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Original Research Article

Public Participation in Road Infrastructure Provision in Abeokuta, Nigeria

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Abstract: Road infrastructure is a key determinant of urban mobility, communication, economic performance and spatial organisation in any nation. Its provision statutorily as government's responsibility has been challenged by economic recession, multiple responsibilities and technical breaches. To this end, the public have had to intervene in providing couple of interventions to meeting their needs. This study therefore, seeks to evaluate public participation in road infrastructure provision in Abeokuta, Nigeria with a view to suggest strategies to improve the economy and spatial organisation of the city. Information was elicited from 375 systematically selected stakeholders (CDA members, traditional leaders, government officials and key informants) who had direct involvement across road project phases. Observed data were subjected to descriptive statistics, including frequencies, percentages and cross-tabulations, while Spearman Rank Correlation analysis was used to examine relationships among the study variables. Findings reveal that majority of the stakeholders were youths (47.2%). Others were older men (23.5%), women (22.1%) and government officials (0.8%) who are engaged in planning and design (66.1%), construction activities (65.3%), site selection (63.2%), needs identification (62.7%) and monitoring and evaluation (45.3%). The contribution of the stakeholders in road provision has been through finances (levies and fund raising) (34.9%), voluntary labour (skilled and unskilled) (25.1%), decision-making (20.0%), procurement of materials (14.9%) and oversight functions (5.1%). Major factors hindering the participation of public in road projects are financial constraints (77.6%), lack of trust in governance (72.8%) and political interference (67.5%). Benefits associated with public participation in road provision include: community acceptance of projects (77.6%), enhancement of livelihood sources (62.9%), timely road project delivery (53.1%) and reduced resource conflict (42.4%). The study identifies public participation in road project provision as a panacea to meeting the deficits from government efforts. It recommends the strengthening of participatory planning, capacity building for stakeholders, equitable resource mobilisation and accountability.

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Keywords: Public Participation, Road Infrastructure, Community Development Associations, Urban Governance, Abeokuta, Nigeria.

1. Introduction

Urban road systems constitute a fundamental component of city development, shaping economic performance, social interaction, and spatial organisation. Roads enable the circulation of people and commodities, improve access to jobs and essential services, and guide patterns of land use and urban expansion. In developing city contexts, the condition and capacity of road infrastructure are closely linked to economic efficiency, transport safety, and overall urban liveability. When road networks fail to respond adequately to growing urban demands, cities commonly experience traffic congestion, limited accessibility, escalating transport costs, environmental stress, and declining productivity (United Nations, 2022).

In many Nigerian urban centres, sustained population growth resulting from natural increase, rural urban migration, and metropolitan spillover has placed considerable pressure on existing road infrastructure. Large portions of the road network were designed under earlier population and traffic assumptions and have not been sufficiently upgraded to accommodate current usage levels. Consequently, road capacity is frequently exceeded, routine maintenance is neglected, and traffic control systems remain inadequate. These pressures are reflected not only in persistent congestion but also in poor road conditions, unsafe mobility environments, inefficient movement patterns, and disparities in access to dependable transport routes across urban neighbourhoods (Litman, 2021).

Notwithstanding continued government investment in road construction and rehabilitation, the delivery of urban road infrastructure in Nigeria remains fraught with enduring challenges. These challenges include weak project prioritisation, limited sensitivity to community needs, ineffective maintenance practices, escalating project costs, implementation delays, and rapid deterioration after completion. Many road projects fall short of long-term performance expectations because decision-making processes are largely centralised, with little meaningful involvement of road users and affected residents. As a result, completed roads may fail to align with local circulation needs, commercial activities, drainage conditions, and safety requirements, thereby diminishing their functionality and sustainability (Ogun State Bureau of Statistics, 2023).

Against this backdrop, public participation has gained prominence as a governance strategy aimed at improving infrastructure delivery outcomes. Public participation encompasses the organised involvement of citizens and relevant stakeholders in decisions influencing the planning, design, execution, and management of public projects. In the context of urban road development, participatory processes are expected to support more accurate identification of needs, enhance transparency, encourage shared responsibility, and strengthen accountability throughout project lifecycles. Evidence from developing urban settings indicates that projects incorporating meaningful community engagement tend to be

more context sensitive, experience fewer disputes, and achieve improved maintenance performance over time (World Bank, 2021).

Public participation in road infrastructure development encompasses seven sequential stages across the project life cycle: needs assessment, planning and design, site selection, resource mobilisation and budgeting, construction, implementation monitoring, and post-completion maintenance and evaluation. At each stage, communities, planners, technical experts, and relevant authorities engage collaboratively to ensure that road projects reflect local priorities, meet agreed standards, and remain functional over the long term (Matu et al., 2020; Magesa et al., 2025).

Within this wider national setting, Abeokuta, the capital city of Ogun State, offers an important context for examining public participation in urban road infrastructure provision. The city has recorded sustained population growth associated with its administrative functions, expanding educational institutions, and strategic position within the Lagos-Ibadan development corridor. This growth has intensified traffic demand and placed mounting pressure on the construction and maintenance of urban service roads, while simultaneously exposing persistent deficiencies in road planning, site selection, accessibility, and long-term upkeep. Ongoing congestion along major routes, deteriorating road conditions across several neighbourhoods, and increasing public dissatisfaction with construction quality and maintenance outcomes raise critical concerns about decision-making processes and the extent of citizen involvement across the various stages of road delivery. From needs identification and site selection through construction, monitoring, and post-completion maintenance, the degree to which residents meaningfully shape road infrastructure decisions remains largely unclear. These circumstances highlight the need for a systematic assessment of whether public participation serves as an effective mechanism for promoting equitable and sustainable urban service road construction and maintenance in Abeokuta, or continues to operate largely as a symbolic practice (Innes & Booher, 2004).

