Research Square

Preprints are preliminary reports that have not undergone peer review.
They should not be considered conclusive, used to inform clinical practice,
or referenced by the media as validated information.

Why Here and Not There? An Analytical Taxonomy of Factors Shaping Street Vendors' Location Choices in Urban Ghana

Nissi Jehovah Hammond
hammondnissi2512@gmail.com
Kwame Nkrumah University of Science and Technology
Henry Mensah
Kwame Nkrumah University of Science and Technology
Eric Kwame Simpeh
Kwame Nkrumah University of Science and Technology
Bright Osei Boateng
Kwame Nkrumah University of Science and Technology
Blessing Ballo
Kwame Nkrumah University of Science and Technology
Joy Frimpomaa Donkor
Kwame Nkrumah University of Science and Technology

Research Article

Keywords: Street vending, urban informality, vending location, tenure security, Ghana

Posted Date: November 24th, 2026

DOI: https://doi.org/10.21203/rs.3.rs-11609117/v1

License: This work is licensed under a Creative Commons Attribution 4.0 International License.
Read Full License

Additional Declarations: No competing interests reported.

Why Here and Not There? An Analytical Taxonomy of Factors Shaping Street Vendors' Location Choices in Urban Ghana.

Nissi Jehovah Hammond[a], Henry Mensah[a], Eric Kwame Simpeh[a], Bright Osei Boateng[b], Blessing Ballo[a] and Joy Frimpomaa Donkor[a]

[a] Centre for Settlements Studies, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana - hammondnissi2512@gmail.com

[a] Centre for Settlements Studies, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana - hmensah200@yahoo.co.uk

[a] Centre for Settlements Studies, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana - eric.simpeh@knust.edu.gh

[b] Department of Planning, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana - brightoseiboateng12@gmail.com

[a] Centre for Settlements Studies, Kwame Nkrumah University of Science and Technology, Kumasi, blessingballo109@gmail.com

[a] Centre for Settlements Studies, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana - frimpomaadonkorjoy@gmail.com

*Correspondence: hammondnissi2512@gmail.com

CRediT authorship contribution statement

NJH: Conceptualization, methodology, formal analysis, writing – original draft preparation, **HM:** Supervision, conceptualization, validation, writing – review and editing, **BOB:** Methodology, data curation, data analysis, writing – original draft preparation, **BB:** Data collection, investigation, writing – review and editing, and **JFD:** Data collection, resources, writing – review and editing. **EKS:** Supervision, conceptualization, validation, writing – review and editing. All authors have read and approved the final version of the manuscript and agree to be accountable for all aspects of the work.

Abstract

Street vending remains a dominant livelihood strategy within urban informal economies, particularly in developing countries where formal employment opportunities are limited and urban governance systems are often fragmented. A mixed-methods approach was adopted, combining structured questionnaires administered to 314 vendors across Tech Junction, Anloga Junction, and Amakom Junction with qualitative insights from open-ended responses. Data were analyzed using descriptive statistics, Cronbach's alpha ($\alpha = 0.932$), Kruskal–Wallis H-test, Common Method Variance (CMV), and Exploratory Factor Analysis (EFA). The results indicate that process clarity (Mean = 4.14), satisfaction with acquisition (Mean = 4.03), and payment of fees (Mean = 4.02) were the most influential factors. The Kruskal-Wallis H-test revealed no statistically significant differences across locations ($p > 0.05$), indicating consistency in vendor experiences. CMV results showed that a single factor accounted for 47.83% of variance, suggesting no dominant method bias. EFA extracted three components explaining 74.29% of total variance: access and allocation mechanisms (37.02%), institutional relations and governance environment (21.12%), and tenure security and spatial stability (16.14%). The study provides a pathway for policymakers and urban planners to design inclusive, transparent, and sustainable vending management systems. This study offers one of the first empirically grounded taxonomies that explains vendors' locational choices within urban informality in Ghana.

