

**[Research Article]**

Negotiating Informal Trading and Street Walking: Implications of Their Coexistence for Urban Space—The Case of Bukoba City, Tanzania

Fortunatus Bahendwa*

Department of Architecture, School of Architecture, Construction Economics and Management, Ardhi University, Dar es Salaam, Tanzania

*Correspondence: fortunatus.bahendwa@aru.ac.tz

Article Info:	Abstract
Received: 5 May 2026 Accepted: 1 July 2026 Published: 1 September 2026 Keywords: walkability; informal trading; street walking; urban space; livelihood.	Rapid urbanization in developing nations has intensified pressure on urban streets, forcing them to accommodate both pedestrian mobility and informal economic activity. This study examines how the interaction between informal trading and pedestrian flow shapes the character of urban space in Bukoba, Tanzania. Data were gathered through observation, structured interviews, mapping, photographic documentation, and document reviews, and analyzed using qualitative descriptive and simple quantitative methods. Walking remains the primary mode of daily transport despite inadequate infrastructure, mixed traffic, and encroachment by street vendors. Concurrently, informal traders cluster in high-foot-traffic areas to sustain their low-income livelihoods. Although these trading activities often disrupt pedestrian continuity and convenience, they also foster urban vitality and facilitate access to daily services. The study concludes that the relationship between street walking and informal trading is both complementary and conflicting, highlighting the need for context-responsive urban planning and design that enhances walkability while preserving the vital socio-economic role of the informal sector.
Informasi Artikel:	Abstrak
Diterima: 5 Mei 2026 Disetujui: 1 Juli 2026 Dipublikasi: 1 September 2026 Kata kunci: keterjalanan; perdagangan kaki lima; mobilitas pejalan kaki; ruang perkotaan; mata pencaharian.	Urbanisasi pesat di negara berkembang meningkatkan tekanan terhadap fungsi jalan sebagai ruang mobilitas pejalan kaki sekaligus aktivitas ekonomi informal. Penelitian ini mengkaji pengaruh interaksi antara kegiatan berdagang informal dan pejalan kaki terhadap karakter ruang kota di Bukoba, Tanzania. Data dikumpulkan melalui observasi, wawancara terstruktur, pemetaan, dokumentasi foto, serta studi dokumen, lalu dianalisis secara kualitatif deskriptif dan kuantitatif sederhana. Berjalan kaki tetap menjadi moda transportasi utama meskipun infrastruktur belum memadai dan terganggu oleh lalu lintas kendaraan maupun lapak dagangan. Di sisi lain, pedagang informal berfokus pada area padat pejalan kaki untuk menjaga kelangsungan mata pencaharian mereka. Meski mengurangi kenyamanan dan kontinuitas akses pejalan kaki, keberadaan pedagang informal turut menciptakan vitalitas ruang kota dan kemudahan akses layanan. Penelitian ini menyimpulkan bahwa hubungan antara pejalan kaki dan pedagang informal bersifat saling mendukung sekaligus konflik, sehingga memerlukan pendekatan perencanaan kota yang responsif untuk meningkatkan kenyamanan pejalan kaki tanpa mengabaikan peran sosioekonomi sektor informal.

INTRODUCTION

Cities in the developing world continue to expand under conditions of limited infrastructure, uneven regulation, and persistent informal economic activity (Roy, 2005). In many of these urban centers, walking remains the primary mode of everyday mobility, particularly for low-income residents, while informal livelihoods, such as petty trading, heavily occupy sidewalks, road edges, and public spaces (Leather et al., 2011; Bahendwa, 2017). Consequently, streets function not merely as circulation corridors, but also as vital spaces for livelihood, economic exchange, and everyday social negotiation (Dovey & King, 2011; Metha, 2013).

This dual functionality poses a complex challenge for urban design and planning (Metha, 2013). In this study, informal trading refers to small-scale vending and commercial activities occupying street edges in both stationary and mobile forms, while street walking encompasses daily pedestrian movement. Ideally, streets are expected to support safe, continuous, and convenient pedestrian flow (Southworth, 2005; Leather et al., 2011); however, these exact spaces are simultaneously appropriated for livelihoods by actors whose survival depends on visibility, customer access, and proximity to foot traffic (Roever & Skinner, 2016). As a result, pedestrian mobility and informal trading coexist in ways that generate both spatial conflict and urban vitality. Rather than viewing this relationship as a simple binary between formal order and informal disorder, it is better understood as a continuously negotiated urban condition where mobility and livelihood demand share the same physical footprint (Brown et al., 2010; Dovey & King, 2011).

This dynamic is particularly critical in East African secondary cities, where walking dominates despite incomplete pedestrian infrastructure, and informal trading serves as one of the most accessible survival strategies for low-income populations (Brown et al., 2010; Bahendwa, 2017). In settings like Bukoba City, constraints such as limited municipal budgets, relatively flexible enforcement, and closer social familiarity among street users shape urban space differently from major metropolitan hubs like Dar es Salaam, Nairobi, or Johannesburg (Roever & Skinner, 2016). Under these conditions, the quality and character of streets are defined not only by formal design standards, but also by the socio-economic practices through which everyday users adapt space to their needs. The street thus becomes a negotiated socio-spatial environment whose form, utility, and character emerge from the continuous interplay between planned provision and informal appropriation.

While urban design and transport scholarship has long emphasized the importance of walking for liveability, accessibility, and public life (Leather et al., 2011; Bahendwa, 2017), literature on urban informality

underscores that informal activities are fundamental to economic survival in developing contexts (Rakodi & Lloyd-Jones, 2002; Chen et al., 2016; Loayza, 2016). In Tanzania, Lukenangula (2023) notes that pedestrians in Dar es Salaam often navigate walking environments that are uncomfortable and poorly supported, while Okyere et al. (2025) highlight a policy-reality gap in African walking cities where pedestrian movement is heavily underprovided in practice. However, existing research has largely focused on major capitals, leaving a crucial gap in understanding how pedestrian mobility and informal trade are negotiated in secondary cities, where weaker infrastructure budgets, looser everyday regulation, and distinct socio-spatial relations produce unique dynamics. Addressing this gap is particularly essential for Bukoba, a Tanzanian secondary city where concentrated pedestrian traffic and informal trade visually dominate the central streets.

Against this background, this study investigates how informal trading activities influence pedestrian mobility and shape the overall character of urban space in Bukoba City, Tanzania. Specifically, the study focuses on three interconnected issues: 1) the physical and spatial conditions of pedestrian spaces; 2) the ways in which informal trading occupies and interacts with these spaces; and 3) the implications of this spatial coexistence for daily street use and future urban management.

LITERATURE REVIEW

Three interconnected concepts inform this study: walkability, spatial informality, and urban livelihood practices. They explain why streets in cities across the Global South, particularly in secondary cities where formal infrastructure and regulatory enforcement are often constrained, function not only as mobility corridors, but also as socio-economic spaces continuously shaped by negotiation, spatial adaptation, and competing user claims.

