculated. Midpoints are

descriptive summaries; they do not account for room size, condition, utilities or exact location. The analysis therefore uses them only to show the relative price position of makeshift rooms.

The original hypothesis paired five grouped counts for housing-supply challenges with five grouped counts for perceived socio-economic outcomes. Pearson's r was reported as .69. The archived test used $t = 1.65$ with three degrees of freedom and a critical value of 3.18. This article retains the non-significant conclusion and explicitly identifies the grouped, five-observation basis of the test. No household-level association is inferred.

Environmental quality categories were respondent assessments rather than engineering inspections. The construction-material table similarly records dominant reported material and does not establish structural integrity. Terms such as poor quality, affordability and shelter contribution are therefore used with appropriate qualifiers. The article does not label individual buildings unsafe without a technical assessment.

The survey's cross-sectional design cannot establish whether makeshift occupancy is temporary, whether households subsequently improved their dwellings or whether policy changes altered supply. Income categories are historical and should not be interpreted as current purchasing power. Nevertheless, the data provide internally coherent evidence on relative affordability, service deficits and resident priorities.

Ethically, the study involved adult respondents and reported aggregate information. A contemporary replication should obtain formal ethics approval, document consent, avoid collecting unnecessary identifiers and ensure that maps or photographs do not expose residents to eviction or stigma.

The analysis distinguishes three evidence levels. First, frequencies and percentages describe the 107 respondents and are interpreted directly within the sampled structures. Second, annual rent ranges compare listed dwelling types and neighbourhoods but do not control for floor area, condition or services. Third, the Pearson coefficient uses five aggregated category pairs rather than 107 household observations. These levels are not combined into a causal model. Keeping them separate prevents the apparent precision of one statistic from overstating what the underlying data can support.

Rental midpoints were calculated solely for figure presentation by averaging the lower and upper bounds of each reported range. They are not claimed as observed transaction prices or representative market means. The original ranges remain in Table 5 so that readers can see the evidence from which the visual comparison was derived. No inflation adjustment was applied because the objective is to compare contemporaneous categories within the archived survey, not to estimate current 2026 rents. The values should therefore not be used as present-day price guidance.

The environmental-quality responses were treated as perceptions supported by field observation, not as a standardised housing-quality index. Categories such as congestion, unplanned structures and erosion can overlap, and respondents may have selected the condition they considered most important. The reported percentages describe the distribution of recorded responses; they do not establish the prevalence of every condition across all structures. Future work should use a structured audit covering roof, wall, foundation, ventilation, water, sanitation, drainage, waste, crowding and hazard exposure.

Results and discussion

The respondent profile confirms a low-income and livelihood-constrained population. Sixty-six per cent depended on farming, 14% on trading, 11% on civil service and 9% on craft work. Fifty-five per cent reported monthly income below ₦15,000 and a further 30% reported ₦15,000–₦30,000. These historical values indicate limited capacity to absorb conventional rent, building-material costs or formal mortgage requirements.

Table 1. Survey distribution and selected household characteristics

Indicator	Category	n	%
Neighbourhood	Liberty Road	19	17.8
Neighbourhood	Down Market	25	23.4
Neighbourhood	Ogoja Road	17	15.9
Neighbourhood	Ranch Road	15	14.0
Neighbourhood	Udige Road	13	12.1
Neighbourhood	College Road	8	7.5
Neighbourhood	Okambi Road	10	9.3
Occupation	Farming	71	66
Monthly income	Below ₦15,000	59	55
Household size	6–8 persons	52	49

Households were relatively large. Forty-nine per cent contained six to eight persons, 31% contained three to five, 16% contained nine or more and only 5% contained one or two. Larger households increase the demand for floor area and services, making a low-cost room potentially overcrowded. The survey did not measure persons per sleeping room, so crowding cannot be quantified directly, but household size raises a clear planning concern.

Construction materials varied. Wood and grasses accounted for 33%, raffia or bamboo 25%, mud 19%, asbestos sheet 14% and zinc or aluminium 8%. The distribution demonstrates reliance on locally available or lower-cost materials. Material type alone does not determine performance; design, maintenance, foundation, roofing and exposure also matter. However, a high share of combustible or weather-sensitive materials suggests the need for technical upgrading support.

