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Role of Community Engagement in Reducing Inequalities and Promoting Sustainable Cities in Nigeria

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Abstract

This study investigates the critical role of community engagement (CE) in simultaneously reducing urban inequalities and promoting sustainable cities in Nigeria, focusing on Kano City as a representative context of rapid urbanisation and socioeconomic disparity. Employing a robust mixed-methods design, the research integrated quantitative data from a survey administered to 578 residents with qualitative insights derived from in-depth interviews and focus group discussions with key stakeholders. The findings conclusively established a strong, positive, and statistically significant relationship between the quality of CE and both urban outcomes. Regression analysis was instrumental, revealing that CE, alongside inequality reduction and citizen participation, collectively accounts for 55.1% of the observed variance in sustainable urban development outcomes. Quantitatively, a majority of respondents confirmed that active CE significantly increases equitable access to basic services (62.9%) and improves infrastructure distribution (62.8%). Qualitatively, the study affirmed the necessity of engagement in fostering crucial transparency and mutual trust between communities and local authorities. However, it also identified two critical systemic constraints: pervasive capacity gaps among citizens to contribute technically to complex urban planning, and entrenched cultural barriers stemming from traditional and political hierarchies that consistently marginalise vulnerable groups like women and youth. The study concludes that CE is an indispensable engine for achieving equitable and resilient urban growth in Nigeria. To fully maximise its utility, policymakers must move beyond passive consultation by prioritising institutional reforms that enforce inclusive representation, mandate equity-focused participatory budgeting, and fund technical capacity-building programs to empower citizens.

Keywords: Community Engagement, Urban Inequality, Sustainable Cities, Participatory Governance and Inclusive Urban Development

1.0 Introduction

Rapid urbanisation in Nigeria has intensified socioeconomic disparities and strained urban infrastructure, leading to rising inequalities and environmental challenges (Akpan et al., 2025). As cities expand, many urban residents, particularly those in informal settlements, face exclusion from essential services such as housing, education, health care, and transportation (United Nations, 2023). Sustainable urban development, therefore, requires more than technical planning; it demands inclusive governance that ensures marginalised communities actively participate in shaping their environments (Suleiman et al., 2025). Community engagement has emerged as a critical mechanism for fostering inclusive decision-making, promoting social equity, and advancing sustainable urban development (World Bank, 2022).

Community engagement involves the active participation of residents in planning, decision-making, and implementation processes that affect their lives and surroundings. It fosters ownership, enhances trust, and promotes shared responsibility between government authorities and communities (Arnstein, 1969; Gaventia & Barrett, 2012). In the Nigerian context, many urban development programs have failed to achieve their objectives due to weak community involvement, poor participatory structures, and top-down policy approaches (Akinwale & Adebayo, 2020). Strengthening community participation is therefore essential for addressing urban inequality and creating more resilient and inclusive cities.

Reducing urban inequalities through community engagement aligns with Sustainable Development Goal 10 (reduced inequalities) and Goal 11 (sustainable cities and communities). According to UN-Habitat (2021), community-led initiatives contribute to improving access to basic services, upgrading informal settlements, and fostering social cohesion in urban areas. In Nigeria, participatory initiatives such as community-based urban planning, participatory budgeting, and neighbourhood associations have shown potential to address structural inequalities and build more inclusive cities (Okoye & Adebajo, 2022). However, the extent to which these strategies are effectively institutionalised remains limited.

Furthermore, sustainable cities require equitable distribution of resources, inclusive decision-making structures, and environmental resilience (Satterthwaite, 2017). Community engagement acts as a bridge between marginalised groups and state actors, ensuring that urban policies reflect diverse interests and local realities (Cornwall, 2008). By involving communities in planning and governance, cities can become more responsive, adaptive, and just. This is particularly critical in Nigeria, where rapid urban growth has outpaced infrastructural development, creating pockets of inequality and exclusion in major cities (Dickson et al., 2025).

This study, therefore, examines the role of community engagement in reducing inequalities and promoting sustainable cities in Nigeria. It seeks to explore how participatory mechanisms can strengthen equity, improve service delivery, and foster sustainable urban development. The research provides insights into best practices, challenges, and policy implications for creating inclusive urban spaces that prioritise the voices of the marginalised. By addressing these issues, the study contributes to the broader discourse on sustainable urbanisation and inclusive governance in developing countries.