The study was guided by five research questions: what are the stages involved in road infrastructure provision projects; who are the stakeholders and at what stage do they participate; what factors contribute to the success and effectiveness of their involvement; what impacts does public participation have on road infrastructure outcomes; and what policy and structural reforms are needed to improve citizen participation in road infrastructure projects.

2.0 Literature Review

2.1 Theoretical Framework

The Evaluating the effectiveness of public participation in urban infrastructure requires moving beyond a narrow view of attendance at meetings or isolated consultations. Participation is best understood as a multidimensional process shaped by power dynamics, inclusiveness, deliberation, co-production, and equity in distributing costs and benefits. To capture this complexity, the study employs four complementary theoretical perspectives:

updated ladders and spectra of participation, communicative and deliberative planning, co-production of urban services, and empowerment and equity approaches.

Sherry Arnstein's Ladder of Citizen Participation remains an important reference point for assessing degrees of citizen involvement, ranging from manipulation to citizen control. Although foundational, more recent critiques highlight its limitations, especially its rigidity and inability to capture the iterative and shifting nature of modern governance (Davis, 2021). In practice, participation often evolves with project stages. The International Association for Public Participation further refined these insights with its Spectrum of Public Participation, which outlines stages from informing, consulting, involving, collaborating, to empowering (International Association for Public Participation, 2020).

Communicative and deliberative planning theory, drawing from Jürgen Habermas's notion of communicative rationality, posits that planning decisions attain legitimacy when they are produced through inclusive, transparent, and reasoned interaction among stakeholders (Grant, 2021). Within this perspective, citizens are understood not merely as end users of policy outcomes but as active participants whose experiential knowledge, values, and priorities contribute meaningfully to decision-making.

Co-production theory conceptualises public participation as a collaborative process in which citizens and public authorities jointly engage in the design, delivery, and monitoring of public services (Clarke & Patel, 2020). Rather than limiting participation to consultation, this approach emphasises shared responsibility and partnership, making it particularly relevant in urban contexts characterised by financial and institutional constraints. In Nigeria, co-production is most evident in the activities of Community Development Associations. In cities including Ibadan and Abeokuta, these associations frequently mobilise communal labour and financial contributions to repair roads, construct drainage infrastructure, or maintain access routes (Olawale, 2022).

Theoretical perspectives on empowerment and equity provide a normative basis for assessing participatory processes. Empowerment extends beyond mere attendance at meetings to encompass access to information, the ability to influence decisions, and the resources required to shape outcomes. Equity, meanwhile, focuses on whether the benefits and burdens of infrastructure projects are distributed fairly across social groups (Collins, 2021). Collectively, these theoretical frameworks support a multidimensional evaluation of public participation in Abeokuta North, encompassing procedural effectiveness, substantive influence on outcomes, normative considerations of fairness and equity, and transactive efficiency in terms of shared value and resource use.

2.2 Empirical Review

The Citizen engagement in road infrastructure governance reveals that communities across the Global South consistently mobilise voluntary labour, communal levies, and associational networks to compensate for state under provision. Yet the durability, inclusivity, and technical quality of such efforts vary markedly depending on the degree to which community action is embedded within formal governance structures. This review

focuses on three regional contexts, namely Sub Saharan Africa, South Asia, and Latin America, selected for their structural comparability with Nigeria: decentralised governance systems, resource constrained local authorities, and strong traditions of community self help. Evidence from these contexts is examined alongside Nigeria specific and Abeokuta North specific studies to construct the empirical foundation for the present research.

Latin American participatory budgeting, particularly the model pioneered in Porto Alegre and subsequently adopted across Brazilian municipalities, represents one of the most extensively studied examples of institutionalised citizen participation in public resource allocation. Evidence from these experiences demonstrates that participatory budgeting can enhance the responsiveness of infrastructure investments to community priorities, particularly in underserved neighbourhoods. The Porto Alegre experience showed that structured citizen engagement mechanisms enabled residents to influence the prioritisation of local infrastructure needs and contributed to a more equitable distribution of public resources.

However, the sustainability of such participatory arrangements remains closely linked to political commitment and institutional support. Studies have shown that changes in political leadership, administrative priorities, and governance structures can weaken participatory budgeting mechanisms and reduce their effectiveness over time (Cabannes, 2015; Cabannes & Lipietz, 2018). Nevertheless, where transparency, accountability, and inclusive representation are maintained, participatory budgeting has been associated with more redistributive outcomes and improved alignment between public investments and community needs (Cabannes, 2015; Cabannes & Lipietz, 2018).

South Asian evidence provides important insights into how formal participation mechanisms interact with existing social structures to shape development outcomes. In India, Gram Sabhas were established to encourage participatory rural development by enabling citizens to contribute to local planning and decision-making processes. However, studies have shown that meaningful participation is often constrained by gender inequalities, caste hierarchies, and unequal access to decision-making spaces, limiting the ability of marginalised groups to influence development priorities and resource allocation (Jha et al., 2012; Sanyal & Rao, 2018). Consequently, the existence of participatory institutions does not automatically guarantee equitable participation or influence in governance processes.