Walkability in Cities of the Global South

Walking is widely recognized as a fundamental mode of urban transport that underpins accessibility, safety, route continuity, and comfort. It enhances neighborhood connection, supports public transit integration, lowers household transport expenditure, and enriches overall public life (Leather et al., 2011; Anciaes et al., 2017; Bahendwa, 2017). However, walkability extends beyond the simple provision of sidewalks; it encompasses route continuity, pedestrian safety, spatial legibility, convenience, ambient comfort, and the overall quality of the built environment experienced at human speed (Leather et al., 2011; Khotbehsara et al., 2025).

In many East African contexts, including urban Tanzania, pedestrians are frequently captive walkers. They travel on foot not primarily because the walking

environment is well-designed or attractive, but because alternative motorized transport is prohibitively expensive or unavailable. Consequently, walking remains the dominant mode of movement across the Global South not due to robust infrastructure, but due to economic necessity. Pedestrian flows thus persist even through environments characterized by broken pavements, traffic hazards, and physical encroachment. Studies from Tanzania underscore this persistent disconnect between the vital mobility role walking plays and the lack of institutional support or physical infrastructure dedicated to it (Lukenangula, 2023; Okyere et al., 2025). Evaluating walkability in these settings therefore requires looking beyond ideal urban design standards to analyze the lived, everyday realities of pedestrian movement, including mixed traffic, physical crowding, and informal spatial occupation.

Spatial Informality in Urban Public Space

Spatial informality describes the production, occupation, and utilization of urban space through practices operating partially outside formal state planning, zoning, and regulatory enforcement. Far from being merely a manifestation of disorder, spatial informality represents a dynamic, adaptive response to unmet societal needs, limited municipal capacity, and the practical demands of daily urban life (Bari, 2016; Loayza, 2016). In many developing cities, informality is not a peripheral activity, but an integral structure through which urban life is actively organized.

In street environments, spatial informality manifests across a spectrum of forms, ranging from semi-fixed or stationary occupations (e.g., roadside product displays, temporary kiosks, parked commercial motorcycles, and improvised shelters) to highly mobile vending tactics that dynamically follow pedestrian flows. Physically, these informal operations can disrupt pedestrian continuity, narrow effective sidewalk widths, and trigger spatial friction among street users. Paradoxically, these same activities also activate street edges, enhance public convenience, provide passive surveillance, and inject vibrant human presence into public space. Informal spatial occupation thus exerts a dual influence: it constrains pedestrian flow while simultaneously driving the social and economic vitality of the street environment.

Urban Livelihood Practices in the Developing World

Urban livelihood practices encompass the adaptive strategies individuals and households employ to sustain daily life under persistent economic constraints. Across the Global South, these strategies rely heavily on petty trade, self-employment, informal service provision, and low-barrier micro-enterprises. Street vending is perhaps

the most visible expression of these livelihoods, as it allows operators to position themselves directly along primary movement corridors, maximizing customer foot traffic and visual exposure.

Low-income urban populations rely on flexible, self-organized mechanisms to secure income and capture economic opportunities (Drakakis-Smith, 2000; Rakodi & Lloyd-Jones, 2002; Simone, 2004). These street-based livelihoods are deeply embedded in social networks, drawing resilience from repeated social interactions, mutual trust, and localized entrepreneurial solidarity (Anderson & Jack, 2002; Phillips, 2002; Lyons & Snoxell, 2005). Recent Tanzanian literature demonstrates that street vending remains deeply woven into the national economic fabric, even as vendors face ongoing systemic challenges such as a lack of legal recognition, exclusion from formal urban planning, and inadequate access to dedicated market spaces (George et al., 2022; Mramba, 2022). Empirical insights from *Women in Informal Employment: Globalizing and Organizing* (WIEGO) further highlight the enduring structural role of street trade within low-capital livelihoods and the broader informal economy (Ramírez & Vanek, 2024).

Conceptual Synthesis

Synthesizing these three conceptual lenses reveals that streets in Global South cities are continuously co-produced by the interplay between mobility needs and livelihood imperatives. 1) Walkability frames why pedestrian conditions are critical for urban equity and access; 2) Spatial informality explains how public space is adapted, reappropriated, and contested in daily practice; and 3) Urban livelihood practices clarify why informal commercial activity naturally concentrates where there are high pedestrian volumes.

In secondary cities such as Bukoba, this triadic dynamic is particularly pronounced. Given the constraints of limited municipal capital and more flexible, localized enforcement regimes, the spatial negotiation between pedestrian movement and informal trade unfolds openly, directly defining the physical form and socio-spatial character of everyday street space.

METHOD

Research Design

This study adopted an exploratory and descriptive case study design to investigate, in depth, the spatial and socio-economic interactions between pedestrian mobility and informal trade within a real-world urban setting (Lewis, 2015). The case study approach was particularly appropriate as it enabled the integration of physical spatial observations, empirical user experiences, and institutional insights within a single contextual framework, facilitating data triangulation across multiple evidence sources.



Figure 1. Spatial Layout and Visual Conditions of the Three Selected Study Corridors: Uganda Street, Tupendane Street, and Kashozi Street in Central Bukoba

Source: Base Map Adapted from Google Maps (2024); Field Photographs and Spatial Mapping by the Author



Figure 2. Macro and Micro Spatial Context of Bukoba City: a) Bukoba Urban Center and Surrounding Suburbs (Study Area Circled with Blue Line); b) Close-up View of the Central Study Corridors

Within Bukoba's city center, three major commercial streets were purposively selected as the primary study corridors: Uganda Street, Tupendane Street, and Kashozi Street (Figures 1 to 2). These specific corridors were chosen because they function as high-density pedestrian and economic arteries where formal and informal street activities visibly overlap and interact (Gehl, 2010; Metha, 2013). Rather than aiming for statistical generalization across the entire municipality, the selection of these streets relied on purposive sampling criteria aligned directly with the study's analytical objectives, ensuring rich spatial and operational data for comparative analysis (Etikan et al., 2016).

Study Area

This study was conducted in Bukoba City, a prominent urban center located in the Lake Victoria Zone

of northwestern Tanzania. Situated on the western shore of Lake Victoria, Bukoba lies between latitudes $1^{\circ}06'00''$ S and $1^{\circ}08'42''$ S, and longitudes $31^{\circ}16'12''$ E and $31^{\circ}16'12''$ E (Figure 3). The municipality covers a total area of approximately 88.5 km^2 , of which roughly 5.5 km^2 consists of water bodies. According to the 2022 Population and Housing Census, Bukoba has a population of 144,938, making it a relatively compact yet socio-economically vibrant secondary city.