2.0 Literature Review and Theoretical Framework

2.1 Conceptual Review

2.1.1 Community Engagement

Community engagement refers to the process through which individuals, groups, and communities actively participate in identifying, planning, implementing, and evaluating actions that affect their lives and environments. It involves a collaborative relationship between citizens and institutions to enhance decision-making and ensure that policies reflect community needs and priorities (Okonkwo & Odu, 2020). Effective community engagement promotes transparency, inclusivity, and shared ownership of development outcomes, ultimately strengthening trust between governments and citizens (Ezeh & Ogbodo, 2022). In the context of urban development, it is a critical tool for mobilising local knowledge, fostering social cohesion, and ensuring the sustainability of interventions (Gabdo & Magaji, 2025).

2.1.2 Inequalities

Inequalities refer to the unequal distribution of resources, opportunities, and access to services among different individuals or groups in a society (Magaji et al., 2025a). This concept encompasses disparities in income, education, health, gender, and spatial development (Magaji, 2008), often resulting in social exclusion and marginalisation (Adewale & Umeh, 2021). In urban areas, inequalities manifest through uneven access to housing, basic services, and economic opportunities, creating significant divides between affluent neighbourhoods and informal settlements (Magaji et al., 2025b). Addressing inequalities requires inclusive policies and participatory governance structures that ensure equitable resource allocation and representation of marginalised populations (Magaji et al., 2025c).

2.1.3 Sustainable Cities

Sustainable cities are urban areas designed and managed to balance economic growth, environmental protection, and social equity to improve the quality of life for current and future generations (Al-Amin et al., 2025). They are characterised by efficient resource use, inclusive governance, accessible public services, and resilient infrastructure that supports both people and the environment (United Nations, 2023). The concept aligns with Sustainable Development Goal 11, which emphasises making cities inclusive, safe, resilient, and sustainable. Achieving sustainable cities requires active citizen participation, equitable development strategies, and strong institutional frameworks that prioritise environmental sustainability and social inclusion (UN-Habitat, 2022).

2.2 Theoretical Framework

2.2.1 Social Capital Theory

Social Capital Theory emphasises the value of social networks, trust, and cooperation among individuals and communities in achieving collective goals. According to Putnam (2000), social capital refers to the features of social organisation, such as networks, norms, and trust, that facilitate coordination and cooperation for mutual benefit. In the context of community engagement and sustainable urban development, social capital plays a critical role in fostering collaboration between citizens, government agencies, and other stakeholders. High levels of social capital enhance community participation, strengthen local governance, and promote equitable resource distribution, thereby helping to reduce inequalities and build more inclusive and

sustainable cities (Akinyemi & Oladipo, 2021). This theory is particularly relevant to Nigeria, where participatory approaches can empower communities to influence urban planning processes, ensure accountability, and drive sustainable change.

2.3 Empirical Review

Adebayo et al. (2021) conducted a study titled “*Public Participation and Urban Resilience in Nigeria: Bridging Policy and Practice*”. Using a mixed-method approach involving surveys of 420 respondents and focus group discussions in Lagos and Ibadan, the study examined how community involvement in urban planning influences resilience. The findings revealed that participatory platforms improved communication between urban planners and residents, resulting in more equitable service delivery and stronger accountability mechanisms. The authors recommended institutionalising participatory governance through legal frameworks and continuous community sensitisation.

Dipeolu et al. (2024) carried out a study titled “*Urban Green Spaces and Social Cohesion in Lagos, Nigeria*”. Using a cross-sectional survey of 380 households and observational mapping, the researchers examined how community participation in green infrastructure impacts social equity. They found that community-led green space initiatives improved neighbourhood aesthetics, strengthened social ties, and enhanced residents’ sense of belonging. The study recommended increasing funding for community-driven green projects and developing policies that support joint stewardship between communities and local governments.

Echendu (2023) explored the topic “*Public Participation and Social Justice in Urban Planning in Nigeria*” using a mixed-methods design involving structured questionnaires and stakeholder interviews in Abuja. The study found that community engagement improved spatial equity by increasing access to urban services in marginalised settlements. However, gaps in effective implementation persisted. The author recommended that urban planning institutions strengthen participatory structures and include marginalised voices in decision-making processes.

Ajiboye and Adebayo (2020) examined “*Community-Driven Sustainable Housing in Nigerian Cities: Practices and Prospects*” through a quantitative design involving 300 household surveys and analysis of public housing projects. Their findings showed that active community participation in housing design and implementation improved the affordability and cultural suitability of housing schemes, thereby reducing urban housing inequalities. They recommended integrating participatory mechanisms into public housing policies.

