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Rapid Population Growth and Infrastructural Challenges in Dodoma City, Tanzania

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Abstract

Rapid urbanization and population growth across African cities have intensified infrastructural challenges, particularly in the delivery of essential services such as transport, water, healthcare, education, and housing. As urban populations expand, often doubling within a decade, pressure on infrastructure deepens, especially in peripheral zones where disparities in service access are most pronounced. This study examines the nature and extent of these challenges using a mixed-methods approach, combining household surveys, key informant interviews, and focus group discussions. The quantitative data were collected from 400 randomly selected households across five urban wards. The results show that 67.6% of the respondents face limited access to basic services, 56.3% report poor road conditions, and 33.3% experience water shortages. Additional concerns include overcrowded classrooms, understaffed health facilities, and unaffordable services; with women and low-income groups being disproportionately affected. The findings highlight how spatial governance dynamics contribute to infrastructural deficits amid rapid urban growth. The study recommends inclusive planning and targeted investment in underserved areas to foster sustainable and equitable urban development.

Keywords: *population growth, urbanisation, human settlements, migration, Tanzania*

1. Introduction

Urbanization represents a transformative force in global development, with over 55% of the world's population residing in urban areas, a figure expected to rise to 68% by 2050 (UN-Habitat, 2020; UNDP, 2019). This demographic shift is accompanied by an estimated global population increase of 835m people between 2019 and 2030, placing mounting pressure on urban infrastructure, services, and land. These dynamics challenge the realization of the Sustainable Development Goal (SDG) 11, which envisions inclusive, safe, resilient, and sustainable cities. From a critical geography perspective, urbanization must be understood as more than a demographic trend: it reflects entrenched power relations and spatial injustices that determine whose interests are prioritized in urban planning and development.

Globally, the nature of urbanization is multidimensional and uneven. As of 2007, half of the global population lived in cities, with projections reaching 68% by 2050 (World Bank, 2021). However, this growth is highly asymmetrical: Africa

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and Asia are projected to account for 90% of urban expansion, with the majority still residing in rural areas (Leeson, 2018; UNECA, 2017; Li et al., 2018). These disparities highlight the urban political economy of development, where economic and policy structures often neglect peripheral regions in favour of capital-intensive urban cores, thereby reinforcing socio-spatial inequalities.

Urbanization is also deeply spatial. Theories—such as the Central Place Theory (CPT)—help explain the clustering of infrastructure and services in core zones, leaving peripheral areas underserved. Urban areas now occupy approximately 0.2–2.4% of the earth's surface (World Bank, 2021; Appelt et al., 2022), and land use changes are increasingly concentrated in Southeast Asia, Eastern China, and Sub-Saharan Africa (SSA) (Farrell, 2017; Li et al., 2024). These changes are not neutral but are shaped by institutional, political, and economic forces that favour elite-driven development at the expense of equitable access.

In Africa, urban populations have doubled from 1995 to 2015, and are expected to double again by 2035 (Leeson, 2018). While East Africa leads in the growth rate, Southern Africa remains the most urbanized sub-region. From a critical geography and urban political economy perspective, these shifts—as noted by OECD/SWAC (2020)—are not simply the result of organic population increases, but are driven by deep-rooted socio-political inequalities, land commodification, and development patterns that prioritize investment in core zones while marginalizing the urban periphery. Migration and natural population growth are thus not isolated demographic phenomena, but manifestations of unequal spatial development underpinned by policy and institutional structures.

Tanzania exemplifies this reality. Urbanization increased from 5% in 1967 to 34.9% in 2022, and is projected to reach 67.8% by 2050 (URT, 2024; REPOA, 2022). However, this expansion has outpaced infrastructural development, leading to housing deficits, water shortages, and overwhelmed transportation systems (UNICEF, 2022; Kii, 2021). These challenges stem not just from technical issues but from governance and economic priorities that systematically exclude the urban poor. As the urban political economy theory emphasizes, infrastructure development is guided by elite interests, capital flows, and the commodification of urban land.