Keywords: Street vending, urban informality, vending location, tenure security, Ghana

1. Introduction

Street vending serves as a critical entry point for low-income urban populations, providing accessible livelihood opportunities and supporting urban food systems and service delivery (Allison et al., 2021). According to the International Labor Organization, over 60% of the world's employed population operates within the informal sector (Siegmann, 2016). Despite its economic relevance, street vending is often characterized by precarious working conditions, weak legal recognition, and exclusion from formal planning systems (Addi & Pacchi, 2021). These conditions have drawn scholarly attention toward understanding the dynamics of informal urban economies and their integration into sustainable development frameworks (Olaniran & Aule, 2025).

In Africa, street vending is deeply embedded within urban economic systems due to rapid urbanization, high unemployment, and structural limitations of the formal sector. It is estimated that between 80% and 85% of employment in Sub-Saharan Africa is informal, highlighting the dominance of informal activities in the region (Cunningham, 2024; Kiaga, 2020). Street vendors are typically located along transport corridors, markets, and high-traffic commercial zones where economic opportunities are maximized (Lagankhel et al., 2025). However, these activities are often constrained by weak governance structures, inconsistent regulatory enforcement, and limited institutional support (Eesley et al., 2018). As a result, vendors frequently experience evictions, harassment, and restricted access to urban space, reflecting broader governance challenges in African cities (Addi et al., 2026).

In Ghana, street vending constitutes a significant component of urban livelihoods, particularly in cities such as Kumasi and Accra (Azunre et al., 2021). The Ghana Statistical Service indicates that over 70–80% of the workforce operates within the informal sector, with trading activities forming a substantial share (Ghana Statistical Service (GSS), 2021). Street vendors contribute to employment creation, income generation, and the provision of affordable goods and services (Adhikari & Phil, 2017; Avenyo, 2018). However, their activities remain largely informal and are governed by a combination of official regulations and informal practices (Phanuel et al., 2018). The challenges, such as inadequate spatial planning, lack of designated vending zones, and weak tenure security, continue to affect the stability and productivity of vendors (Addi et al., 2026). Consequently, vendors rely heavily on informal arrangements and social networks to sustain their operations (Steel & Anyidoho, 2016).

The literature identifies several factors influencing vendors' spatial decisions, including access to customers, proximity to transport nodes, governance conditions, and tenure security (Onstein et al., 2020). Institutional dynamics such as regulatory enforcement, relationships with authorities, and perceived fairness in space allocation also play critical roles (Sabbi & Mensah, 2015). In addition, social and economic considerations, including income opportunities, competition, and network support, shape where vendors choose to operate (Wirtz et al., 2026). While these studies provide valuable insights, they often examine these determinants independently rather than as part of an integrated framework. This fragmentation limits the ability to fully understand how multiple factors interact to influence vending location choices within complex urban informal systems (Dovey, 2024).

Despite the growing body of literature, a significant gap remains in developing a comprehensive and empirically validated taxonomy of the factors shaping vendors' choice of vending locations in Ghana. In this study, street vending is defined as the informal trading of goods and services in public spaces such as streets, pavements, and transport corridors, where access, use, and control of space are governed by informal, negotiated arrangements. This study, therefore, seeks to identify, categorize, and analyze the key factors influencing vendors' choice of vending locations within urban informality in Ghana, thereby contributing to both theory and practice. This contributes to the literature by developing an

analytical taxonomy that integrates vendors' spatial decision-making processes and offers a basis for designing policies that support inclusive and sustainable urban development.

2. Factors Influencing Vendors' Choice of Vending Locations within the Context of Urban Informality in Ghana

An extensive body of literature has examined the factors influencing vendors' choice of vending locations within the broader context of urban informality. Addi *et al.* (2026); Birago *et al.* (2025) argues that urban informality operates through negotiated systems where access to space is structured by socially embedded rules rather than disorder. The author highlights how institutional arrangements, regulatory flexibility, and spatial practices shape how informal actors occupy urban space. Similarly, Afua *et al.* (2020) identify accessibility, proximity to customers, and informal allocation systems as key determinants of vending location choices. Addi *et al.* (2026) further note that informal markets often develop internal regulatory mechanisms, including allocation procedures and operational rules, which guide how space is accessed and utilized. Bansah (2017) identifies determinants of vending locations into governance-related, economic, and social factors, with emphasis on the role of regulatory frameworks and institutional engagement. These studies suggest that vendors' choice of vending locations is shaped by interconnected institutional, spatial, and governance processes that regulate access to urban trading spaces. The literature implies that informal vending is not random but operates within organized systems where accessibility, regulatory arrangements, and socially negotiated practices influence how vendors secure and maintain trading locations.