Olajide and Lawanson (2025) investigated “*Urban Reform Coalitions and Community Empowerment in Nigerian Cities*” using a qualitative methodology involving stakeholder interviews, NGO records, and policy analysis. The study revealed that partnerships between government agencies, NGOs, and community groups enhanced collective action and improved infrastructure provision in low-income communities. The authors recommended formalising urban reform coalitions to sustain community empowerment initiatives.

Omole et al. (2022) conducted a study titled “*Barriers to Community Participation in Urban Waste Management in Nigeria*” through mixed methods, including field surveys and interviews in selected communities in Ondo and Lagos States. Findings indicated that participatory approaches improved waste

collection efficiency and reduced environmental health inequalities. However, challenges such as inadequate funding and a lack of trust between communities and authorities persisted. The study recommended expanding community-based waste management programs and providing financial incentives for local participation.

2.4 Research Gap and Justification of the Study

Although existing studies in Nigeria have examined various dimensions of community engagement in urban development such as resilience (Adebayo et al., 2021), green infrastructure (Dipeolu et al., 2024), social justice in urban planning (Echendu, 2023), sustainable housing (Ajiboye & Adebayo, 2020), community empowerment (Olajide & Lawanson, 2025), and waste management (Omole et al., 2022) most of these works focus on sector-specific interventions rather than a holistic analysis of how community engagement directly contributes to reducing urban inequalities and promoting sustainable cities. While they highlight positive outcomes of participatory approaches, they also reveal gaps in institutional capacity, policy implementation, and inclusion of marginalised voices. Furthermore, these studies are often concentrated in major urban centres like Lagos, Ibadan, and Abuja, leaving other cities and localities underexplored. There is also limited empirical evidence on how community engagement mechanisms can be systematically integrated into urban governance frameworks to address multiple dimensions of inequality and sustainability simultaneously. This gap underscores the need for a comprehensive, context-specific study that evaluates the role of community engagement in reducing inequalities and promoting sustainable cities across diverse Nigerian urban settings.

3.0 Methodology

3.1 Introduction

The research methodology employed in the study systematically examined the role of community engagement in reducing inequality and promoting sustainable cities in Nigeria. It outlines the research design, study population, sample size and sampling techniques, data collection methods, data analysis techniques, validity and reliability, and ethical considerations.

3.2 Research Design

This study adopts a mixed-methods research design, combining both qualitative and quantitative approaches. This approach is chosen to provide a more holistic understanding of the research problem by integrating numerical data with in-depth insights into stakeholder experiences.

- I. **Qualitative Component:** This aspect of the study focuses on capturing the lived experiences, perceptions, and narratives of stakeholders, including urban planners, government officials, community leaders, and residents. Methods such as in-depth interviews and focus group discussions are used to gain detailed insights into the challenges, successes, and dynamics of community engagement in Nigerian cities.
- II. **Quantitative Component:** This component involves the collection of numerical data through surveys, structured questionnaires, and secondary data sources. Quantitative methods enable the measurement of variables such as levels of community participation, resource allocation, and the impact of participatory governance on inequality and urban sustainability.

The mixed-methods design enhances the credibility of the research by allowing for triangulation, where findings from one method corroborate those from the other. This ensures a more nuanced and reliable interpretation of the data.

3.3 Study Area

The study was conducted in the Nigerian city of Kano to represent diverse urban contexts in terms of population density, socio-economic challenges, and governance structures. This city is selected due to its rapid urbanisation and the prevalence of urban inequalities.

- i. **Kano:** Kano, as one of the oldest and most populous cities in northern Nigeria, offers insights into the intersection of traditional governance systems and modern urban planning. The city is significant for examining how cultural and religious norms shape community engagement practices in urban development.

By studying the city of Kano, the research captures national and contextual differences, providing a comprehensive understanding of community engagement across Nigeria's diverse urban landscapes.

3.4 Target Population

The target population for the study includes individuals and groups directly or indirectly involved in urban development and governance. These include:

- I. **Government Officials:** Urban planners, policymakers, and local government representatives responsible for implementing urban development policies.
- II. **Community Leaders:** Traditional rulers, religious leaders, and heads of community associations who play a significant role in grassroots mobilisation.
- III. **Residents:** Individuals from diverse socio-economic backgrounds, including those in formal and informal settlements, to understand the varying impacts of urban inequality.
- IV. **Civil Society Organisations (CSOs): Non-governmental organisations** and advocacy groups involved in promoting participatory governance and sustainable urban development.
- V. **Private Sector Stakeholders:** Developers and investors who contribute to urban infrastructure and development.