Dodoma City, Tanzania's capital since 1973, serves as a key case for analysing urbanization and infrastructure strain. Its recent transformation, driven by the government relocation initiative in 2016, has triggered exponential growth in population and infrastructure demand. Yet, this growth has been uneven and inadequately planned, resulting in systemic deficits in healthcare, education, transport, and water services (Msuya et al., 2020; Gwaleba, 2018). The emergence of informal settlements and fragmented service delivery points to institutional failures in managing rapid urban transitions, a key concern of critical geography.

This study sought to investigate infrastructural challenges arising from Dodoma's rapid urbanization by focusing on transportation, housing, water, education, and healthcare. By anchoring its analysis in critical geography, urban

political economy, and the Central Place Theory, the study seeks to uncover the power-laden spatial processes that shape urban growth and marginalization. It aims to generate insights that inform equitable, sustainable, and participatory urban planning practices.

While demographic growth and migration contribute to urban expansion, this study moves beyond population-based explanations by applying the UPST and pragmatic research philosophy to examine the structural and spatial mechanisms driving infrastructural inequality (Pieterse, 2022). The Central Place Theory further reveals how service provision remains concentrated in urban cores, reinforcing exclusion in peripheral zones (Ballard & Harrison, 2020). In Dodoma City, these lenses reveal a dual challenge: population growth increases demands, while governance failures and spatial biases exacerbate infrastructure deficits. A multi-theoretical framework helps trace how political decisions shape unequal urban outcomes.

Despite the growing literature on urbanization in Africa, little empirical work addresses the spatial-political dynamics of infrastructure in fast-growing secondary cities, such as Dodoma. This study fills that gap through a mixed-methods approach, generating context-specific insights rooted in local realities. The findings inform municipal policy, and contribute to broader debates on inclusive urban transformation in the Global South, emphasizing the need for planning frameworks that respond to spatial disparities and reflect lived experiences.

2. Methodology of the Study

This study employed a cross-sectional design within a mixed-methods framework, guided by the Urban Political Space Theory (UPST) and the Central Place Theory (CPT). These frameworks illuminate how governance structures, institutional priorities, and spatial arrangements shape infrastructure outcomes and service accessibility. Rather than viewing infrastructure as a neutral byproduct of urban growth, the study critically examined it as a reflection of spatial politics and power relations. This approach enabled a nuanced analysis of socio-spatial inequalities linked to rapid urbanization.

Further, the study adopted a mixed-methods design grounded in pragmatic research philosophy, which emphasizes context-sensitive and policy-relevant inquiry. The research that led to this paper was conducted in Dodoma City; Tanzania's capital, and a rapidly urbanizing area facing significant infrastructural strains. The study population comprised residents of five strategically selected wards: Msalato (63), Nala (58), Ihumwa (119), Matumbulu (55), and Chamwino (105); yielding a total sample size of 400 respondents.

To ensure spatial representation, stratified random sampling was applied across five city blocks—north-east, north-west, south-east, south-west, and central—defined using the CPT. One ward was randomly selected from each block, and within each, three high-density streets were purposively chosen to reflect urbanization pressures. Household heads from these streets were then randomly

interviewed. This design captured spatial disparities highlighted in both the UPST and CPT. Complementing the survey, purposive sampling identified key informants, urban planners, local officials, and utility managers; who later participated in FGDs and in-depth interviews. These engagements provided insights into governance dynamics and institutional factors shaping service delivery and resource allocation.

The quantitative data were gathered through structured questionnaires to examine service access, housing, and infrastructure across varied socio-economic and spatial contexts. Qualitative insights were obtained via interviews and focus group discussions (FGDs). Descriptive statistics identified key disparities and mismatches in service provision; while thematic analysis—using NVivo—revealed patterns of infrastructural neglect, governance inefficiencies, and spatial exclusion. By triangulating survey, interview, and spatial data, the study addressed challenges linked to rapid urban growth and infrastructure strain. Grounded in the UPST, the approach offered a critical lens for understanding and reforming infrastructural governance in Tanzania's rapidly urbanizing regions.

3. Data Collection and Analysis

This article examined how rapid population growth affects Dodoma City's infrastructure using a mixed-methods approach grounded in critical geography. Viewing spatial and infrastructural inequalities as products of political and economic forces, the study combined quantitative and qualitative data to explore how institutional power and uneven development shape urban life. Structured household surveys captured information on demographics, access to services, housing quality, and residents' perceptions of infrastructure across wards that were selected for their spatial and socio-economic diversity. This spatial selection reflects CPT's emphasis on the uneven distribution of services between urban cores and peripheral areas.