Table 2. Materials and perceived environmental quality

Domain	Category	n	%
Dominant material	Wood/grasses	36	33
Dominant material	Raffia/bamboo	27	25
Dominant material	Mud	20	19
Dominant material	Asbestos sheet	15	14
Dominant material	Zinc/aluminium	9	8
Environmental condition	Congestion/slum incidence	33	31
Environmental condition	Unplanned structures	28	26
Environmental condition	Erosion	20	19
Overall quality	Poor	61	57
Overall quality	Fair	32	30

Respondents identified congestion and slum incidence as the most frequent environmental condition at 31%, followed by unplanned structures at 26%, erosion at 19%, infrastructure decay at 14% and poor waste management at 10%. These are perceived conditions rather than independently measured prevalence, but they show that residents understood their housing challenge as a neighbourhood systems problem rather than only a building-material problem.

Overall environmental quality was rated poor by 57%, fair by 30%, good by 9% and uncertain by 4%. The result is central to policy interpretation. Makeshift structures may supply affordable shelter, yet most respondents did not describe the environment as satisfactory. Any policy that recognises the shelter function must therefore include sanitation, drainage, access and risk reduction.

Table 3. Service, household and tenure conditions

Indicator	Category	n	%
Housing challenge	Lack of government interest	38	36
Housing challenge	Lack of electricity	29	27
Housing challenge	Lack of potable water	24	22
Housing challenge	Poor accessibility	16	15
Household size	1–2	5	5
Household size	3–5	33	31
Household size	6–8	52	49
Household size	9 or more	17	16
Land acquisition	Leasehold	41	38
Land acquisition	Purchase	32	30
Land acquisition	Inheritance	20	19
Land acquisition	Gift	14	13

Housing-related challenges were led by lack of government interest at 36%, lack of electricity at 27%, lack of potable water at 22% and poor accessibility at 15%. These categories describe service deficits, not only housing-unit deficits. Upgrading therefore requires coordination among planning, water, electricity and road agencies. A housing programme that delivers structures without services would address only part of the problem.

Land was acquired through leasehold by 38%, purchase by 30%, inheritance by 19% and gift by 13%. This mixture suggests different levels of tenure evidence and investment incentive. Leasehold and purchase may involve documents of varying formality, while inheritance and gift may depend on family recognition. Before upgrading, authorities should assess claims and conflicts rather than assume that all residents have either full title or no rights.

Table 4. Occupancy motivations, supply constraints and perceived contribution

Domain	Category	n	%
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Reason for occupancy	Income	59	55
Reason for occupancy	Location	30	28
Reason for occupancy	Culture	18	17
Supply constraint	Government neglect	32	30
Supply constraint	Insecure tenure	28	26
Supply constraint	High material cost	20	19
Perceived contribution	Shelter for less-privileged households	39	36
Perceived contribution	Reduced housing-shortage burden	32	30
Preferred measure	Public-private partnership	40	37
Preferred measure	Low-cost housing scheme	30	28

Income was the leading reason for occupying makeshift housing, selected by 55%, followed by location at 28% and culture at 17%. The location response is significant because low-income households often trade dwelling quality for proximity to farms, markets, work or social networks. Relocation to distant housing can therefore increase transport costs and undermine livelihoods even when the replacement unit is physically better.

Government neglect was the leading perceived constraint on housing supply at 30%, followed by insecure tenure at 26%, high building-material costs at 19%, poor maintenance attitude at 16% and unemployment or poverty at 9%. These responses distribute responsibility across institutions, markets and households. They support a multi-component policy rather than a single subsidy or enforcement measure.

Table 5. Indicative annual rents and exploratory grouped correlation

Neighbourhood	Makeshift room range (₦)	Single room range (₦)	1–2 bedroom flat range (₦)
Liberty Road	8,000–10,000	18,000–20,000	60,000–100,000
Down Market	15,000–20,000	30,000–37,000	100,000–150,000
Ogoja Road	6,000–10,000	18,000–20,000	40,000–80,000
Ranch Road	6,000–10,000	18,000–20,000	40,000–80,000
Udige Road	6,000–10,000	18,000–20,000	40,000–80,000
College Road	10,000–12,000	20,000–22,000	70,000–120,000
Okambi Road	6,000–10,000	18,000–20,000	40,000–80,000
Exploratory test	$r = .69$	$t(3) = 1.65$	$p > .05$; five grouped pairs

Respondents described the contribution of makeshift structures in practical terms. Thirty-six per cent said they provided houses for less-privileged people, 30% said they reduced the burden of shortage, 19% said they complemented government effort and 15% said they reduced social tension and supported productivity. These are perceived benefits, but they explain why abrupt removal without replacement would carry social cost.