The literature further highlights that formal representation does not always translate into substantive influence. Women and other disadvantaged groups may be included in local governance structures yet remain excluded from key planning, implementation, and oversight functions (Forster, 2013; Oladipo, 2024). Similar patterns have been observed in Nigeria, where Aina and Omoregie (2024) report limited female involvement in community development association oversight and infrastructure management activities. Experiences from participatory monitoring and social audit initiatives across South Asia also demonstrate that transparency and accountability mechanisms are most effective when supported by strong institutional safeguards, enabling governance structures, and sustained

political commitment. These findings underscore the need to move beyond formal participation arrangements and ensure that citizens possess both the opportunity and the capacity to influence infrastructure governance meaningfully.

The Sub-Saharan African Ghana, experience with community-driven infrastructure development demonstrates both the potential and limitations of local collective action. Studies indicate that community groups can effectively mobilize resources and labour to provide and maintain public goods where government provision is inadequate, but sustaining these efforts over time is often challenging, particularly when external support is unavailable (Casey, 2018; Lyon, 2003). The literature attributes these sustainability challenges largely to weaknesses in Ghana's fiscal decentralisation system, which limits the financial and administrative capacity of local governments to support community initiatives effectively (Ijah, 2013). Evidence further suggests that greater fiscal autonomy enhances investment in infrastructure and other development projects, while heavy reliance on intergovernmental transfers may weaken local revenue mobilisation and reduce fiscal flexibility for development spending (Lekettey et al., 2026). Consequently, the long-term success of community-led infrastructure initiatives depends not only on active community participation but also on sustained institutional capacity, financial support, and effective collaboration with local government authorities (Adusei-Asante, 2012).

Evidence from Sub-Saharan Africa suggests that community-driven development initiatives can effectively mobilise local resources and deliver public goods, but their long-term sustainability is often constrained by limited external support and weak institutional backing (Casey, 2018; Lyon, 2003). In Ghana, many community initiatives struggle to endure once donor assistance ends, while incomplete fiscal decentralisation restricts the capacity of local governments to provide adequate financial and technical support (Ijah, 2013; Lyon, 2003). Consequently, sustainable outcomes depend not only on community participation but also on strong integration with local government planning, funding, and oversight mechanisms.

Within Nigeria, community participation in local infrastructure provision has been documented in several states, with communities contributing financial resources, labour, and other forms of support to road development initiatives (Olawale, 2022). However, studies also identify governance challenges, including exclusionary practices, accountability concerns, and institutional constraints that limit the sustainability of community-led interventions (Aina & Omoregie, 2024). These challenges are often linked to broader weaknesses in local government financing and capacity, particularly the mismatch between statutory responsibilities and available fiscal resources (World Bank, 2021).

At the most proximate scale, studies of Community Development Associations in Ogun State, which directly encompasses the Abeokuta North local government area, demonstrate that CDAs coordinate road maintenance principally through voluntary labour, diaspora remittances, and compulsory household levies (Olawale, 2022). Residents interviewed in these studies consistently rated community-led road works as more

transparent than government-contracted projects, attributing this to direct community monitoring of materials procurement and labour deployment. However, weak technical expertise among CDA leadership leads to systematic under-specification of road foundations, reducing structural durability and necessitating repeated maintenance cycles that amplify household financial burden (Olawale, 2022). Unequal contribution capacity across socioeconomic groups generates distributional inequities within communities, as wealthier households disproportionately benefit from roads they contributed to financing while low-income and tenant households are frequently excluded from governance decisions (Olawale, 2022). The recommendation that community-led road projects be embedded within local government annual budgets and supported through formal co-financing arrangements provides a normative benchmark directly relevant to the present study (Olawale, 2022; World Bank, 2021).

The cross regional evidence converges on several robust findings. Community engagement consistently improves perceived transparency in road governance and demonstrably mobilises resources in contexts of state under provision. However, the durability of infrastructure outcomes, the equitable distribution of benefits, and the technical quality of construction remain persistently weak without three enabling conditions: institutional embeddedness within local government planning and budgeting, sustained professional technical oversight, and explicit safeguards against gender exclusion and elite capture. These conditions are documented as absent or partial in all three regional contexts reviewed, and are specifically confirmed as absent in Ogun State and across the five Nigerian states examined by Adeyemi and Oladipo (Mensah, 2021; Adeyemi & Oladipo, 2023; Aina & Omoregie, 2024).

Against this comparative background, three significant gaps in the existing literature are identifiable. First, the applicability of theoretical frameworks developed in Western and large urban African contexts including Arnstein's (1969) Ladder of Citizen Participation, the IAP2 Spectrum (IAP2, 2018), and co production theory (Ostrom, 1996) to mid-sized Nigerian local government areas with distinct socio-political configurations and fiscal constraints has not been empirically tested (Fadare et al., 2013; Echendu, 2023). Second, no existing study systematically examines how technical oversight, gender inclusion, diaspora contributions, climate adaptation, and digital monitoring interact as a combined set of governance conditions in mid-sized Nigerian cities. The studies reviewed here analyse these factors independently, precluding conclusions about their joint effects on participatory governance quality and infrastructure outcomes (Mwangi & Njeri, 2020). Third, longitudinal evidence on procedural fairness and sustainability across the full road project lifecycle from initial planning through construction, monitoring, and long term maintenance is entirely absent for Abeokuta North and rare in the Nigerian literature more broadly. Existing studies privilege short term construction outcomes or initial consultation processes, leaving the lifecycle dimension unexamined (Adekunle, 2021).