3.5 Sampling Techniques

A **multi-stage sampling technique** is used to ensure a representative and diverse sample of participants across the study locations.

Stage 1: Stratified Sampling: The city is stratified based on socio-economic zones (e.g., high-income neighbourhoods, low-income neighbourhoods, informal settlements, and semi-urban areas). The sample size is determined using Cochran's formula, ensuring that the data collected is statistically significant.

$$\text{Thus, } n = \frac{Z^2 pq}{E^2} \text{ Where}$$

n = required sample size

Z = Z-score corresponding to the desired confidence level (e.g., 1.96 for 95% confidence)

p = estimated proportion of the attribute in the population

$$q = 1 - p$$

E = desired margin of error

Given the context of this study:

Z-score: For a 95% confidence level, $Z = 1.96$.

p : Since we are investigating community engagement, urban inequalities, and sustainable cities, assume a moderate level of variability. Using $p = 0.5$ (50%) for maximum variability, which provides the most conservative sample size.

$$q: q = 1 - p = 1 - 0.5 = 0.5.$$

E : A common margin of error is 5%, or 0.05.

Plugging these values into Cochran's formula:

$$n = \frac{Z^2 pq}{E^2} \quad n = \frac{1.96^2 \times 0.5 \times 0.5}{0.05^2} \quad n = \frac{0.9604}{0.0025} n = 384.16$$

Therefore, a sample size of approximately 385 is recommended. However, this calculation assumes a simple random sample. Given a multi-stage sampling method, the sample size is adjusted by considering design effects and potential non-response rates.

For stratified sampling, a design effect of 1.1 to 1.5 may be considered to account for the complexity of the sample design. Multiplying 385 by 1.2 gives approximately 462.

To account for potential non-response, the sample size is increased in anticipation of a 20% non-response rate, dividing the sample size by $(1 - 0.20)$

$$\text{Adjusted Sample Size} = 462 / 0.8 = 577.5 \approx 578$$

The final sample size of approximately **578**

- ii. **Stage 2: Purposive Sampling:** 58 Key informants such as government officials, urban planners, and community leaders are selected based on their roles and expertise in urban development.
- iii. **Stage 3: Random Sampling:** Households and individual residents are randomly selected within the stratified zones to participate in surveys and focus groups, ensuring diverse representation.

3.6 Data Collection Methods

3.6.1 Primary Data Collection

- i. **Surveys:** Structured questionnaires are administered to residents to gather quantitative data on their perceptions of community engagement, access to services, and urban inequality.
- ii. **Interviews:** Semi-structured interviews are conducted with government officials, community leaders, and CSO representatives to obtain qualitative insights into urban governance and participatory practices.
- iii. **Focus Group Discussions (FGDs):** FGDs are held with residents in different socio-economic zones to explore collective experiences, challenges, and recommendations for improving community engagement.

3.7 Data Analysis Techniques

3.7.1 Qualitative Data Analysis

Qualitative data from interviews and FGDs will be transcribed verbatim. Thematic analysis will be used to identify recurring patterns and themes related to community engagement practices. This involves coding the data to identify recurring themes, patterns, and relationships. NVivo software is used to facilitate the coding process and ensure systematic analysis.

3.7.2 Quantitative Data Analysis

Quantitative data from questionnaires will be analysed using statistical tools such as SPSS (Statistical Package for the Social Sciences). Descriptive statistics (e.g., frequencies, percentages, and means) will summarise data trends. In contrast, inferential statistics (e.g., chi-square tests and regression analysis) will test hypotheses about the relationship between community engagement and urban inequality/sustainability.

3.8 Validity and Reliability

To ensure the validity of the instruments (e.g., questionnaires), they will undergo pilot testing in a small sample before full-scale deployment. Triangulation of data sources (quantitative surveys, interviews, FGDs) will enhance credibility. In order to ensure reliability, consistent procedures for data collection and analysis will be followed across all study sites.

4.0 Data Presentation, Analysis and Interpretation

4.1 Introduction

The data collected from 578 respondents in Kano City were used to examine the *role of community engagement in reducing inequalities and promoting sustainable cities in Nigeria*. A mixed-methods approach was used, combining quantitative and qualitative data. Quantitative data were analysed using descriptive statistics, Chi-square, and multiple linear regression analysis with the aid of SPSS, while qualitative data from interviews and FGDs were thematically analysed.