Rental evidence provides the strongest direct support for an affordability function. Across all seven neighbourhoods, the reported makeshift-room range was below the range for a conventional single room, self-contained room or one- to two-bedroom flat. At Down Market, for example, a makeshift room was reported at ₦15,000–₦20,000 annually compared with ₦30,000–₦37,000 for a single room and ₦100,000–₦150,000 for a small flat. Similar gaps occurred elsewhere.

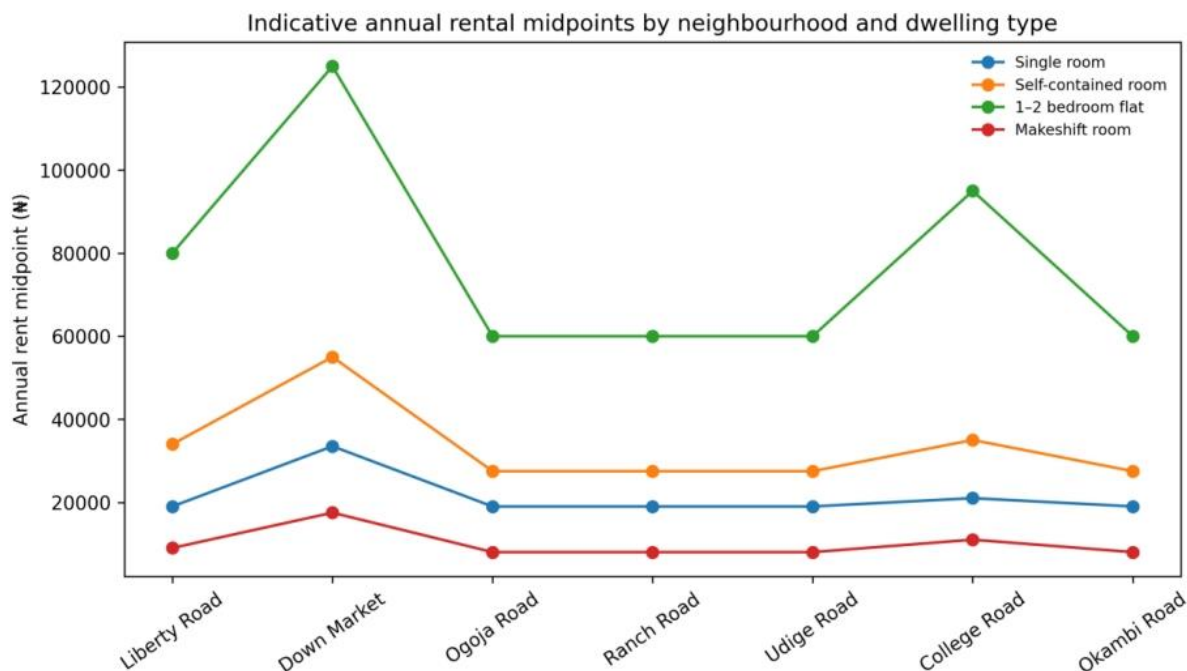


Figure 1. Indicative annual rental midpoints by neighbourhood and dwelling type.

The figure uses range midpoints to illustrate this consistent price ordering. Makeshift rooms occupy the lowest line in every neighbourhood, while one- to two-bedroom flats are highest. Down Market and College Road show higher rent levels than several other areas. The figure does not control for quality or size, but it confirms that makeshift accommodation reduced the immediate monetary threshold for entry into the urban rental market.

Affordability, however, should not be confused with adequacy. A dwelling can be cheaper because it externalises costs through poor services, maintenance burden, exposure to weather or insecure tenure. The survey's poor environmental rating and service deficits indicate that households may be purchasing low rent at the cost of other dimensions of wellbeing. Policy should seek to preserve affordability while reducing these non-rent costs.

The exploratory correlation between grouped housing-supply challenges and grouped development responses was positive at $r = .69$ but did not reach the study's significance criterion, $t(3) = 1.65$. The correct conclusion is not that housing challenges have no relationship with development in general. It is that this five-pair aggregate test did not provide sufficient evidence to reject the null hypothesis. The result has very low statistical power and cannot represent individual households.

Preferred measures emphasised partnership and supply. Public-private partnership was selected by 37%, low-cost housing by 28%, adequate funding by 20% and increased access to land by 15%. These preferences are compatible with an incremental upgrading strategy, but programme design should protect low-income residents from rent escalation or displacement after improvements.