Bukoba was selected as the case study area because it exhibits spatial and economic conditions highly representative of secondary urban centers in developing contexts. Although smaller in scale than major metropolitan hubs like Dar es Salaam, Bukoba features a densely concentrated central business district, highly active commercial corridors, substantial foot traffic, and prominent informal street-based activities. Furthermore,

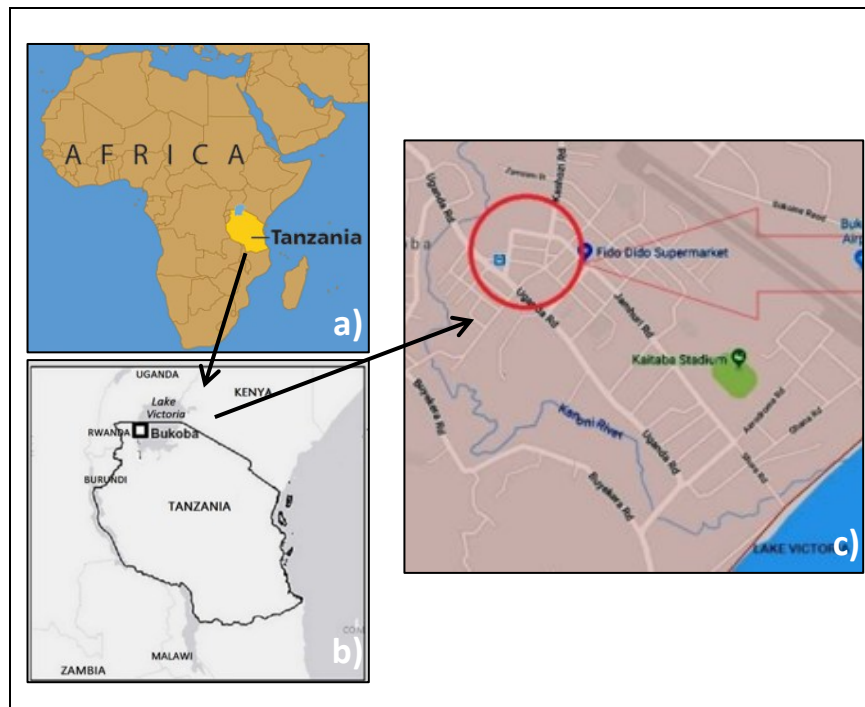


Figure 3. Location of the Study Area: a) Tanzania, b) Bukoba, c) Bukoba City Center
The Study Area is Marked with Red Circle Line

as a secondary city, Bukoba reflects typical structural constraints including limited municipal infrastructure budgets, modest regulatory enforcement, and tightly knit local social networks. These characteristics make Bukoba an ideal empirical context for examining how small-to-medium city dynamics shape the daily spatial negotiation between pedestrian mobility and livelihoods.

Population and Sampling

The study involved three distinct categories of respondents: pedestrians, petty traders, and city officials. In this context, the term pedestrians refer to respondents encountered walking along the selected streets, capturing their multifaceted everyday roles as residents, workers, shoppers, and general street users. For the street-user survey, 100 pedestrians and 60 petty traders were interviewed using convenience intercept sampling along the three selected corridors during fieldwork.

To ensure spatial representation across each corridor, at least 30 pedestrians were interviewed from each street, with the remaining 10 distributed according to pedestrian availability and flow, while 20 petty traders were sampled from each street. Pedestrians were selected from those actively moving through the streets on foot, whereas petty traders were chosen from individuals conducting small-scale trading activities along street edges, sidewalks, road reserves, and adjacent public spaces. Additionally, key informant interviews were conducted with city officials, including a town planner, land surveyor, real estate specialist, and town manager, to gather expert insights on urban planning, street

management, policy frameworks, and spatial design control in Bukoba City.

Data Collection

Data were collected using a multi-method approach comprising direct observation, spatial mapping, photographic registration, structured interviews, and semi-structured key-informant consultations. This combination captured both the physical and spatial conditions of the selected streets and the perceptions of their everyday users, allowing data from different sources to be systematically cross-checked and triangulated.

Direct observation documented the physical and spatial characteristics of the selected corridors, as well as the practical interactions between walking and informal trade. Focused walk-throughs were conducted to record favorable and adverse factors affecting pedestrian movement. Informal activities including petty trading, commercial spillover from formal shops, makeshift structures, vehicle parking, and motorcycle (*boda-boda*) occupations were systematically recorded alongside physical street elements such as walkways, roadside vegetation, drainage channels, street furniture, and building frontages in relation to pedestrian traffic and spatial character. Complementing this, spatial mapping was utilized to interpret the physical layout of the study area, trace primary pedestrian routes and key destinations, and plot the distribution of activities observed during fieldwork. Photographic registration further provided visual documentation of walkway conditions, physical encroachment, commercial displays,

vehicle-pedestrian interactions, building edges, and street furniture.

For street users, structured interviews were conducted with pedestrians and petty traders. Pedestrian interviews covered travel purposes, walking frequency, transport preferences, perceived safety and comfort, satisfaction with street conditions, views on adjacent buildings and street activities, and the specific impact of informal trade on their walking experience. Trader interviews focused on location choice determinants, spatial occupation practices, interactions with pedestrians, business convenience, attitudes toward potential relocation, and the reliance of trade survival on pedestrian foot traffic. In contrast, semi-structured consultations guided by open-ended questions were used with city officials as key informants. These consultations provided complementary institutional insights into municipal planning intentions, street management, regulatory enforcement, official attitudes toward informal trading, and the perceived impacts of street occupation on pedestrian mobility and broader urban form.

Data Analysis and Interpretation

The data analysis adopted a socio-spatial mixed-methods orientation, integrating descriptive qualitative interpretation of spatial evidence with simple quantitative summaries of the interview data. Observational field notes, spatial mapping data, and photographic records were thematically coded according to key analytical categories, including walkway conditions, pedestrian route continuity, patterns of informal spatial occupation, street elements, and the spatial interactions between pedestrian movement and commercial activity. Interview responses were organized into thematic and numerical categories, using simple tabulations and percentage distributions to summarize the survey findings.

The primary objective of this analysis was not to statistically test causal relationships, but to generate robust empirical evidence showing how pedestrian activity and informal trading coexist, generate conflict, and mutually shape the character of the selected study corridors. Consequently, the interpretation focused on both the symbiotic and contested dimensions of this socio-spatial relationship, highlighting its broader implications for urban design, spatial planning, and street management in secondary cities.

Ethical Considerations and Limitations

This study adhered to fundamental research ethics suited for field-based urban inquiry. Participation in interviews was strictly voluntary, with respondents fully informed of the study's purpose and scope prior to engagement. To ensure confidentiality and protect respondent anonymity, interview data were aggregated and presented without personal identifiers. Similarly,

direct observation, spatial mapping, and photographic registration focused exclusively on physical spatial conditions and public street activities, avoiding the individual identification of pedestrians or vendors.

The study has certain methodological limitations. Because the empirical focus was restricted to selected commercial corridors within Bukoba's city center, the findings offer context-bound insights rather than broad statistical generalizations for all urban contexts. Additionally, municipal officials were consulted through key-informant interviews to provide institutional perspectives, rather than being included in the quantitative structured survey sample. Nevertheless, the integration of direct observation, spatial mapping, photographic documentation, and user interviews provided a robust and sufficient empirical foundation for analyzing the dynamic interactions between informal trading and pedestrian mobility in the study area.