To complement household-level data, interviews were held with urban planners, local officials, and utility managers. These revealed key governance challenges and institutional gaps in infrastructure provision. Focus group discussions with residents, educators, and healthcare workers added insights into the lived experiences of deprivation. These qualitative methods supported the UPST by highlighting how governance and spatial politics shape inequality. The approach also reflects a pragmatic research philosophy, prioritizing relevant, experience-based inquiry tied to Dodoma's rapid population growth and infrastructural pressures.

The quantitative data were analysed using descriptive statistics to summarize service access and socio-demographic patterns. The qualitative data were coded in NVivo 12 through thematic analysis, revealing issues like infrastructural neglect, governance gaps, and adaptive community responses. Data triangulation enhanced validity and allowed for layered interpretation. The approach reflects a pragmatic research philosophy by emphasizing actionable, and context-driven

insights. It also applies the UPST to reveal how spatial arrangements and governance systems shape inequality in Dodoma City. Ultimately, it shows that addressing infrastructural challenges requires structural transformation; and not just technical fixes.

4. Results and Discussions

4.1 Water Resources and Scarcity

Figure 1 illustrates that limited access to clean and safe water (40.1%) and insufficient water supply (33.3%), constitute the most pressing challenges reported by households in Dodoma City. These findings highlight the severity of water insecurity in urban contexts. Additional constraints include inadequate water infrastructure (11.4%), substandard water treatment (6.7%), and contamination of water sources (5.8%): all of which pose significant risks to public health. A smaller proportion of the respondents (2.7%) identified unaffordable costs associated with water services, reflecting economic barriers to equitable access. Collectively, these challenges reveal systemic deficiencies in urban water provision; and highlight the need for targeted infrastructural and policy interventions to ensure safe, reliable, and affordable water access for all residents.

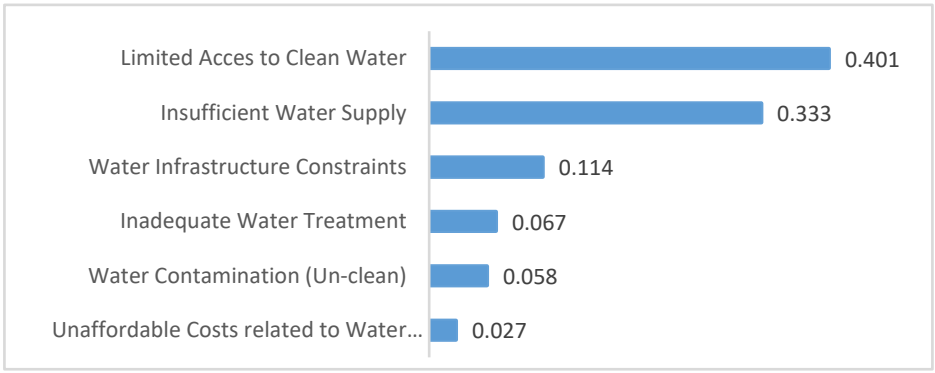

Figure 1: Percentage Response to Household Challenges Related to the Supply of Clean and Safe Water in Dodoma City
Source: Field data (2024)

While previous studies—e.g., by Swai and Anasel (2019)—identify water scarcity as a persistent urban issue, they largely attribute it to population growth and rural-urban migration. This study confirms these pressures in Dodoma City, but moves beyond demographic explanations. Drawing on the UPST, it demonstrates how governance practices and spatial hierarchies contribute to the uneven distribution of infrastructure. The CPT further explains how service investments favour core urban zones over peripheral areas. Guided by a pragmatic research philosophy, the findings highlight the need for structural reforms that address spatial and institutional drivers of exclusion, and not just technical upgrades.

Furthermore, the FGDs conducted in Msalato Ward provided additional qualitative insights into these challenges. The participants identified infrastructural inadequacies—including water leakage, limited supply, and the ward not being connected to the sewage system—as the key barriers to accessing clean water and sanitation services. Discussions with city officials highlighted complementary concerns regarding wastewater management systems, which have been strained by the city's rapid population growth and insufficient funding for necessary repairs and upgrades. These technical and financial obstacles underscore the urgent need for comprehensive strategies to address water access and sanitation issues.