3.0 Methodology

3.1 Framework for the Research

A convergent mixed-methods design was employed so that information from different sources could be collected and compared. The quantitative component involved the administration of structured questionnaires to residents and community leaders, which generated numerical evidence on awareness, satisfaction, and participation in infrastructure projects. The qualitative component consisted of three activities: conducting key informant interviews with policymakers, local officials, and civil society representatives; organising focus group discussions with residents, youth groups, and community associations to capture varied perspectives; and analysing policy documents, government reports, and related records to identify participation patterns and gaps.

3.2 Materials and Methods

3.2.1 Study Area

The study was conducted in Abeokuta North Local Government Area, a rapidly expanding administrative area in Ogun State, Nigeria. The LGA contained both urban and peri-urban settlements where residents experienced unequal access to basic amenities, particularly road networks essential for mobility, trade, and services. The study population comprised residents, members of Community Development Associations, elected officials, government engineers and technical officers, and traditional leaders.

3.2.2 Database for the Study/Methodology

Abeokuta North Local Government Area comprises sixteen (16) wards, of which five were purposely selected for this study. The selection focused on wards where service road construction and maintenance projects were ongoing or had recently been completed, with visible community involvement in planning or execution. Additionally, these were areas where target respondents were readily accessible, thereby facilitating effective data collection. The selected wards were Elega (Ward 4), Ilugun (Ward 5), Totoro Sokori (Ward 11), Ita Oshin Olomore (Ward 12), and Ibara Idiya (Ward 16).

The study population was derived from the projected 2025 population of Abeokuta North Local Government Area, estimated at 375,438 using the compound growth formula, based on the 2006 census figure of 198,793 and an annual growth rate of 3.4 per cent. The minimum required sample size was subsequently determined using Yamane's (1967) formula: $n = N / (1 + Ne^2)$, applying a 95 per cent confidence level, a 5 per cent margin of error, and a population proportion of 0.5 (Nanjundeswaraswamy & Divakar, 2021; Adam, 2020), which yielded an approximate sample size of 384 households.

To achieve balanced representation across the study area, the total sample of 384 households was proportionally distributed among the five selected wards using the number of polling units per ward as a proxy for relative population size. This approach was necessitated by the non-availability of disaggregated official population figures at the ward level for Abeokuta North Local Government Area. Polling units, being administratively

assigned by the Independent National Electoral Commission (INEC) in proportion to the registered voter population within each ward, provide a reasonable and widely accepted proxy for estimating relative population distribution at the sub-local government level. The proportion of polling units in each ward relative to the total number of polling units across the five selected wards was therefore used to allocate questionnaires accordingly. Structured questionnaires were administered to 384 households across the selected communities. Of this number, 375 were successfully retrieved and found suitable for analysis, representing a response rate of 97.7 per cent. The distribution of questionnaires across the five wards is presented in Table 1.

Table 1: Questionnaire Distribution in Abeokuta North Local Government Area (2025).

Wards	Wards Name	Number of Polling Units	Proportion	Share of Sample (%)	Questionnaires Allocated
Ward 11	Totoro Sokori	39	0.2747	27.47	105
Ward 5	Ilugun	34	0.2394	23.94	92
Ward 16	Ibara Idiya	28	0.1972	19.72	76
Ward 12	Ita Oshin Olomore	21	0.1479	14.79	57
Ward 4	Elega	20	0.1408	14.08	54
Total		142		100.00	384

Source: Author's field survey, 2025

For the qualitative survey, participants were purposively drawn from the same wards as the quantitative survey. Twelve key informant interviews were conducted with representatives from the Works Department, the local government chairperson's office, Community Development Association executives from each ward, and traditional leaders. Three focus group discussions were held with women's associations, youth groups, and transport operators.

3.2.3 Instrumentation and Data Analysis

Structured questionnaires were used to gather data on several dimensions of citizen engagement, including the level and form of participation, awareness of infrastructure planning processes, satisfaction with project outcomes, and perceptions of government responsiveness. The questionnaire incorporated Likert scale items and multiple-choice questions and was pre-tested to ensure clarity, comprehensibility, and reliability. A pilot study with forty respondents from a neighbouring local government area yielded a Cronbach's alpha coefficient of 0.84, indicating strong internal consistency.

Quantitative data were processed and analysed using SPSS version 26. Descriptive statistics, including frequencies, percentages, and cross-tabulations, were used to summarise respondent characteristics and identify patterns among different stakeholder groups. For inferential purposes, Spearman Rank Correlation analysis was performed to investigate the relationships between participation variables and outcomes in urban road infrastructure projects. Qualitative data were analysed thematically, with key themes identified and interpreted in relation to the quantitative findings.

4.0 Results and Discussion

4.1 Stages of Road Infrastructure Provision Projects

The analysis of community awareness across the seven stages of road infrastructure projects revealed clear variations in engagement patterns. Table 2 presents the awareness levels across the seven phases.