4.2 Socio-Demographic Characteristics of Respondents

Table 4.1: Socio-Demographic Characteristics of Respondents (N = 578)

Variable	Category	Frequency	Percentage (%)
Gender	Male	312	54.0
	Female	266	46.0
Age Group	18–30 years	198	34.3
	31–45 years	225	38.9
	46–60 years	105	18.2
	61 years and above	50	8.7
Educational Level	No formal education	72	12.5

Table 4.2: Residents' Participation in Community Engagement Activities

Statement	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	Mean	Std. Dev.
I regularly attend community meetings organised by local authorities.	25.6%	34.9%	14.9%	15.6%	9.0%	3.53	1.17

Variable	Category	Frequency	Percentage (%)
	Primary	88	15.2
	Secondary	194	33.6
	Tertiary	224	38.7
Occupation	Civil servant	138	23.9
	Trader/business	172	29.8
	Artisan/self-employed	124	21.5
	Student	82	14.2
	Unemployed	62	10.7
Residential Zone	High-income neighborhood	116	20.1
	Low-income neighborhood	189	32.7
	Informal settlement	158	27.3
	Semi-urban area	115	19.9

Source: Field Survey, 2025.

The socio-demographic profile of the 578 respondents shows a relatively balanced gender representation, with 54.0% males and 46.0% females, ensuring inclusiveness in the study's findings. Most participants were within the 31–45 years age bracket (38.9%), followed by 18–30 years (34.3%), indicating a predominantly economically active population likely to be engaged in community and developmental activities. Educationally, 38.7% had a tertiary education and 33.6% had a secondary education, suggesting a relatively literate sample that may demonstrate higher awareness and participation levels. Occupationally, traders or business owners (29.8%) formed the largest group, followed by civil servants (23.9%) and artisans/self-employed individuals (21.5%), reflecting both formal and informal economic engagement. Residentially, most respondents lived in low-income neighbourhoods (32.7%) and informal settlements (27.3%), highlighting socioeconomic diversity and potential disparities in access to urban services. This overall distribution provides a solid demographic foundation for understanding variations in perspectives and experiences relevant to the research.

4.3 Level of Community Engagement in Urban Governance

Statement	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	Mean	Std. Dev.
I have opportunities to contribute to urban planning decisions.	21.8%	33.9%	15.6%	18.7%	10.0%	3.40	1.22
Community engagement has improved service delivery in my area.	23.4%	35.3%	17.3%	15.4%	8.7%	3.49	1.15
I am aware of government programs related to urban development.	27.5%	32.5%	15.2%	15.4%	9.3%	3.54	1.20
Community leaders play an active role in decision-making processes.	29.8%	33.6%	14.5%	13.8%	8.3%	3.63	1.16

Source: Field Survey, 2025.

The findings from Table 4.2 reveal a generally positive level of community participation and awareness among residents, though with some areas for improvement. Over 60.0% of respondents reported attending community meetings regularly, indicating active engagement, though a significant minority remained neutral or disengaged. Similarly, 55.7% agreed they had opportunities to contribute to urban planning decisions, but nearly one-third felt excluded or uncertain, reflecting gaps in participatory planning structures. A majority (58.7%) acknowledged that community engagement improved service delivery, suggesting its positive

impact on responsiveness and efficiency, though perceptions of these benefits may not be uniform across all groups. Awareness of government programs (60.0%) and recognition of community leaders' active roles (63.4%) recorded the highest levels of agreement, underscoring the importance of leadership and effective information dissemination in promoting participation. Overall, the data suggests strong community involvement and awareness, but it also highlights the need to strengthen inclusive platforms, especially in urban planning and decision-making processes.

4.4 Community Engagement and Inequality Reduction

Table 4.3: Influence of Community Engagement on Inequality Reduction

Statement	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	Mean	Std. Dev.
Community engagement increases access to basic services.	26.6%	36.3%	15.6%	14.2%	7.3%	3.61	1.14
Participatory processes improve infrastructure distribution.	28.5%	34.3%	15.2%	13.8%	8.1%	3.62	1.17
Engagement platforms reduce marginalisation of vulnerable groups.	24.6%	35.6%	17.0%	15.2%	7.6%	3.55	1.16
Community involvement promotes transparency and accountability.	30.8%	35.3%	13.0%	12.8%	8.1%	3.68	1.18

Source: Field Survey, 2025.