The study underscores the critical importance of infrastructure improvement, increased financial investment, and active community participation in fostering sustainable solutions to urban water challenges. Studies by Masanja (2023) and Wawa (2021) have similarly stressed the role of infrastructure development and strategic urban planning in enhancing access to clean water in urban areas. Additionally, proactive policy measures and equitable resource distribution are essential in addressing these issues effectively. Failure to act could exacerbate public health crises; thereby hindering economic progress and contributing to environmental degradation, and ultimately threatening the sustainability and resilience of urban areas, such as Dodoma City.

4.2 Challenges of Roads/Pathways Infrastructure

Table 1 highlights that limited access to essential services (34.4%), road safety concerns (28.7%), and transport affordability (13.9%) as the most frequently cited challenges by the respondents, based on multiple responses. These issues are particularly acute in peri-urban and rapidly expanding wards where road and pathway infrastructure remains underdeveloped. When analysed by percentage of cases, limited access affected 67.6% of the respondents, followed by safety concerns (56.3%), and affordability (27.3%); indicating widespread exposure to these constraints. The cumulative effect of these challenges restricts mobility and access to vital services, reinforcing spatial and social inequalities across the City.

Table 1: Challenges of Roads/Pathways Affecting Residents

Challenges	Frequency	% Response	% Cases
Limited access to basic services	292	34.4	67.6
Restricted mobility	26	3.1	6.0
Safety concerns on roads/paths	243	28.7	56.3
Transport costs (affordability)	118	13.9	27.3
Poor transport facilities	89	10.5	20.6
Poor/insufficient road/path spaces	38	4.5	8.8
Traffic jams/congestion	42	5.0	9.7

Source: Field data (2024)

Field insights from Dodoma's city officials revealed that transportation challenges, especially in peri-urban zones, were intensifying with rapid population growth. Similarly, Masanja (2023) noted poor road conditions in Tanzania's secondary cities. However, this study moves beyond documenting physical shortcomings. The UPST enabled a deeper analysis of how governance practices shape spatial allocation, and revealed that investment decisions systematically favour central wards, leaving fringe zones underserved. This was not a result of physical geography or growth alone, but of institutional spatial preferences rooted in planning hierarchies.

Compounding these physical limitations, infrastructure distribution patterns were also informed by fragmented governance and inconsistent public transit operations, echoing the findings by Sende (2020). While prior studies have noted logistical inefficiencies, this study shows how they reflect institutional fragmentation and policy incoherence. The CPT offered a valuable interpretive tool: that transport infrastructure follows a spatial hierarchy that over-serves economic centres while neglecting areas with critical service gaps. Also, the pragmatic research philosophy proved pivotal: it prioritized context-based analysis and illuminated how daily commuting struggles stem from entrenched planning biases, not just capacity limitations.

The study found that poor road designs and the absence of pedestrian infrastructure have increased safety risks, particularly for school-aged children and residents in informal settlements. Kombe and Kreibich (2022) reported similar trends in Arusha, yet their accounts lacked spatial-theoretical grounding. By embedding these observations in the UPST, the study explained how unregulated growth and weak institutional oversight exacerbate vulnerability. Additionally, rising emissions from congestion showed that environmental degradation is a governance outcome. Similarly, the pragmatic philosophy supported this framing: it supported viewing environmental risks through the lens of local lived conditions and planning failures rather than abstract ecological metrics alone.

These findings mirror urban patterns across the Global South, where infrastructure gaps reinforce socio-spatial inequalities (Lupala et al., 2020; Lumun & Edwe, 2019). This study builds on that literature by empirically linking investment priorities to planning hierarchies and spatial governance. Through the UPST and the CPT, it reveals how exclusion is actively produced through institutional and spatial mechanisms. Also, guided by a pragmatic research philosophy, the study offers actionable recommendations: redirect political focus, reform governance structures, and reframe spatial priorities to address infrastructural disparities. Hence, it moves beyond a critique towards a strategic urban reform.