RESULT AND DISCUSSION

Physical Characteristics and Spatial Occupation of Study Corridors

This section presents and interprets the empirical findings regarding the spatial and socio-economic coexistence of informal trading and pedestrian mobility in central Bukoba, bringing together observational evidence and interview data to show how physical street conditions, pedestrian walking experiences, and vendors' livelihood practices shape the use and character of urban space. The empirical investigation was conducted along three primary commercial corridors in Bukoba's city center, with findings organized around the material conditions of walking space, user perspectives, and their broader socio-spatial implications.

Field observations reveal that the material quality of walking infrastructure across central Bukoba is highly uneven. Dedicated, paved, and visually legible pedestrian edges exist only along limited segments, such as portions of Kashozi Road and Uganda Road near the Hamugembe area (Figure 4a). Across most corridor segments, however, pedestrian movement occurs on unpaved, ill-defined roadside margins, with Tupendane Street presenting the most severely constrained environment where pedestrians continuously navigate narrow, unpaved edges while maneuvering around parked motorcycles (*boda-bodas*) and roadside vendors (Figure 4b). Furthermore, physical route continuity is routinely interrupted by informal spatial occupations, as petty trading setups, motorcycle parking zones, and temporary vehicle drop-off points frequently spill into pedestrian paths, forcing walkers onto the motorized carriageway and exposing them to traffic hazards. Conversely, where roadside spaces are wider, the physical footprint is better able to absorb these competing demands, allowing pedestrian flow and informal vending to coexist without

complete blockage, demonstrating that spatial quality depends heavily on corridor width, paving status, and localized encroachment.

An intriguing observational finding in these shared spaces is that where pedestrians, motorcycles, and automobiles operate simultaneously, motorized traffic speeds tend to decrease particularly in heavily crowded segments and near speed humps. This suggests that

spatial friction generated by mixed, high-density usage acts as an informal traffic-calming mechanism, although this dynamic should not be interpreted as a substitute for proper pedestrian infrastructure. Overall, while walking in Bukoba's central streets remains highly active and resilient, it is continuously compromised by incomplete infrastructure and uncoordinated spatial reappropriation (Figure 5).



Figure 4. a) Unpaved and Dusty Walkways Near the Bus Terminal Encroached by Motorcycle Parking and Informal Trading, Obstructing Pedestrian Movement; b) Paved and Demarcated Walkways along Kashozi Road Shared between Pedestrians, Informal Trading, and Motorcycle Parking

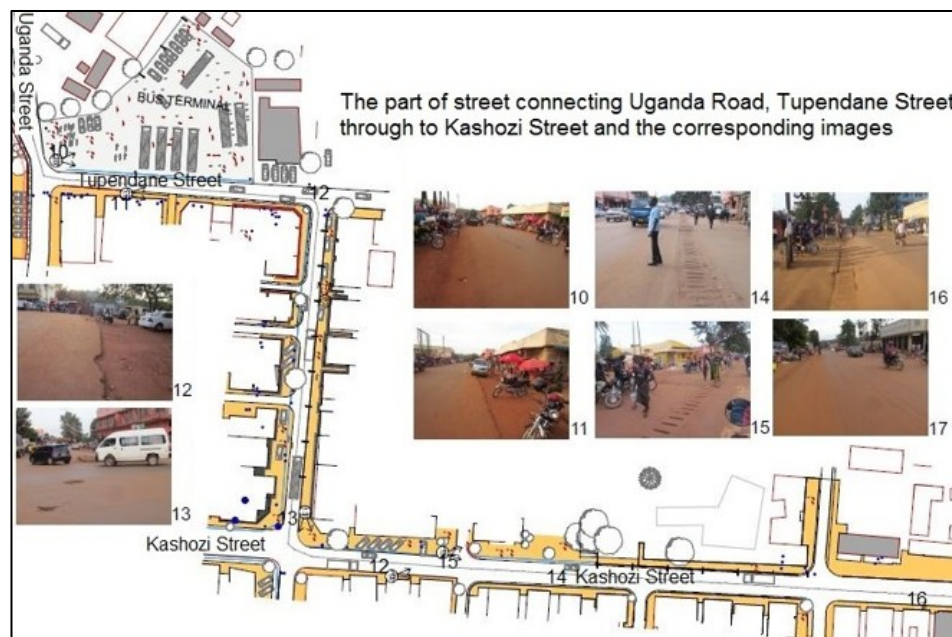


Figure 5. Spatial Usage along Uganda Road, Tupendane Street, and Kashozi Street in Bukoba, Illustrating the Intersection of Pedestrian Movement, Parked Vehicles, and Informal Trading. These Overlapping Activities Transform the Corridors into Multifunctional Socio-Economic Spaces that Simultaneously Serve as Transit Routes, Commercial Hubs, and Sites of Everyday Urban Adaptation

Socio-Economic Activities and Walking Behaviour in Street Space

Informal trading represents the dominant street-edge activity observed across the study corridors, manifesting through goods displayed directly on the

ground, simple display tables, umbrellas, and temporary makeshift structures (Figure 6a). Furthermore, established formal businesses frequently spill their commercial displays into public pedestrian space, further constricting walking paths (Figure 6b). These findings



Figure 6. a) The Mix of Buildings, Informal Parking of Cars and Motorcycles, Displays of Petty Traders' Goods, and Makeshift Huts Affecting the Architectural Character of the Urban Street; b) Buildings along Uganda Road in the Hamugembe Area, Predominantly Single-Storey Structures Occupied by Commercial Functions

demonstrate that pedestrian obstruction stems not solely from petty traders in a narrow sense, but also from broader commercial spillover by formal enterprises into public space.

The spatial concentration of these activities is particularly pronounced near major urban attractors, such as the central bus terminal and market areas, where pedestrian density is highest. In these high-intensity nodes, informal trade, pedestrian mobility, and transport-related space occupation by automobiles, motorcycles (*boda-bodas*), and tricycles (*bajajs*) compete directly for the same limited road surface. This dynamic generates a highly vibrant street environment where mobility and street trade exhibit a strong mutual dependence: dense pedestrian traffic attracts commercial activity, while trading and parking practices continuously reshape the physical capacity and effective utility of walking space.

Consequently, these empirical observations indicate that the selected corridors do not function merely as channels for traffic circulation. Instead, they operate as multifunctional socio-economic spaces where the street serves simultaneously as a mobility corridor, a site of economic exchange, and a space of everyday urban adaptation (Figure 6).

Street Elements, Built Form, and the Experience of Walking

The observational findings further demonstrate that the pedestrian walking experience is shaped not only by walkway conditions and activity density, but also by the surrounding built form and physical street elements framing public space. Dedicated bridge walkways secured with side rails (Figure 7a), alongside natural trees, traffic signs, billboards, and covered stormwater drainage channels (Figure 7b), form basic street facilities. Spatial orientation is further enhanced by local landmarks, such as the banana tree statue at the junction between Uganda Road and Tupendane Street (Figure 8a), and maintained natural and planted trees along Uganda Road (Figure 8b). Central Bukoba is predominantly defined by low-rise development, with most buildings ranging from one to four storeys, alongside occasional taller structures along Uganda Road. A significant number of these buildings feature commercial uses at ground and first-floor levels, often complemented by verandas that serve as transitional spaces between shop interiors and the street. These verandas enhance product visibility and actively contribute to the commercial vitality of the corridor.