Table 2: Awareness of Community Members' Activities Across Project Phases

Phase	Level 4 Aware (%)	Level 5 Fully Aware (%)
Need Identification	49.1	13.6
Planning and Design	50.4	15.7
Budgeting	13.3	11.5
Site Selection	49.9	13.3
Construction	44.8	20.5
Monitoring and Evaluation	22.4	22.9
Maintenance	50.9	23.7

Source: Author's field survey, 2025

Maintenance activities recorded the highest level of awareness, with 50.9 per cent of respondents rating themselves as aware at Level 4. Planning and Design (50.4 per cent), Site Selection (49.9 per cent), and Need Identification (49.1 per cent) also recorded high awareness levels, indicating that residents are relatively well informed about project phases that directly affect their communities and involve visible consultation processes. Construction followed with 44.8 per cent of respondents reporting awareness, suggesting that residents are most informed about project phases that are tangible and directly impact daily routines.

The Budgeting phase recorded the lowest level of awareness among all stages. It was dominated by neutral responses at 53.3 per cent, indicating that many residents possess only a moderate or limited understanding of financial planning processes. Only 24.8 per cent of respondents reported strong knowledge of project budgeting, suggesting limited transparency and minimal community influence over financial decision-making.

The Monitoring and Evaluation stage displayed a relatively balanced but polarised distribution of responses. While 45.3 per cent of respondents reported adequate knowledge, a nearly equal proportion of 44.6 per cent expressed limited familiarity. This polarisation reflects divergent interpretations of what monitoring and evaluation entail and suggests inconsistencies in stakeholder communication regarding oversight activities.

Ward-level analysis revealed spatial disparities in awareness across project stages. Totoro Sokori recorded the highest awareness in Need Identification, with 70 respondents reporting Level 4 awareness, while Ita Oshin Olomore recorded the lowest awareness in the Budgeting phase, with only 7 respondents reporting Level 4 awareness.

4.2 Stakeholder Involvement at each Project Stage

Stakeholder mapping revealed a distinct hierarchy in road infrastructure governance. Table 3 presents the distribution of key stakeholders involved in road infrastructure projects.

Table 3: Key Stakeholders' Involvement in Road Infrastructure Projects

Key Stakeholders	Frequency	Percentage (%)
Local Government	135	36.0
Residents	112	29.9
Contractor	60	16.0
Nongovernmental Organizations	34	9.0
Religious Leaders	22	5.9
Traditional Leaders	12	3.2
Total	375	100.0

Source: Author's field survey, 2025

Local Government authorities and residents emerged as the most dominant actors, jointly accounting for 247 responses representing 65.9 per cent of total stakeholder engagement. Local Government recorded the highest participation with 135 responses representing 36.0 per cent, demonstrating its central responsibility for infrastructure planning, project approval, funding allocation, and regulatory oversight. Residents ranked second with 112 responses representing 29.9 per cent, reflecting their role as both project beneficiaries and contributors to infrastructure development.

Stage-by-stage quantification showed distinct participation patterns. Residents were most active during Need Identification, with 86.1 per cent involvement and Construction with 88.0 per cent involvement. Local Government maintained consistently high involvement across most phases, particularly during Need Identification at 81.9 per cent, Budgeting at 80.5 per cent, and Site Selection at 84.5 percent. Contractors displayed phase-specific participation, with limited involvement during early conceptual stages but greater participation during Budgeting and Construction. All stakeholders showed dramatically reduced involvement during Monitoring and Evaluation and Maintenance phases, with engagement dropping to between 24 per cent and 48 per cent across stakeholder categories.

The types of community participation revealed that involvement is largely structured along resource-based contributions rather than governance-related activities. Table 4 presents the types of community participation.

Table 4: Types of Community Members' Participation in Road Infrastructure Projects

Participation Type	Frequency	Percentage (%)
Financial contributions	131	34.9
Labour voluntary work	94	25.1
Decision-Making	75	20.0
Materials	56	14.9
Oversight	19	5.1

Total	375	100.0

Source: Author's field survey, 2025

Financial contributions were the most frequent, accounting for 34.9 per cent of total participation, followed by labour inputs at 25.1 per cent. Combined, financial and labour contributions made up nearly three-quarters of all participation, indicating that community members primarily serve as providers of funds and materials rather than as active decision makers. Participation in decision-making activities accounted for 20.0 per cent, while oversight-related participation was markedly low at 5.1 per cent.

4.3 Factors Influencing Stakeholder Participation

The evaluation of factors influencing community participation revealed a clear hierarchy in perceived importance. Responses were measured on a five-point Likert scale where ratings of 4 (important/limiting) and 5 (very important/very limiting) were combined to represent high influence or high limitation. Table 5 presents the factors influencing community participation.

Table 5: Factors Influencing Community Participation (High Influence Ratings)

Factor	Percentage Rating 4 and 5
Trust in authorities	84.8
Transparency in decision-making	77.9
Adequate information flow	70.9
Supportive leadership	63.7
Policy support	55.2
Capacity building	48.6
Community cohesion	42.4
Participation incentives	29.1

Source: Author's field survey, 2025

Responses rated **4 (Important)** and **5 (Very Important)** on the five-point Likert scale were classified as **high influence ratings**. Trust in authorities emerged as the most influential factor, with 84.8 per cent of respondents rating it as important or very important. Transparency in decision-making recorded the second-highest level of perceived importance, with 77.9 per cent of respondents rating it as important or very important. Adequate information flow ranked third, with 70.9 per cent of respondents rating it within the high influence categories. The least influential factor identified was participation incentives, where only 29.1 per cent of respondents rated it as highly influential.

Regarding factors limiting participation, Table 6 presents the severity of constraints.