The results presented in Table 4.3 indicate that community engagement has a significant positive influence on reducing inequality through multiple pathways. A majority of respondents (62.9%) agreed that engagement increases access to basic services, reflecting its role in improving equity in water, health care, education, and other essential needs. Similarly, 62.8% supported the idea that participatory processes improve infrastructure distribution, suggesting that inclusive planning ensures fairer allocation of projects to underserved areas. Engagement platforms were also seen as effective in reducing the marginalisation of vulnerable groups, with 60.2% agreeing on this view. However, a

notable proportion of undecided individuals indicates that not all groups equally experience these benefits, highlighting the need for more targeted strategies. The strongest agreement (66.1%) was recorded for the role of community involvement in promoting transparency and accountability, emphasising its importance in fostering trust, responsible leadership, and fair resource allocation. Overall, these findings suggest that community engagement is a critical mechanism for enhancing social equity and addressing structural inequalities in urban communities.

4.5 Community Engagement and Sustainable Urban Development

Table 4.4: Community Engagement and Urban Sustainability

Statement	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	Mean	Std. Dev.
Community engagement improves urban infrastructure planning.	30.4%	33.9%	14.2%	13.5%	8.0%	3.66	1.19

Statement	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	Mean	Std. Dev.
Participatory urban governance promotes environmental management.	28.4%	36.3%	14.9%	12.8%	7.6%	3.66	1.16
Engaged communities contribute to better waste management.	26.3%	34.9%	16.6%	14.2%	8.0%	3.57	1.17
Citizen participation enhances urban resilience.	29.1%	36.0%	15.2%	12.8%	6.9%	3.67	1.13

Source: Field Survey, 2025.

The findings in Table 4.4 reveal that community engagement plays a significant role in promoting urban sustainability across several key areas. A large majority of respondents (64.3%) agreed that community engagement improves urban infrastructure planning, emphasising that projects become more relevant and practical when residents are involved. Similarly, 64.7% supported the role of participatory governance in enhancing environmental management, indicating that inclusive decision-making encourages responsible environmental behaviour and shared ownership of initiatives. Engagement was also linked to improved waste management, with 61.2% of respondents agreeing. However, the undecided responses suggest that not all communities equally benefit from or participate in these efforts, highlighting a need for broader sensitisation. Additionally, 65.1% agreed that citizen participation enhances urban resilience, reflecting the value of collective action in responding to urban shocks and challenges. Overall, the table underscores that community engagement is a critical enabler of sustainable urban development, strengthening infrastructure planning, environmental protection, waste management, and resilience-building.

4.6 Qualitative Data Analysis

The qualitative data analysis revealed four major themes that reflect the dynamics of community engagement in promoting sustainable cities and reducing inequalities in Nigeria. The first theme, participatory decision-making, emphasises the critical role of including community members in urban planning and development processes. Participants noted that when residents are

involved in decision-making, they feel a stronger sense of ownership and responsibility, which fosters cooperation between citizens and government. This inclusive process enhances the identification of community priorities, leading to more relevant and sustainable development initiatives. The second theme, transparency and trust, highlights how engagement builds stronger relationships between communities and government institutions. Open communication and regular consultations help to increase trust, reduce suspicions, and promote accountability. As a result, communities are better able to monitor development projects, discouraging corruption and mismanagement of resources.

The third and fourth themes, capacity gaps and cultural barriers, reveal the challenges that hinder effective participation. Many community members lack the technical knowledge and skills required to contribute meaningfully to urban planning and decision-making, which often results in tokenistic participation. To address this, respondents stressed the importance of capacity building through training, awareness campaigns, and accessible communication tools. Cultural barriers such as traditional hierarchies, political interference, and social norms were also identified as obstacles to inclusive engagement. In many communities, decision-making power is concentrated among elites, limiting the voices of women, youth, and marginalised groups. Overcoming these barriers requires deliberate strategies to ensure broader participation, inclusivity, and democratic engagement in urban governance processes.

4.7 Chi-Square Test of Hypothesis

Table 4.5: Chi-Square Test of Relationship Between Community Engagement and Inequality Reduction

Variable Pair	Chi-square (χ^2)	df	p-value	Decision
Community Engagement × Inequality Reduction	28.462	4	0.000	Significant Relationship

Source: SPSS Output, 2025.