Figure 7. a) Pedestrians' Path on the Bridge Secured with Side Rails; b) Natural Trees, Traffic Signs, Billboards, and Covered Storm Water Drainage Channels as Basic Street Furniture and Facilities



Figure 8. a) The Statue of a Banana Tree at the Junction Between Uganda Road and Tupendane Street; b) Maintained Natural and Planted Trees along Uganda Road

Simultaneously, the interface between private building fronts and public space is continuously reconfigured by parked motorcycles, automobiles, petty traders, large shade umbrellas, and makeshift stalls. These temporary street elements strongly influence the visual and spatial character encountered by pedestrians: in certain segments, they heighten street-level vibrancy and commercial engagement, while in others, they restrict physical accessibility generates a congested, improvised streetscape. Consequently, both the spatial appearance and everyday experience of central Bukoba's corridors

emerge from an ongoing interplay between the formal built environment and informal street-edge occupation, rather than from building architecture alone.

Pedestrians' Perspectives on Walking Conditions

A total of 100 pedestrians were interviewed within the selected corridors. Walking is a major mode of movement in Bukoba city centre for most respondents it forms a routine part of everyday urban mobility rather than an occasional activity (Figure 9a to 9b).

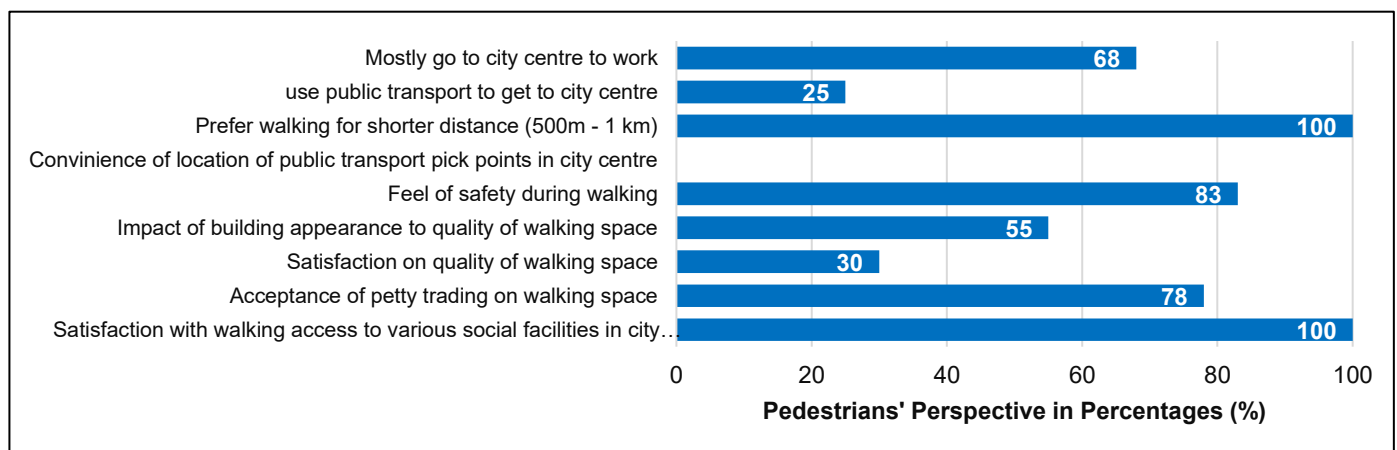


Figure 9a. Pedestrians' Perspective on Issues Related to Street Walking, Activities and Spatial Condition in Walking Space in Bukoba

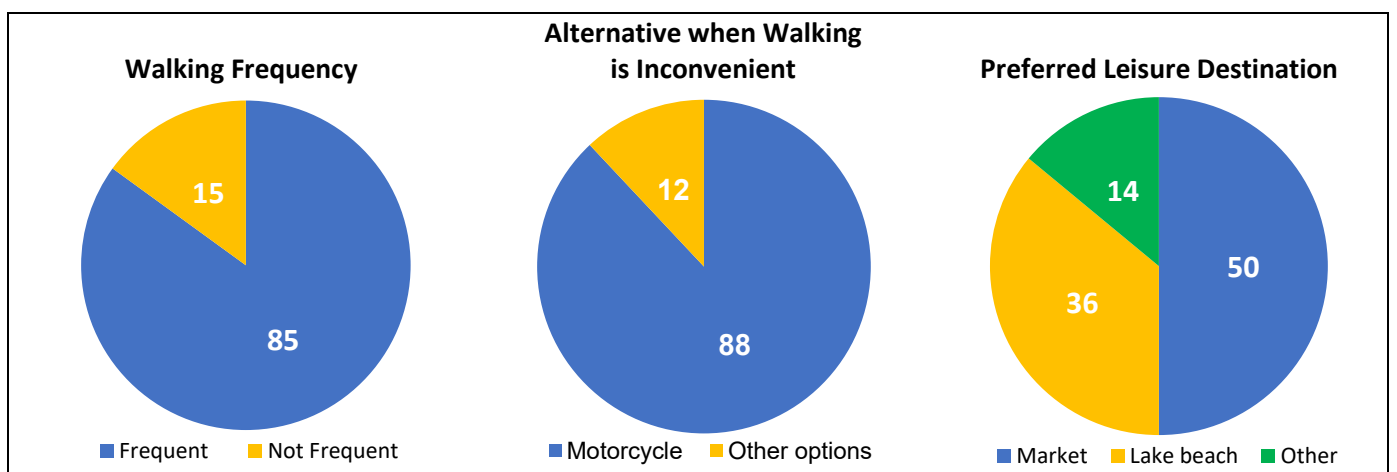


Figure 9b. Selected Pedestrian Travel Characteristics as a Percentage in Bukoba City Centre

The interviews also suggest that Bukoba's relatively compact urban form contributes to walking frequency. Most respondents walk to the city centre frequently (Figure 9b for walking frequency), while motorcycles serve as the main alternative when walking becomes inconvenient. This pattern reflects Bukoba's relatively compact urban form and the limited role of formal public transport, making walking and motorcycle transport the two most relied-on mobility modes in the city.

Pedestrians also reported that the character of buildings and the wider street scene influence the quality of walking. Many respondents associated building appearance, commercial billboards, other walking people, and petty traders with a more engaging walking environment (Figure 9a). This suggests that activity and visual richness shape how the street is evaluated, not only the physical condition of its infrastructure.

However, positive appreciation of street life does not remove awareness of physical problems. A majority acknowledged that poor-quality walking space, especially narrow or unpaved walkways, makes walking inconvenient, and mixed traffic involving vehicles and motorcycles was also identified as an important challenge (Figure 9a). These results show that the pedestrian experience is marked by both adaptation and constraint.

An especially important result is that 78% of respondents stated that they feel happy or comfortable with the activities taking place along walking space, including informal trading, the display of goods, motorcycle parking, and makeshift structures (Figure 9a).