Table 6: Factors Limiting Community Participation (High Limitation Ratings)

Factor	Percentage Rating 4 and 5
Limited finances	77.6
Lack of trust in government	72.8
Political interference	67.5
Poor communication from the authorities	53.1

Low awareness	37.1
Social and gender bias	24.6
Lack of legal frameworks	15.4

Source: Author's field survey, 2025

Responses rated 4 (High Limitation) and 5 (Very High Limitation) on the five-point Likert scale were classified as high limitation ratings. Limited finances received the highest severity ratings, with 77.6 per cent of respondents rating it as a high or very high limitation. Lack of trust in government was rated as a high or very high limitation by 72.8 per cent of respondents, and political interference was perceived as a significant constraint by 67.5 per cent of respondents.

4.4 Impact of Citizen Participation on Road Project Outcomes

The analysis of participation impacts showed a clear hierarchy in perceived benefits. Table 7 presents the perceived impacts of community participation.

Table 7: Impacts of Community Participation (High Impact Ratings)

Outcome	Percentage Rating 4 and 5
Improved quality of roads	85.1
Community acceptance	77.6
Improved socioeconomic benefits	62.9
Timely project completion	53.1
Maintenance and sustainability	48.6
Reduced project conflicts	42.4
Enhanced transparency	32.0
Cost efficiency	29.1
Increased stakeholder accountability	22.4

Source: Author's field survey, 2025

Improved quality of roads represented the most strongly perceived benefit, with a combined 85.1 per cent of respondents rating this outcome as high or very high. Community acceptance of projects recorded the second-highest positive rating, with 77.6 per cent of respondents selecting the highest categories. In contrast, governance-related outcomes recorded relatively lower ratings, with enhanced transparency at 32.0 per cent and increased stakeholder accountability at 22.4 per cent.

Table 8 revealed satisfaction levels varied significantly across construction components. The highest satisfaction levels were recorded for road earthwork grading, where 65.6 per cent of respondents indicated satisfaction or high satisfaction. Drainage construction followed at 54.4 per cent satisfaction, and installation of street lighting at 49.3 per cent satisfaction. The lowest satisfaction levels were associated with aesthetic components, including footpaths at 34.7 per cent, roundabouts at 29.8 per cent, and beautification of road medians at 24.3 per cent.

Table 8: Weighted Mean for Level of Satisfaction of Respondence

Criterion	Mean	Satisfaction %
Road Earthwork Grading	3.76	65.6%
Drainage Construction	3.53	54.4%
Installation of Street Light	3.43	49.3%
Road Construction	3.24	39.5%
Foot-path	3.19	34.7%
Roundabout	3.00	29.8%
Beautification of Road Median	2.58	24.3%

Source: Author's field survey, 2025

Post-completion monitoring by residents remained limited, with 62.4 per cent of respondents indicating they never or rarely monitor completed projects. This finding is particularly significant because post-project evaluation is widely recognised as an essential component of infrastructure management, yet ex-post evaluation and community monitoring remain among the least developed aspects of project governance (Arnstein, 1969; Sukasuka et al., 2022). The inability or unwillingness of community members to engage in post-completion monitoring suggests that participation in road infrastructure projects in Abeokuta North Local Government Area is largely concentrated in the earlier, more visible phases of project delivery, while oversight functions — which are central to accountability and sustainability — remain underdeveloped at the community level.

The Spearman Rank Correlation analysis in table 9, revealed significant positive relationships between participatory variables and project outcomes with the significance level set at $\alpha = 0.01$ (two-tailed). Road project outcomes showed the strongest association with community satisfaction ($\rho = 0.621$, $p < 0.01$), followed by stakeholder relationships ($\rho = 0.573$, $p < 0.01$), monitoring frequency ($\rho = 0.401$, $p < 0.01$), and social inclusion ($\rho = 0.356$, $p < 0.01$).

Although a positive association was observed between monitoring frequency and social inclusion ($\rho = 0.295$), this coefficient did not attain statistical significance at the predetermined $\alpha = 0.01$ threshold (two-tailed) and is therefore excluded from substantive interpretation. The remaining pairs all yielded statistically significant positive coefficients ($p < 0.01$), reflecting a uniformly consistent directional pattern across the study variables. This uniformity suggests that improvements in any one variable tend to co-occur with improvements in the others, lending support to the coherence of the study's conceptual framework.

Table 9: Spearman's Rank Correlation Matrix Among Study Variables

Variable	1	2	3	4	5
1.Road project outcomes	-	.621**	.573**	.401**	.356**
2.Community satisfaction	.621**	-	.544**	.362**	.418**
3.Stakeholder relationship	.573**	.544**	-	.338**	.451**
4.Monitoring frequency	.401**	.362**	.338**	-	*.295*
5. Social inclusion	.356**	.418**	.451**	*.295*	-

N = 375

Correlation is significant at 0.01 level (2 tailed)**

4.5 Policy and Structural Reforms

Strong community support emerged for structural reforms across all wards. Table 8 presents the perceived effectiveness of reform strategies.

Table 10: Perceived Effectiveness of Reform Strategies

Strategy	Percentage Rating 4 and 5
Transparent budgeting and procurement	80.0
Strengthening monitoring and evaluation mechanisms	73.0
Legal backing for participation	71.8
Capacity building for residents	62.6
Strengthening Community Development Associations	61.1
Public sensitization campaigns	62.4
Regular public forums	56.2
Use of information and communication technology platforms	32.0

Source: Author's field survey, 2025

Transparent budgeting and procurement processes received the strongest endorsement, with 80.0 per cent of respondents rating it as effective or very effective. Strengthening monitoring and evaluation mechanisms resulted in 73.0 per cent high effectiveness ratings. The least effective strategy across all wards was the use of ICT platforms for participation, with only 32.0 per cent of respondents rating ICT-based approaches as effective.