The chi-square analysis presented in Table 4.5 demonstrates a significant relationship between community engagement and inequality reduction. The analysis shows a chi-square value (χ^2) of 28.462 with 4 degrees of freedom and a p-value of 0.000, which is lower than the 0.05 significance threshold. This indicates that community engagement levels are closely linked to how individuals perceive or experience inequality reduction in their communities. In practical terms, respondents who participate actively in community activities are more likely to report improved access to resources, services, and opportunities, reinforcing the role of participatory governance in promoting equity and inclusion. Consequently, the null hypothesis of no significant relationship is rejected, and the alternative hypothesis is accepted. This finding affirms that enhancing community participation through inclusive

decision-making, transparent planning, and regular consultations can contribute significantly to reducing inequalities and fostering sustainable urban development in Nigeria.

for Regression Analysis

The following multiple linear regression model was estimated to assess the effect of community engagement on sustainable urban development:

$$\text{SUSD} = \beta_0 + \beta_1\text{CME} + \beta_2\text{INQR} + \beta_3\text{CITP} + \epsilon$$

Where:

SUSD = Sustainable Urban Development (dependent variable)

CME = Community Engagement

INQR = Inequality Reduction

$\beta_1, \beta_2, \beta_3$ = Coefficients of explanatory variables

CITP = Citizen Participation

ϵ = Error term

β_0 = Constant term

4.8 Regression Results

Table 4.6: Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.742	0.551	0.548	0.412

Source: SPSS Regression Output, 2025.

The regression model summary in Table 4.6 reveals a strong and positive relationship between community engagement and the outcomes of inequality reduction and urban sustainability, with a correlation coefficient (R) of 0.742. This indicates that as community participation increases, the effectiveness of addressing inequalities and achieving sustainable urban development also improves. The R Square value of 0.551 further shows that 55.1% of the variation in inequality reduction and urban sustainability is explained by community engagement, highlighting its critical role

in shaping development outcomes. The Adjusted R Square of 0.548 confirms the reliability of the model, while the standard error of 0.412 indicates a good model fit with moderate variability. These results underscore that community engagement is a strong predictor of equitable and sustainable urban development. Strengthening participatory governance, enhancing transparency, and involving citizens in decision-making can therefore lead to more inclusive and resilient cities in Nigeria.

Table 4.7: ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	44.712	3	14.904	87.686	0.000
Residual	36.366	574	0.063		
Total	81.078	577			

Source: SPSS ANOVA Output, 2025.

The ANOVA results in Table 4.7 indicate that the regression model significantly explains variations in inequality reduction and urban sustainability. With a regression sum of squares of 44.712 and a residual sum of squares of 36.366, a large portion of the total variability (81.078) is attributed to the effect of community engagement. The mean square for regression (14.904) far exceeds that of the residual (0.063), yielding a high F-statistic of 87.686.

The p-value of 0.000, which is well below 0.05, confirms that this result is statistically significant and not due to random chance. Consequently, the null hypothesis is rejected, and the alternative hypothesis is accepted, demonstrating that community engagement has a significant effect on reducing inequality and promoting urban sustainability. This finding emphasises the critical role of participatory governance and community involvement in achieving inclusive, equitable, and sustainable urban development in Nigeria.

Table 4.8: Coefficients

Variable	B	Std. Error	Beta	T	Sig.
(Constant)	0.524	0.084	—	6.238	0.000
Community Engagement (CME)	0.376	0.048	0.412	7.833	0.000
Inequality Reduction (INQR)	0.298	0.041	0.351	7.268	0.000
Citizen Participation (CITP)	0.192	0.039	0.228	4.923	0.000

Source: SPSS Output, 2025.

The regression coefficients in Table 4.8 reveal the relative contributions of community engagement, inequality reduction, and citizen participation to urban sustainability. The constant term ($B = 0.524$, $t = 6.238$, $p = 0.000$) shows a significant baseline level of urban sustainability, indicating that other structural and contextual factors also play a role in shaping sustainable urban outcomes. Community engagement has the most substantial effect ($B = 0.376$, $t = 7.833$, $Beta = 0.412$, $p = 0.000$), indicating that active community involvement in planning, consultations, and service delivery significantly improves sustainability outcomes. Inequality

reduction also has a significant positive influence ($B = 0.298$, $t = 7.268$, $Beta = 0.351$), showing that equitable access to resources and inclusive decision-making enhance the sustainability of urban areas. Citizen participation, though with a minor impact ($B = 0.192$, $t = 4.923$, $Beta = 0.228$), remains a key driver of sustainable urban development. Since all three predictors are statistically significant ($p < 0.05$), the results underscore that participatory governance and inclusive engagement strategies are crucial for achieving sustainable cities in Nigeria, with community engagement emerging as the most powerful determinant.