This is significant because it suggests that pedestrians do not judge the street only by its physical shortcomings. For many, such activities contribute to liveliness, easier access to everyday goods and services, and a sense of social presence and informal surveillance. The relationship between walking and informal trading is therefore experienced as both beneficial and constraining rather than as a purely negative conflict.

Pedestrians also expressed satisfaction with the location of major facilities such as markets, the bus stand, open spaces, shopping areas, and government offices (Figure 9a). This overall satisfaction appears to reflect the compact organization of the city and the relative proximity between living, working, and service areas. Figure 9a also shows that the market and the lake beach are the most preferred places for leisure or spare-time visits, further indicating the importance of walkable access in the everyday urban experience of Bukoba residents (Figure 9b).

Petty Traders' Perspectives on Street Occupation and Walking

A total of 60 petty traders were interviewed within the selected study corridors. As summarized in Figure 10a and Figure 10b, informal occupation of street space is strongly tied to livelihood need and customer access. Many respondents acquired their trading space informally, and prolonged use of such locations, combined with the limited threat of eviction, appears to have produced a sense of practical entitlement to continued occupation.

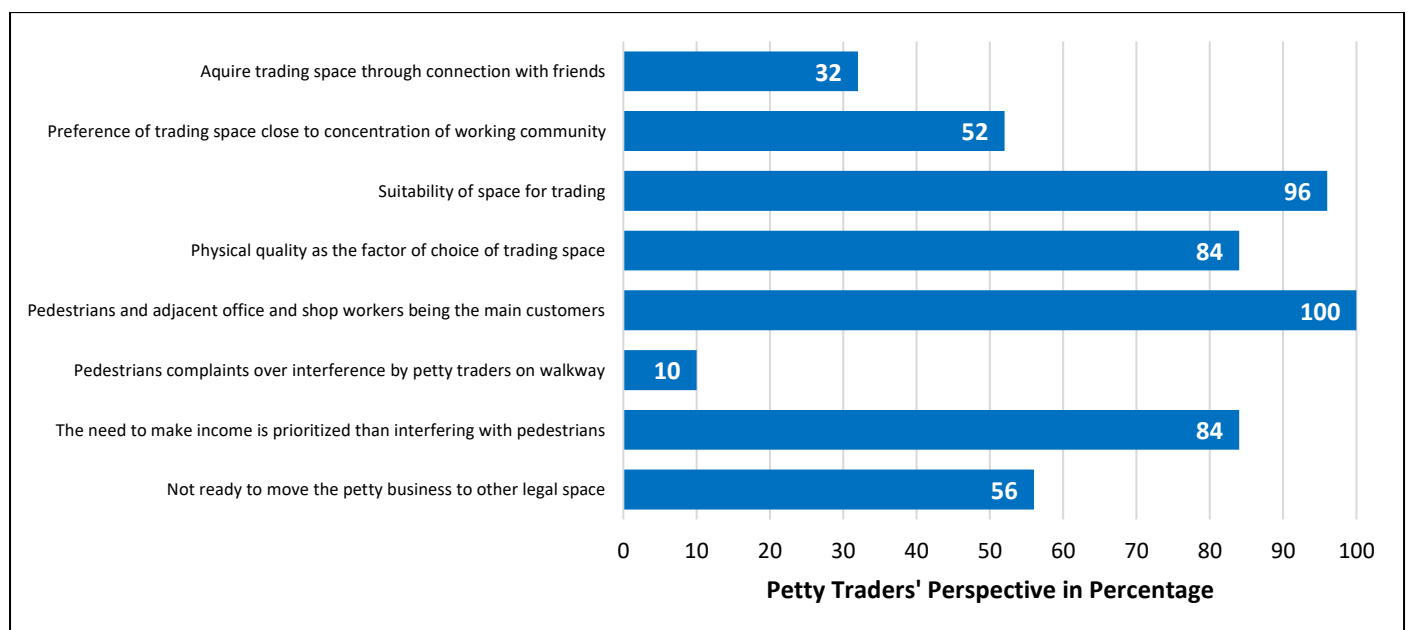


Figure 10a. Street Petty Traders' Reactions to Issues Related to Street Space Use, Interaction with Street Walkers and the Street Space Condition in Bukoba City

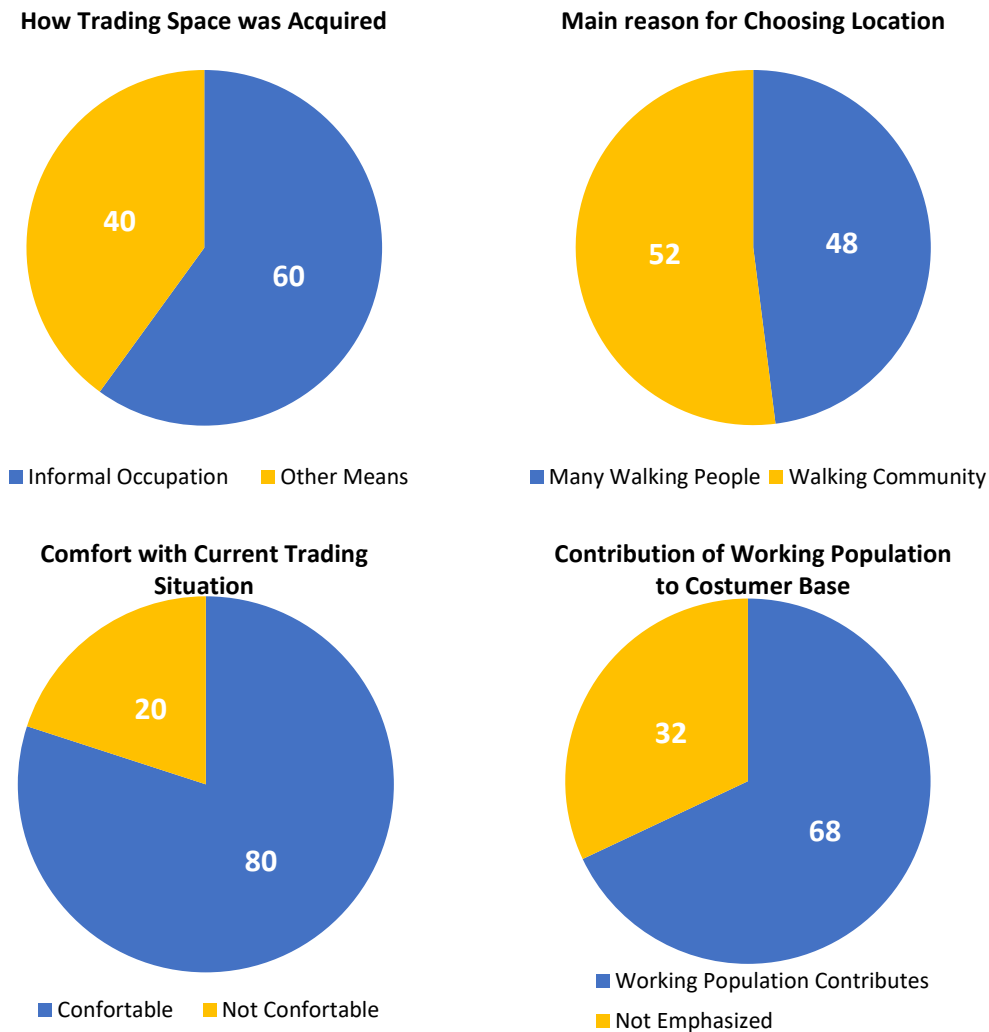


Figure 10b. Selected Petty Traders' Characteristics Related to Location Choice and Street Occupation as a Percentage in Bukoba City Centre

The attraction of these locations is closely linked to pedestrian concentration and city-centre activity. Figure 10a shows that traders choose these sites both because many people walk through them and because they are close to the working community. Together, these findings show that petty traders position themselves where human movement and potential customers are densest. The selected streets therefore function not only as transport corridors but also as economically strategic sites.