Taken together, the findings describe a constrained housing equilibrium. Households obtain low-cost shelter near livelihoods, landlords or builders use accessible materials, and the public sector provides limited alternatives. The resulting settlement meets an immediate need but produces cumulative service and environmental deficits. A sustainable response must change the conditions of this equilibrium rather than simply remove its visible structures.

The income and occupational profile helps explain why low-cost shelter remained important. More than half of respondents reported monthly income below the lowest listed threshold, while farming dominated occupation. These findings indicate limited and potentially variable cash flow, but the survey did not record annual income, seasonal earnings, assets or remittances. It would therefore be inappropriate to calculate a precise rent-to-income ratio from the available categories. The defensible interpretation is that many sampled households operated under tight monetary constraints and were likely sensitive to even small increases in rent or service charges.

Household size compounds the affordability challenge. Nearly half of respondents lived in households of six to eight persons, and a further group reported nine or more. Larger households require more space, water and sanitation capacity,

yet low incomes may push them toward rooms that are inexpensive but crowded. The survey did not measure floor area or persons per sleeping room, so overcrowding cannot be quantified against a formal standard. Nevertheless, the combination of large household categories and small low-cost structures identifies a priority for future housing-quality assessment.

The material profile should be interpreted as an indicator of construction practice rather than a direct ranking of safety. Wood and grasses formed the largest category, followed by raffia or bamboo and mud. Durability depends on design, maintenance, workmanship and exposure as well as material. The source narrative reported worn walls and leaking roofs in some structures, but it did not provide a structure-by-structure engineering score. Policy should therefore support inspection and improvement of specific defects rather than assume that every dwelling in a material category has identical performance.

Respondent-rated environmental quality was predominantly poor, and the recorded conditions included congestion, unplanned development and erosion. These are settlement-level concerns that cannot be solved by replacing wall materials alone. Drainage, waste collection, access routes, plot organisation and water supply require coordinated public investment. The result also suggests that housing assistance should not be evaluated only by the number of units delivered. A dwelling placed in an unserviced or hazardous environment may reproduce the same vulnerability in a more formal structure.

Leasehold and purchase were the two largest recorded land-access categories, while inheritance and gifts also contributed. This mixture indicates that makeshift development was not synonymous with a single tenure pathway. Some households may hold locally recognised rights even where documentation is incomplete. Upgrading programmes should map and verify claims, identify disputes and avoid imposing a one-size-fits-all titling process. Secure occupancy can be strengthened through several instruments, and the appropriate instrument depends on law, community practice and risk.

The ranked supply constraints place government neglect and insecure tenure above high material cost, although all were important. Because the results are respondent perceptions, they identify experienced barriers rather than measured causal weights. They nevertheless direct attention beyond household behaviour. Better housing cannot be achieved solely by advising residents to save or use stronger materials when serviced land, infrastructure and formal pathways remain inaccessible. Public policy shapes the price and feasibility of every stage from land acquisition to building approval and service connection.

The rent ranges show a consistent monetary gap between makeshift rooms and conventional rooms or flats across all seven neighbourhoods. This is the strongest evidence for the shelter contribution claimed by the study. It demonstrates relative affordability within the recorded market, but not adequacy or long-term cost effectiveness. A household may accept lower quality because the alternative rent is unattainable. Policy should preserve affordability during upgrading by phasing standards, subsidising essential improvements and monitoring rent increases that could displace the intended beneficiaries.

The grouped correlation requires a final interpretive safeguard. A coefficient of .69 appears moderately strong, but with only five paired category totals the calculated *t* value did not exceed the critical value reported in the thesis. More importantly, grouped counts are not independent household measurements. The result cannot support the statement that housing-supply challenges had no influence on development, nor can it prove an influence. It is best described as an inconclusive exploratory pattern that motivates properly designed household-level research.

Policy implications

The first policy principle is no clearance without a realistic and affordable alternative. Structures located in immediate hazard zones may require relocation, but risk assessment and household consultation should precede action. Where risks can be mitigated, in-situ upgrading is likely to preserve livelihoods and social networks more effectively.

Second, upgrading should prioritise basic services and access. Drainage, waste collection, potable-water points, safe electricity connections and passable roads can reduce neighbourhood risk even before every structure is rebuilt. Service improvements should be sequenced with tenure and affordability safeguards so that residents are not displaced by rapid rent increases.