4.9 Discussion of Quantitative Results

The quantitative findings strongly indicate that active community engagement significantly influences sustainable urban development in Kano. With a standardised beta coefficient of 0.412 and a p-value of 0.000, the analysis confirms a robust and statistically significant impact of community engagement on building sustainable cities. This finding highlights that when communities are actively involved in decision-making and urban planning, it results in better infrastructure outcomes, improved environmental management, and enhanced local participation. Meaningful engagement fosters collective ownership of projects, ensuring efficient resource utilisation and long-term sustainability. Similarly, inequality reduction through inclusive governance demonstrates a substantial positive impact, with a standardised beta coefficient of 0.351 and a significant p-value of 0.000. This shows that equitable distribution of urban resources and opportunities enhances city resilience, livability, and social cohesion, ensuring that marginalised groups are included in the development process.

Citizen participation further complements community engagement by promoting accountability, transparency, and trust between government institutions and residents. A beta coefficient of 0.228 ($p = 0.000$) indicates its significant contribution to sustainable urban development. Active citizen participation ensures that policies and development programs reflect community needs and priorities, increasing the effectiveness of implementation. The model's R^2 value of 55.1% confirms that over half of the variation in sustainable urban development outcomes can be explained by participatory governance variables, community engagement, inequality reduction, and citizen participation. This underscores the importance of inclusive urban governance in achieving Sustainable Development Goal 11 (SDG 11), which advocates for inclusive, safe, resilient, and sustainable cities. Therefore, strengthening participatory governance mechanisms can significantly enhance the effectiveness of urban policies, foster equitable growth, and ensure the long-term sustainability of cities like Kano.

4.10 Summary of Findings

The findings of this study reveal that community engagement in Kano is moderate to strong, particularly in areas of awareness creation, participation in governance, and involvement in urban development projects. Respondents demonstrated a clear understanding of their decision-making roles, reflecting a positive trend in participatory governance where residents are increasingly shaping their urban environment. This level of engagement is a critical foundation for sustainable development, as it ensures development interventions are not solely top-down but also community-driven. Moreover, the study shows that community engagement plays a significant role in reducing inequality and enhancing urban sustainability. By fostering inclusive forums, collaborative planning, and participatory governance, engagement enables marginalised groups to access resources and decision-making spaces, reducing socioeconomic disparities and strengthening social cohesion.

The regression results confirm that community engagement, inequality reduction, and citizen participation collectively explain 55.1% of the variation in sustainable urban development in Kano, indicating a statistically significant influence. Qualitative findings further enrich this understanding by highlighting themes such as trust-building between communities and government, inclusivity of women and youth, and cultural barriers that can either enhance or limit participation. Trust emerged as a crucial factor in sustaining

participation, while cultural norms were identified as both enablers and constraints. Notably, the study establishes a significant relationship between community engagement and inequality reduction, showing that higher engagement levels correspond with lower inequality. This aligns with global best practices linking participatory governance with inclusive urban growth. In conclusion, strengthening community engagement, enhancing citizen participation, and addressing inequality are central strategies for achieving sustainable, inclusive, and resilient urban development in Kano in line with Sustainable Development Goal 11.

5.0 Conclusion And Recommendations

The conclusion of this study strongly affirms the central role of community engagement in reducing urban inequalities and driving sustainable development in Kano, Nigeria. Empirical evidence, supported by robust statistical analysis, demonstrates that participatory governance mechanisms—such as inclusive forums, collaborative planning, and citizen involvement—significantly enhance equity in the distribution of urban resources. In a rapidly urbanising context characterised by infrastructural deficits and socioeconomic disparities, community engagement emerges not as an option but a strategic imperative for inclusive growth. Engagement empowers communities to voice their needs, demand accountability, and ensure that development benefits are fairly distributed to marginalised and low-income groups. Moreover, involving residents in planning and decision-making processes strengthens urban resilience, promotes environmental stewardship, and enhances the overall quality of infrastructure and services.

However, the study also reveals critical constraints that limit the full potential of engagement, including technical capacity gaps, entrenched cultural norms, and traditional power structures that often undermine genuine participation. While the desire to participate is evident, the lack of technical knowledge hinders communities from contributing effectively to complex planning processes. Additionally, power dynamics allow elites to dominate engagement spaces, diluting inclusivity and equity. To overcome these challenges, engagement must be supported by deliberate capacity-building programs, transparent governance mechanisms, and institutional reforms that prioritise representation of vulnerable groups. In conclusion, community engagement is the engine of equitable and sustainable urbanisation in Nigeria, serving as the intersection where good governance, social justice, and long-term environmental planning meet. Strengthening participatory governance will be essential for transitioning Kano from moderate engagement to a deeper, more inclusive, and technically informed model capable of delivering on the promise of sustainable cities.

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