4.3 Challenges in Accessing Primary School Education

Figure 2 outlines the main challenges city residents face in accessing education. These include insufficient school infrastructure (32.6%), cultural and socio-economic obstacles (19.5%), and long travel distances between home and school (19.5%). The lack of adequate facilities—such as classrooms, libraries,

laboratories, playgrounds, and qualified teachers—was found to significantly impede effective education delivery. Additionally, extended travel distances, often resulting from family relocations, were shown to disrupt students' attendance and contribute to increased dropout rates. In some cases, these logistical difficulties discouraged parents from enrolling their children in schools altogether. Financial limitations, especially affecting girls due to household resource constraints and gender-based socio-economic disparities, further compound the barriers to educational access and participation in the study area.

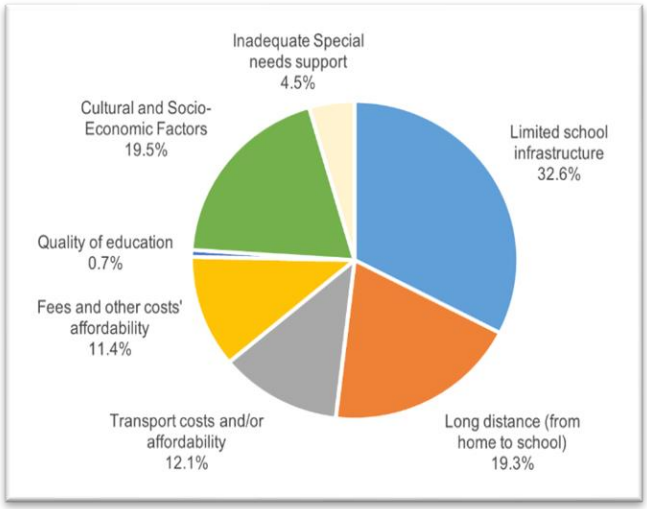

Figure 2: Household Challenges Related to Primary Education
Source: Field data (2024)

Moreover, FGDs revealed additional insights into the challenges facing access to primary school education. Participants reported that, despite reforms promoting fiscal decentralization, primary school education remained hindered by persistent structural barriers. This was echoed in a revelation made during FGDs, where one of the participants made the following comment:

> *"… the rapid expansion and increased urbanization of Dodoma City have coincided with the implementation of the fee-free education programme in primary and secondary schools, which has increased students' enrolment, leading to resource scarcity and insufficient staffing. The two phenomena are arguably among the contributing factors that compromise the quality of primary school education, and limit our children's access to education in the region"* ***(45–year-old Woman, Nala Ward, 2023)****.*

This statement underscores how, while improving enrolment, the fee-free education policy has inadvertently strained existing infrastructure. Dodoma's rising population has amplified the demand for learning materials, teaching staff, and facilities: challenges not adequately addressed through existing policy frameworks. As enrolment surges without proportional expansion in resources, the quality of education declines, especially in already underserved communities.

These study results reinforce earlier findings by Lucumay and Matete (2024) on dropout rates and inadequate school infrastructure in Tanzania; and also aligns with Juma and Opaga (2021) and URT (2020), who linked fee-free education policies to overcrowding and resource shortages. It extends these insights by revealing how such challenges vary spatially across Dodoma City, with the UPST illustrating how governance and planning decisions favour central zones while neglecting peripheral areas. Reported barriers—30% infrastructure deficits, 17.8% socio-economic constraints, and 17.7% long commuting distances—reflect both national policy shortcomings and localized planning failures. Guided by the pragmatic research philosophy, the study also generated spatially grounded evidence to support equitable education reforms.

Echoing studies by Kagaigai et al. (2023) and Kusunya (2022), this study confirms that underfunded schools and teacher shortages are intensified in rapidly growing urban areas. The CPT explains the concentration of school infrastructure in administrative cores, despite increasing demand in outlying zones, revealing structural inequalities embedded in urban governance. Also, grounded in the pragmatic philosophy, the study moves beyond a policy critique and proposes spatially responsive solutions that emphasize targeted investment and realignment of educational priorities with Dodoma's demographic and territorial dynamics.