Fuseini and Kemp (2015) categorizes these influences into spatial access, regulatory conditions, and socio-political dynamics. Forkuor, Akuoko and Yeboah (2017) identifies negotiation processes, everyday governance practices, and power relations as central to how vendors secure and maintain space. Koster and Nuijten (2016) further highlight that informal trading spaces are governed through hybrid systems combining formal regulations with informal practices, reflecting the complexity of urban informality. The literature also underscores the role of fairness, transparency, and procedural clarity in shaping spatial decisions. F. D. Boateng (2020) suggest that perceived procedural justice contributes to compliance and stability in informal trading environments. Sowatey *et al.* (2018) emphasize the importance of trust, predictability, and equitable treatment in sustaining informal markets. Hartati (2018) further notes that equitable allocation systems and accessible processes influence where vendors choose to locate. The table 1 summarizes the literature for the factors that shape vendors' choice of vending locations within the context of urban informality in Ghana.

The literature demonstrates that vendors' spatial choices are strongly influenced by governance relationships, perceptions of fairness, and the ability to navigate both formal and informal institutional systems. The studies imply that transparent allocation processes, trust-based interactions, and stable regulatory environments enhance vendors' willingness to retain or secure particular vending spaces. This suggests that urban informality functions through structured social and institutional arrangements that shape spatial stability, compliance, and long-term occupation of trading locations. The literature on the factors that shape vendors' choice of vending locations within the context of urban informality in Ghana is summarised in Table 1 below.

Table 1: Taxonomy of the factors that shape vendors' choice of vending locations within the context of urban informality in Ghana

Factors	Sources

Informal authority access	(Birago et al., 2025)
Clear and transparent process	(Sowatey *et al.,* 2018)
Minimal challenges	(Afua *et al.* 2020)
Token/fee payment	(Sackey, 2025)
No strong connections required	(Kim et al., 2018).
Fair space allocation	(Hartati, 2018)
Proof of space rights	(Bansah, 2017); (Acheampong, 2019)
Standard acquisition procedure	Addi *et al.* (2026)
Satisfaction with process	(Barra & Papaccio, 2024) (F. D. Boateng, 2020)
Security-driven investment	(Musah et al., 2024)
Low harassment risk	(Hendri, 2025)
Protective regulatory rules	(Koster and Nuijten, 2016)
Positive manager relations	(Forkuor, Akuoko and Yeboah, 2017)
Dues-based retention	(Dewi, 2022)
Recognized vending space	(Aksom, 2020)
Confident of no eviction	(Nyarku and Oduro, 2018)
No forced displacement	(Adei *et al.,* 2021)
Local support backing	(Carré, Horn and Bonner, 2018)

Source: Authors' own creation

3. Methods

3.1 Study Area

The study was conducted across three major urban vending hubs, Tech Junction, Anloga Junction, and Amakom Junction, located along the N6 corridor in the Kumasi Metropolis, Ashanti Region of Ghana (see figure 1). These locations were purposively selected due to their high concentration of street vending activities, strategic positioning along major transport routes, and their role as key commercial nodes linking Kumasi to other regional capitals. The areas are characterized by heavy pedestrian and vehicular traffic, diverse economic activities, and varying levels of informal governance, making them suitable for examining the dynamics of vending location choices. Additionally, these junctions show typical features of urban informality in Ghana, including unregulated space allocation, interactions with local authorities, and varying degrees of tenure security. Their selection, therefore, provides a relevant and representative context for analyzing the factors shaping vendors' locational decisions within an urban informal area.