When ranking reforms by priority, clear policy frameworks emerged as the top priority selected by 39.6 per cent of respondents. Adequate funding for participation ranked second at 29.8 per cent, followed by legal protection for citizen input at 20.0 percent. Training for government officials received 10.1 percent while strengthening community

institutions received only 0.5 per cent as first choice priorities. Support for mandatory participation was overwhelming at 74.4 per cent across all wards, with only 25.6 per cent expressing opposition. Ward-level support ranged from 72.2 per cent to 76.0 per cent, demonstrating remarkable consistency and a clear democratic mandate for institutionalising participation beyond discretionary.

4.6. Discussion

The findings reveal a consistent pattern of stage-dependent participation in road infrastructure development within Abeokuta North. Community engagement is strongest during visible and experiential phases, particularly in need identification, construction, and maintenance, where residents directly observe or contribute to physical works. Awareness of site selection and planning and design also registers at comparatively notable levels, suggesting that early project stages involving consultation and site appraisal attract meaningful community attention. In contrast, administrative and technical stages such as budgeting and monitoring and evaluation receive markedly lower levels of participation. The budgeting phase, which governs resource allocation and financial decisions, remains largely opaque to community members, while monitoring and evaluation despite its critical role in ensuring quality and accountability engages only a limited proportion of residents. This pattern indicates that community members are positioned as observers, contributors of labour, or beneficiaries rather than as active partners in planning and financial decision-making. The consistent disparity between tangible implementation stages and procedural oversight stages underscores a systemic gap in participatory governance, where communities are mobilised for physical contributions but excluded from strategic choices that shape project outcomes and long-term sustainability (Sharma, 2021).

Across the studies reviewed, a recurring pattern emerges in which community involvement in road infrastructure projects is formally encouraged but remains largely symbolic in practice, with financial planning and key technical decisions retained by government and professional authorities. This pattern is further illustrated in participatory urban upgrading initiatives in Brazil, where community involvement has been found to be largely tokenistic in practice, with major decisions regarding project design and financing shaped predominantly by state and private actors rather than by residents (Friendly, 2019; Friendly & Stiphany, 2019).

The statistical analysis revealed a significant relationship between stakeholder type and the stage of project involvement. Government actors are primarily concentrated in the planning and oversight stages, controlling strategic decisions and resources. In contrast, residents and Community Development Associations are largely involved in project execution and long-term maintenance, responsible for on-the-ground labour and sustainability. This pattern reflects broader trends observed globally and across Nigeria, where community participation is often channelled into implementation support after key decisions are made by authorities (Harris, 2022).

The convergence of these local, national, and global patterns indicates a systemic participatory disparity. This reinforces a top-down governance model where community

labour and local knowledge are utilised for delivery, but meaningful influence over initial priorities and design remains minimal, potentially compromising project relevance and long-term ownership despite the community's essential role in practical success.

Regarding the impacts of participation, the analysis revealed that participation produced stronger outcomes in road quality and ownership but weaker effects on accountability and transparency. While communities achieve short-term infrastructure improvements, long-term maintenance, inclusiveness, and social benefits are less assured. International examples support these findings. In Chile, participatory road projects improved local control over infrastructure, achieving short-term success, yet long-term governance improvements were limited (Rojas, 2020). In Australia, structured citizen participation enhanced infrastructure quality, though public confidence in transparency and accountability remained uneven (Mitchell, 2021).

The strong community support for mandatory participation and the prioritisation of policy frameworks, funding, and legal protections reflect a sophisticated understanding of what is required to make participation meaningful and sustainable. Residents recognise that without enforceable rules, resources to support engagement, and legal safeguards for their input, participation will remain vulnerable to political manipulation and bureaucratic discretion. This demand for institutionalisation aligns with hybrid governance models that combine government support and technical expertise with community mobilisation and oversight (Nugroho, 2021).

5.0. Contribution to Knowledge

This study makes several important contributions to the field of urban and regional planning and participatory governance in infrastructure development. First, the study provides empirical evidence on the patterns and effectiveness of public participation in road infrastructure provision in a secondary Nigerian city, an area that has received limited scholarly attention compared to major metropolitan centres like Lagos, Abuja, and Port Harcourt. The findings contribute to understanding how participatory processes operate in mid-sized cities with constrained institutional capacity and resources.

Second, the study develops and applies a multidimensional framework for evaluating public participation that encompasses procedural, substantive, normative, and transactive dimensions of effectiveness. This framework moves beyond simply recording whether participation occurs to assessing its depth, influence, and alignment with democratic principles, offering a replicable model for similar studies in other Nigerian and West African cities. Third, the research identifies the specific stages of road projects where community engagement is strongest and weakest, revealing critical gaps in budgeting and oversight that undermine long-term sustainability and accountability. This granular understanding of stage-specific participation patterns provides actionable insights for policymakers and practitioners seeking to strengthen participatory governance across the entire project lifecycle.