4.4 Health Services Challenges at the Household Level

The results in Table 2 highlight inadequate health facility infrastructure as the most reported challenge; as cited by 23.4% of the respondents, and affecting 67.3% of the households. This was followed closely at 19.5% by affordability of medical costs—such as registration and laboratory fees—that impacted 56.2% of the households. Poor service quality was also significant, noted by 16.4% of the respondents, and affecting 47.1% of the households. These issues are most acute in peri-urban areas, where limited public facilities and long travel distances intensify financial and time burdens. Collectively, these constraints delay access to care, worsen health outcomes, and reinforce inequalities in urban healthcare delivery.

Table 2: Household Challenges Related to Healthcare Services

Challenges	Frequency	% Response	% Cases
Limited health facility infrastructures	286	23.4	67.3
Long distance from home to H/facility	125	10.2	29.4
Transport costs affordability	94	7.7	22.1
Registration, lab, and other costs affordability	239	19.5	56.2
Inadequate health facility staff availability	199	16.3	46.8
Poor/low quality of service offered	200	16.4	47.1
Cultural and socio-economic factors	58	4.7	13.6
Inadequate special needs support	22	1.8	5.2

Source: Field data (2024)

Beyond affordability, healthcare quality remains a major concern, with 16.4% of the respondents reporting poor service delivery linked to staff shortages, overcrowding, and long waiting times. Interviews with city officials confirmed that many fringe wards lack health centres, contrary to the standards outlined in Tanzania's National Health Policy. The policy emphasizes equitable access to essential health services, prioritizing primary healthcare, resource decentralization, and improved service delivery across all regions. However, Dodoma's rapid population growth has strained existing facilities, revealing gaps between policy intent and implementation. One in-depth interview also affirms these findings thus:

> *"…. healthcare services in many wards, including Nala Ward, face limited access due to distant facilities and informal settlements, forcing residents to travel long distances to clinics or hospitals in the Central Business Districts (CBDs). Dodoma City's rapid population growth – following the relocation of government headquarters – has intensified overcrowding in existing centres, resulting in long waits and inadequate care. This demographic shift has also led to frequent shortages of medical staff, equipment, and essential medicines; undermining service delivery and imposing high out-of-pocket costs that pose significant financial barriers to low-income households."* ***(Male, 42 Years, City Urban Planning Officer, July 2023).***

This spatial misalignment between population growth and healthcare infrastructure has led to widespread service delays and medication shortages, particularly for chronic illness management. Residents from peripheral wards often travel to the city centre for basic care, compounding financial and logistical burdens. These findings align with Kagaigai et al. (2023), who identified chronic under-investment, workforce shortages, and infrastructure gaps as critical challenges in Tanzania's health sector. Likewise, Muthoni and Wamuyu (2023) report that long distances, high costs, and inadequate medical supplies impede equitable healthcare access, particularly in rapidly growing urban areas.

While government health insurance schemes have improved basic healthcare access (Mistry et al., 2023), systemic disparities persist, particularly in Dodoma's peripheral urban areas. Consistent with Kusunya (2022), this study found that resource allocation favours central wards, resulting in overcrowded clinics, prolonged wait times, and rising out-of-pocket costs for underserved populations. The UPST helped illuminate how these inequities stem from governance structures that prioritize politically dominant zones, embedding exclusion into the spatial fabric of service provision. The CPT further explains the clustering of healthcare infrastructure in urban cores, reinforcing geographic disadvantage for outlying communities.

Moreover, guided by the pragmatic research philosophy, the study foregrounds locally grounded insights to move beyond generalized diagnoses. Field evidences show that infrastructure gaps are not just technical oversights—they are outcomes of strategic decision-making shaped by urban hierarchies and institutional priorities. As Dodoma's population continues to grow, addressing these healthcare challenges requires redistributive reforms in planning and resource deployment. Equitable expansion of infrastructure and adaptive service delivery must be central to policy responses if health access is to keep pace with urban transformation.

4.5 Housing Challenges Related to Increased Dodoma City's Urbanization

Table 3 presents multiple-response data on household challenges relating to the housing situation in Dodoma City. Social and family-related issues—such as extended family and neighbourhood sharing of common resources—were the most frequently reported challenges, affecting 58.8% of the households. Rising living costs and inadequate access to clean water followed, impacting 37.7% and 32.9% of households, respectively. Other concerns included limited transport infrastructure, long commuting distances, and poor access to education and health services. These findings reflect the layered nature of housing stress, and underscore the need for an integrated planning to improve affordability, service access, and spatial equity.