The results also show a strong preference for staying in current locations. Most traders were unwilling to move, mainly because relocation was associated with loss of customers, reduced business opportunity, and lower income. This position is reinforced by the fact that almost all respondents reported that city authorities had never attempted to remove them from the spaces they occupy. In practical terms, this suggests that the current pattern of occupation has been normalized through limited enforcement.

Most traders also considered their present locations suitable for business, while customer access was valued more highly than other spatial qualities such as shade, cleanliness, drainage, or convenience. This indicates that visibility and customer reach outweigh most environmental or spatial considerations in traders' location decisions.

All petty traders acknowledged that pedestrians complain about the interference created by their activities. Nevertheless, most reported that they feel comfortable doing business along the walking streets because these spaces provide access to customers while still allowing pedestrians to move, even if imperfectly. Figure 10a further indicates that traders depend not only on pedestrians as direct customers, but also on the wider working population concentrated in the city centre. These findings confirm that informal trade depends heavily on active pedestrian environments and on the concentration of everyday.

Taken together, the findings show that the selected streets in Bukoba city centre operate as shared socio-spatial environments rather than as purely pedestrian corridors or purely trading spaces. Observation reveals incomplete and discontinuous pedestrian provision, frequent encroachment, and strong competition for street space. At the same time, pedestrian interviews show that many users value the liveliness, convenience, and service access associated with street activity even while acknowledging the discomfort caused by poor walkway quality and traffic pressure. Traders, in turn, confirm that their occupation of public space is driven primarily by livelihood need and access to customers, especially walking customers.

The empirical picture that emerges is therefore mixed. Informal trading supports economic survival and contributes to active street life, but it also reduces pedestrian continuity and contributes to congestion and spatial competition. The results do not support a simplistic interpretation of informal trade as either wholly beneficial or wholly harmful. Instead, they show a negotiated urban condition in which walkability and livelihood are mutually connected but also in tension urban functions in the city centre.

The findings show that the coexistence of pedestrian mobility and informal trading in Bukoba city centre reflects a broader urban condition in which mobility and livelihood are closely intertwined. Areas with high pedestrian concentration attract petty trading and related informal activities, while those same activities reshape the quality, use, and image of walking space. In Bukoba, a secondary city with relatively limited infrastructure and flexible everyday enforcement, the street therefore functions not only as a circulation corridor, but also as an economic resource and a lived social environment (Chen et al., 2016; George et al., 2022; Ramírez & Vanek, 2024).

One important implication is that walkability in developing cities should not be understood only through formal infrastructure standards. In Bukoba, walking remains frequent despite incomplete pedestrian infrastructure, poor paving conditions, mixed traffic, and encroachment by street-edge activities. This supports the view that walkability in East African cities is often shaped less by ideal pedestrian design and more by adaptation to imperfect but active urban environments (Leather et al., 2011; Lukenangula, 2023; Okyere et al., 2025). At the same time, informal trading is not experienced only as an obstruction. Although it can reduce pedestrian continuity and convenience, many pedestrians also associate it with street liveliness, service access, and active urban experience, which echoes wider arguments on the social value of active and inhabited streets (Gehl, 2010; Bahendwa, 2017).

From an economic perspective, petty traders occupy locations where pedestrian presence and customer access are greatest, indicating that street occupation is driven primarily by livelihood need. Pedestrians provide the market for petty trade, while petty trade persists by attaching itself to everyday pedestrian flows. Yet this interdependence also produces spatial tension, since the same activities that support livelihood may reduce the effectiveness of walking space by narrowing access routes, intensifying congestion, and introducing competing uses into areas not originally designed for them. The resulting street condition is therefore mixed: socially and economically productive, but spatially pressured (Chen et al., 2016; Loayza, 2016; George et al., 2022; Ramírez & Vanek, 2024).

The findings further suggest that the character of the street is shaped not only by buildings, but also by the intensity and nature of street activities. In Bukoba, the public realm is experienced through a combination of formal built form, moving people, commercial spillover, petty trading, parking, and temporary structures. This supports the view that urban quality should be understood not only through formal visual order, but also through use value, social intensity, and everyday practicality (Simone, 2004; Gehl, 2010; Bahendwa, 2017). In a secondary city setting, this negotiated environment appears to be sustained not only by the practical need for livelihood, but also by relatively flexible everyday control, as reflected in the high proportion of traders reporting no attempt at removal. From a planning perspective, this means that total exclusion of informal street activities may be neither practical nor socially responsive, while unrestricted occupation of pedestrian space undermines safety, convenience, and inclusive access. The key challenge is therefore to move beyond the binary of tolerance versus eviction and instead pursue more context-responsive regulation, management, and spatial integration (George et al., 2022; Mramba, 2022).

Overall, the study shows that the coexistence of walking and informal trading in Bukoba city centre is both complementary and conflictual. Walking generates customers, supports street vitality, and sustains petty trade, yet the same activities that depend on pedestrian flows can interrupt continuity, reduce comfort, and intensify spatial competition. The central task for planning and design is therefore to improve walkability without ignoring the everyday economic role of streets in developing secondary cities (Lukenangula, 2023; Okyere et al., 2025; Ramírez & Vanek, 2024).

CONCLUSION

Rather than representing a simple clash between movement and disorder, the Bukoba case demonstrates that pedestrian mobility and informal trading are

negotiated through a small-city socio-spatial order in which everyday livelihood needs, localized social familiarity, and relatively flexible enforcement shape how streets are used. These findings point to practical design priorities for Bukoba city, including continuous paved walkways in the busiest corridors, controlled spillover areas for trading, clearly managed parking and motorcycle stopping points, and context-sensitive enforcement that protects both pedestrian movement and small-scale livelihoods.

The coexistence of walking and informal trading in Bukoba city produces a mixed urban condition. Informal street activities contribute to economic survival, convenience, and street vitality, but they also reduce walking continuity, constrain accessibility, intensify congestion, and complicate the safe and convenient use of pedestrian space. The street therefore emerges as a negotiated socio-spatial environment in which mobility and livelihood continuously shape one another.