Third, households require technical support for incremental improvement. Simple guidance on foundations, roof anchoring, fire separation, ventilation and durable low-cost materials can produce meaningful safety gains. Small grants, revolving funds or material vouchers can be targeted to the most vulnerable households and linked to inspected stages of improvement.

Fourth, land and tenure interventions should recognise the diversity of claims. Community mapping, occupancy records, mediated dispute resolution and time-bound leases may be appropriate where full title is not immediately feasible. Serviced plots and sites-and-services schemes should be located within reasonable access to employment and markets.

Finally, programme evaluation should measure more than units delivered. Indicators should include rent burden, service access, displacement, household crowding, environmental quality and the number of structures upgraded safely. Resident participation is necessary because the survey shows that location and livelihood considerations are central to housing decisions.

An upgrading programme should begin with settlement profiling and resident participation. Mapping should record structures, access routes, drainage, water points, tenure claims and hazards. Residents should help identify priorities and feasible sequencing because improvements that ignore livelihoods or rent levels may be rejected or may trigger displacement. Early actions can focus on drainage clearance, waste collection, safe water and emergency access while longer-term housing and tenure options are negotiated.

Minimum standards should be progressive and risk based. Immediate requirements should address life-safety hazards, sanitation and severe structural defects. Less urgent dimensional or finish standards can be achieved over time through technical assistance and affordable finance. A rigid requirement to meet full formal standards at once may make compliance impossible for the target population. Progressive enforcement should be transparent, time-bound and paired with support so that it does not become permanent tolerance of unsafe conditions.

Finance should match irregular low incomes. Small improvement loans, savings groups, material vouchers and targeted subsidies may be more accessible than conventional mortgages. Repayment schedules should recognise seasonal livelihoods, and support should prioritise components with high safety or service value. Public funds can be combined with household contribution, but eligibility and allocation must be auditable to limit capture. Assistance to small landlords should include conditions protecting tenants from immediate rent escalation or eviction after publicly supported improvement.

Relocation should remain a last-resort instrument for locations where risk cannot be reduced in place. Any relocation plan should document the hazard, consult residents, preserve access to employment and social networks, and provide tenure and costs that households can sustain. Moving residents to distant formal estates can increase transport expenditure and encourage return to informal accommodation. The relevant policy test is not whether the replacement unit looks more formal, but whether it reduces total vulnerability without excluding the household.

Conclusion

Makeshift housing in Obudu Urban performed a demonstrable affordability and shelter function for low-income households. Reported rents were consistently below conventional alternatives, and respondents perceived the structures as reducing shortage and accommodating less-privileged residents. These findings explain continued demand and caution against policies based only on removal.

The same evidence shows substantial inadequacy. Most respondents rated environmental quality as poor, service deficits were widespread and many structures relied on temporary materials. The exploratory correlation was non-significant and too aggregated to support household-level conclusions. Strong claims about structural safety or development effects would therefore exceed the data.

The most defensible policy is a managed transition: protect residents from abrupt displacement, improve services, recognise appropriate tenure claims, support incremental construction and expand genuinely affordable housing. Makeshift housing should neither be celebrated as an adequate solution nor erased without replacement. It is evidence of a housing system that requires inclusive, risk-reducing reform.

The policy significance of the study lies in this simultaneous recognition of contribution and deficit. Makeshift structures formed part of the local affordable-housing system because their recorded rents were below those of conventional alternatives. At the same time, the survey documented poor environmental ratings, service constraints and insecure conditions. Treating only the affordability evidence would normalise avoidable risk, while treating only the deficiencies would overlook the shelter gap that the structures currently fill. An effective intervention must therefore reduce risk without abruptly withdrawing the lowest-cost option available to sampled households.

Future evaluation should track whether upgrading improves water, sanitation, drainage, structural condition and tenure security while keeping total housing costs within household capacity. It should also monitor displacement and rent change,

because an aesthetically improved settlement can become less accessible to the original residents. The present cross-sectional evidence cannot answer those longitudinal questions, but it identifies the indicators that should be measured and supports a phased, resident-centred approach rather than clearance based on construction appearance alone.

Declarations

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Conflict of interest

The author declares no known financial or personal conflict of interest relating to this manuscript.

Author contribution

All authors contributed to this study: Conceptualisation, methodology, investigation, data curation, analysis, visualisation,

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