Table 3: Household Challenges Related to Housing Services

Challenges	Frequency	% Response	% Cases
High house rent	56	5.8	13.0
Rising costs of living	163	16.8	37.7
Long distance to the workplace	83	8.6	19.2
Inadequate supply of clean and safe water	142	14.7	32.9
Inadequate education and health services	105	10.8	24.3
Limited transport facilities and infrastructure	106	11.0	24.5
High transport costs and traffic jams	59	6.1	13.7
Social and family-related challenges	254	26.2	58.8

Source: Field data (2024)

Research by Güneralp et al. (2017) and Gwaleba (2018) shows that rapid urban expansion in African cities often leads to rental inflation, spatial fragmentation, and unequal housing access. These trends are also evident in Dodoma City, where population growth exceeds formal housing supply, and disproportionately affects low-income groups. While earlier studies (Bodo, 2019; Sumari et al., 2023; Lumun & Edwe, 2019) link these issues to infrastructure deficits, this study advances the discussion by tracing affordability gaps to spatial planning decisions. The UPST highlights institutional bias toward central wards in housing investment, while the CPT helps explains the concentration of residential development near administrative hubs. Besides, through the pragmatic research philosophy, the study integrated the quantitative data and lived experiences to expose governance practices that perpetuate spatial exclusion.

Building on this, interviews with city officials reveal that Dodoma's peripheral settlements—often informal and unregulated—lack essential services such as water, electricity, and accessible roads; and face increasing risks like seasonal flooding. These vulnerabilities are not simply outcomes of urban growth, but also a result of planning systems that deprioritize fringe zones, leading to chronic infrastructure gaps. As Akomolehin et al. (2025) note, such neglect reflects broader governance failures that entrench spatial inequality. Here, the UPST explains how institutional exclusion drives uneven service delivery, while the CPT (Delgado Henriques et al., 2025) clarifies why infrastructure investment remains concentrated in central areas despite shifting population pressures.

The pragmatic research lens used in this study helped connect spatial patterns with community-level realities, showing how unbalanced urban growth undermines resilience and well-being. Dodoma City's housing challenges mirror trends across fast-growing African capitals, but also expose specific governance failures—informal expansion, insecure tenure, and environmental risks—all rooted in planning systems that lack spatial equity. As Delgado Henriques et al. (2025) emphasize, meaningful reforms must be spatially responsive and grounded in the lived experiences of affected communities.

5. Conclusion and Recommendations

Dodoma City's rapid population growth has placed significant strain on infrastructure; particularly in water, healthcare, education, housing, and transport. Through a theoretical lens, these deficits are not merely technical gaps, but reflect spatial governance shaped by political and administrative priorities. Investment patterns consistently favour central nodes, leaving peripheral and informal settlements underserved, thereby reinforcing spatial exclusion. The 2016 government relocation to Dodoma further exposed these imbalances, revealing a disconnect between demographic expansion and infrastructure preparedness. Guided by the pragmatic research philosophy, this study integrated statistical data and lived experiences to offer context-sensitive insights into urban inequality.

To address these disparities, the President's Office – Regional Administration and Local Government (PO-RALG), alongside the Ministry of Lands, Housing and Human Settlements Development, should revise infrastructure allocation frameworks to prioritize underserved peri-urban wards such as Ihumwa, Nala, and Matumbulu. These revisions must be informed by current land use and demographic data to ensure equitable investment in essential services. Institutionalizing spatially disaggregated planning tools and regularly reviewing infrastructure budgets will help align development planning with Dodoma's evolving urban landscape. Concurrently, the National Bureau of Statistics (NBS), in collaboration with the Dodoma City Planning Department, should establish and maintain a geo-referenced urban deprivation index to guide targeted interventions and responsive planning.

At the municipal level, the Dodoma City Council should implement a decentralized urban development strategy that empowers ward development committees to conduct regular participatory audits of local infrastructure needs. These committees require support through a dedicated urban governance improvement fund and trained GIS officers to enhance spatial monitoring. Also, oversight by the President's Delivery Bureau will ensure alignment with the Dodoma Master Plan (2022–2042), and promote transparency through a public urban dashboard. This coordinated approach will strengthen inclusive governance, multilevel planning, and an equitable data-driven urban development.

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