An important lesson from the study is that the quality of urban streets cannot be judged only by formal physical order. It also depends on how effectively public space accommodates movement, access, exchange, and everyday social and economic activity. For Bukoba city, this implies the need to improve and demarcate pedestrian routes, protect minimum walking widths in key activity corridors, organize vending areas more carefully, and manage parking and motorcycle stopping points so that livelihood activities do not eliminate pedestrian function. In this sense, the challenge is not to remove informal street life altogether, but to manage it in ways that strengthen both walkability and everyday urban livelihood.

ACKNOWLEDGMENT

I would like to express my deepest gratitude to Ardhi University for providing a conducive environment to conduct this research, as well as to the reviewers and editors of the Journal of Geographical Sciences and Education who have helped improve manuscript quality.

AUTHOR CONTRIBUTIONS

Fortunatus Bahendwa: conceptualization, methodology, writing—original draft preparation, writing—review and editing, and visualization.

FUNDING

This research received no external funding.

DATA AVAILABILITY

All relevant data are included in the paper or its Supplementary Information.

CONFLICT OF INTEREST

The authors declare there is no conflict.

REFERENCE

- Anciaes, P. R., Nascimento, J., & Silva, S. (2017). The Distribution of Walkability in an African City: Praia, Cabo Verde. *Cities*, 67, 9–20. <https://doi.org/10.1016/j.cities.2017.04.008>
- Anderson, A. R., & Jack, S. L. (2002). The Articulation of Social Capital in Entrepreneurial Networks: A Glue or a Lubricant?. *Entrepreneurship & Regional Development*, 14(3), 193–210. <https://doi.org/10.1080/08985620110112079>
- Bahendwa, F. (2017). Relevance of Walking and Informal Activities in Urban Space: A Case of Dar es Salaam City, Tanzania. *Journal of Sustainable Development*, 10(4), 43–55. <https://doi.org/10.5539/jsd.v10n4p43>
- Bari, A. I. (2016). *Understanding Urban Informality: Everyday Life in Informal Urban Settlements in Pakistan* (Doctoral dissertation, [England]: School of Geography, Politics and Sociology, Newcastle University).
- Brown, A., Lyons, M., & Dankoco, I. (2010). Street Traders and the Emerging Spaces for Urban Voice and Citizenship in African Cities. *Urban Studies*, 47(3), 666–683. <https://doi.org/10.1177/0042098009351187>
- Chen, M., Roevers, S., & Skinner, C. (2016). Urban Livelihoods: Reframing Theory and Policy. *Environment and Urbanization*, 28(2), 331–342. <https://doi.org/10.1177/0956247816662405>
- Dovey, K., & King, R. (2011). Forms of Informality: Morphology and Visibility of Informal Settlements. *Built Environment*, 37(1), 11–29.
- Drakakis-Smith, D. (2000). *Third World Cities* (2nd ed.). Routledge.
- Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of Convenience Sampling and Purposive Sampling. *American Journal of Theoretical and Applied Statistics*, 5(1), 1–4.
- Gehl, J. (2010). *Cities for People*. Island Press.
- George, C., Msoka, C. T., & Makundi, H. (2022). Formalisation of Street Vending in Dar es Salaam: Implementation and Enforcement of the Wamachinga Identity Card Initiative. *Forum for Development Studies*, 49(4), 641–664. <https://doi.org/10.1080/08039410.2022.2112277>
- Khotbehsara, E. M., Yu, R., Somasundaraswaran, K., Askarizad, R., & Kolbe-Alexander, T. (2025). The Walkable Environment: A Systematic Review through the Lens of Space Syntax as an Integrated Approach. *Smart and Sustainable Built Environment*, 15(6), 2198–2224. <https://doi.org/10.1108/SASBE-02-2024-0049>
- Leather, J., Fabian, H., Gota, S., & Mejia, A. (2011). *Walkability and Pedestrian Facilities in Asian*

- Cities: State and Issues* (Sustainable Development Working Paper No. 17). Asian Development Bank.
- Lewis, S. (2015). Qualitative Inquiry and Research Design: Choosing among Five Approaches. *Health Promotion Practice*, 16(4), 473-475. <https://doi.org/10.1177/1524839915580941>
- Loayza, N. V. (2016). Informality in the Process of Development and Growth. *The World Economy*, 39(12), 1856-1916. <https://doi.org/10.1111/twec.12480>
- Lukenangula, J. M. (2023). Peoples' Perspectives on the Walking Environment in Rapidly Growing Cities: The Case of Dar es Salaam City. *African Journal of Land Policy and Geospatial Sciences*, 6(1), 163-187. <https://doi.org/10.22004/ag.econ.334629>
- Lyons, M., & Snoxell, S. (2005). Sustainable Urban Livelihoods and Marketplace Social Capital: Crisis and Strategy in Petty Trade. *Urban Studies*, 42(8), 1301-1320. <https://doi.org/10.1080/00420980500150631>
- Mehta, V. (2013). *The Street: A Quintessential Social Public Space* (Vol. 564). Routledge.
- Mramba, N. R. (2022). Moving Towards the Social Inclusion for Street Vendors in Tanzania: Current Situation and Perspectives. *International Journal of Research in Business and Social Science*, 11(2), 296-305. <https://doi.org/10.20525/ijrbs.v11i2.1596>
- Okyere, S. A., Frimpong, L. K., Oviedo, D., Mensah, S. L., Fianoo, I. N., Nieto-Combariza, M. J., Abunyewah, M., Adkins, A., & Kita, M. (2025). Policy-Reality Gaps in Africa's Walking Cities: Contextualizing Institutional Perspectives and Residents' Lived Experiences in Accra. *Journal of Urban Affairs*, 47(7), 2381-2402. <https://doi.org/10.1080/07352166.2023.2296105>
- Phillips, C. (2002). Social Capital, Local Networks and Community Development. In C. Rakodi & T. Lloyd-Jones (Eds.), *Urban livelihoods: A People-Centred Approach to Reducing Poverty* (pp. 133-150). Earthscan.
- Rakodi, C., & Lloyd-Jones, T. (Eds.). (2002). *Urban Livelihoods: A People-Centred Approach to Reducing Poverty*. Earthscan.
- Ramírez, T., & Vanek, J. (2024). *Street Vendors and Market Traders in 12 Countries: A Statistical Profile* (WIEGO Statistical Brief No. 40). Women in Informal Employment: Globalizing and Organizing (WIEGO).
- Roever, S., & Skinner, C. (2016). Street Vendors and Cities. *Environment and Urbanization*, 28(2), 359-374. <https://doi.org/10.1177/0956247816653898>
- Roy, A. (2005). Urban Informality: Toward an Epistemology of Planning. *Journal of the American Planning Association*, 71(2), 147-158. <https://doi.org/10.1080/01944360508976689>
- Simone, A. (2004). *For the City yet to Come: Changing African Life in Four Cities*. Duke University Press.
- Southworth, M. (2005). Designing the Walkable City. *Journal of Urban Planning and Development*, 131(4), 246-257. [https://doi.org/10.1061/\(ASCE\)0733-9488\(2005\)131:4\(246\)](https://doi.org/10.1061/(ASCE)0733-9488(2005)131:4(246))