Fourth, the study quantifies the relative influence of different stakeholder groups and identifies the factors that most significantly enable or constrain meaningful participation. The finding that trust in authorities and transparency in decision-making are the most critical drivers of participation, while financial constraints and political interference are the most significant barriers, provides clear guidance for reform priorities. Fifth, the research demonstrates the central role of Community Development Associations as mobilizers and official liaisons in participatory governance, while also revealing their limited influence in strategic decision-making. This highlights both the potential and the limitations of community-based organizations and underscores the need for institutionalized recognition and support. Sixth, the study provides evidence-based recommendations for policy and structural reforms, prioritizing clear policy frameworks, adequate funding, and legal protection for citizen input. These recommendations are grounded in community preferences and statistical analysis, ensuring their relevance and legitimacy.

6.0 Limitations of the Study

While this study provides valuable insights into public participation in road infrastructure provision in Abeokuta North, some limitations should be acknowledged. The geographical scope was confined to five wards within Abeokuta North Local Government Area, which narrows the generalisability of findings to other local government areas with different socio-political and institutional contexts. The cross-sectional design captures participation patterns at a single point in time, making it difficult to track how involvement evolves across the full project lifecycle. The reliance on self-reported data may also introduce respondent bias or recall limitations, as participants' perceptions may not fully align with objective realities. Finally, the focus on road infrastructure limits the transferability of findings to other sectors such as water supply, electricity, or sanitation, which operate under different governance dynamics. Despite these limitations, the study offers a robust empirical foundation for understanding participatory governance in urban road infrastructure provision within a secondary Nigerian city.

7. Conclusion and Recommendations

7.1. Conclusion

This study demonstrates that community participation in road infrastructure provision in Abeokuta North is active but constrained. Engagement is high in execution and maintenance but minimal in budgeting and oversight, perpetuating a system where communities are essential labour forces but not recognized as strategic decision-makers. The study confirms that education and Community Development Association membership empower residents to participate more effectively, yet outcomes remain primarily technical and short-term, with limited impact on governance and accountability.

The research reveals that stakeholders contribute through financial levies, voluntary labour, and material provision, but their involvement in decision-making and oversight remains limited. Major barriers including financial constraints, lack of trust in government, and political interference continue to undermine participatory processes. However, where

participation occurs, it yields significant benefits including improved road quality, community acceptance, and enhanced socioeconomic opportunities.

Communities' strong support for hybrid governance models and mandatory participation underscores the importance of co-production between government agencies and local actors. The study concludes that sustainable and effective road infrastructure provision requires institutionalised participation across all stages, integrating citizen input from planning to monitoring, supported by clear policy frameworks, adequate funding, and legal protection for citizen voices.

7.2. Recommendations

1. Strengthen Participatory Planning Frameworks

Local governments should institutionalise community input through structured workshops, participatory mapping exercises, town hall meetings, and prioritization sessions. These mechanisms should be embedded within local government planning processes to ensure that community voices are systematically incorporated into project design and decision-making.

2. Institutionalise Hybrid Governance Models

Community Development Associations should be formally recognised as co-producers in road infrastructure delivery, with clear responsibility allocation across planning, execution, monitoring, and evaluation. This requires establishing formal partnership agreements between local government and community organisations, defining roles, responsibilities, and accountability mechanisms.

3. Enhance Capacity Building for Stakeholders

Adult literacy programs, civic education, and technical training should be introduced to improve residents' ability to engage meaningfully in decision-making. Training should cover project cycle management, budgeting processes, technical standards, and monitoring techniques to empower communities to participate effectively across all project stages.

4. Strengthen Monitoring and Accountability Mechanisms

Communities should be equipped with practical tools including citizen scorecards, mobile reporting applications, and community audit teams to ensure transparency and sustainability. These mechanisms should be linked to formal grievance redress systems that ensure community feedback is acknowledged and acted upon.

5. Ensure Adequate Resource Mobilization and Support

Government funding and technical support should be combined with community labour and knowledge through structured co-financing arrangements. Public-private partnerships should be explored where appropriate, ensuring that community contributions are recognized and matched with institutional resources.

6**. Provide Legal Backing for Participation**

Clear legal frameworks should be established to protect citizen input and ensure that participation is not merely symbolic. Legislation should mandate community involvement in all phases of road infrastructure projects, define minimum standards for engagement, and establish sanctions for non-compliance.

7**. Address Political Interference**

Mechanisms should be put in place to insulate project implementation from political manipulation. This includes transparent procurement processes, independent project oversight committees, and protection for community members who raise concerns about project quality or resource allocation.

8**. Promote Inclusive Participation**

Deliberate strategies should be adopted to ensure that marginalized groups including women, youth, persons with disabilities, and low-income residents are represented in participatory processes. This may include targeted outreach, quota systems in community committees, and accessible meeting formats.

8.0. Further Areas of Research

Future research should expand in several key directions: comparative studies across urban and rural local government areas to understand how contextual differences shape participation outcomes; longitudinal research tracking road projects from inception to post-completion to assess long-term effects on trust, sustainability, and civic engagement; gender-disaggregated investigations into disparities in access and influence within infrastructure decision making; evaluation of digital participation platforms and ICT adoption, including generational differences in engagement; deeper political economy analysis of elite capture, power dynamics, and exclusionary practices using ethnographic methods; cost benefit analyses to determine whether the outcomes of participatory approaches justify their financial and administrative costs; cross-sectoral comparisons across roads, water, electricity, and sanitation to identify sector specific dynamics; institutional assessments of local government capacity in terms of staffing, funding, and technical expertise; and finally, exploration of how participatory governance can be integrated with climate resilience planning to incorporate local knowledge into sustainable, environmentally adaptive infrastructure design.

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