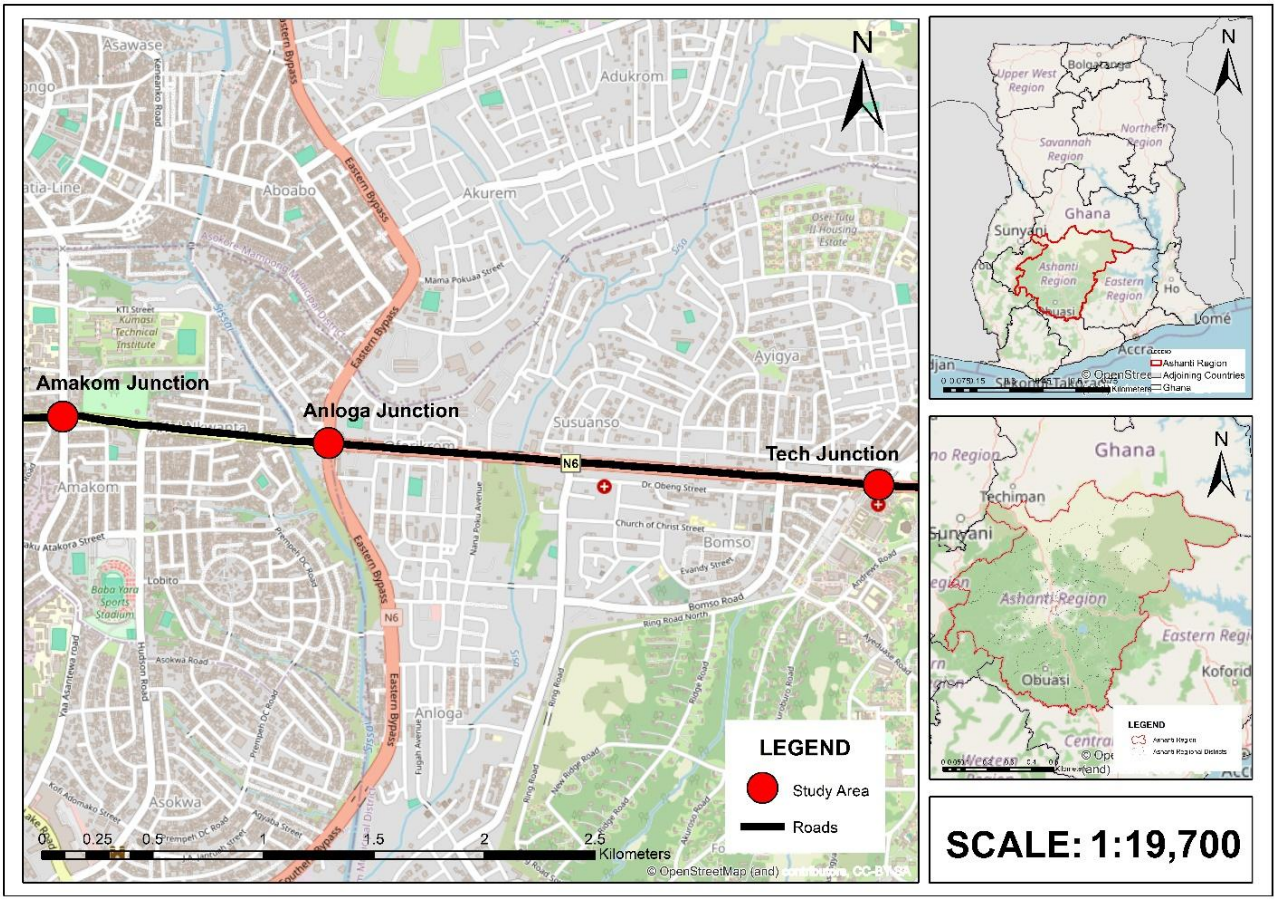

Figure 1: Map showing the study locations

Source: Author's own creation

3.2 Methodological Framework

The study was undertaken through an empirical investigation using a quantitative approach complemented by a structured literature review. As illustrated in Figure 2 (methodological flow chart), the research design is organized under key sub-headings, namely: research instrument development, sampling procedure and sample size determination, data collection methods, and data analysis techniques. The survey instrument was designed using Likert-scale items to capture vendors' perceptions of factors influencing their choice of vending locations. A stratified sampling approach was employed to ensure representation across selected vending areas, and appropriate statistical techniques, including non-parametric tests and Exploratory Factor Analysis, were applied. This aim is to identify, categorize, and analyze the key factors shaping vendors' locational decisions within urban informality.

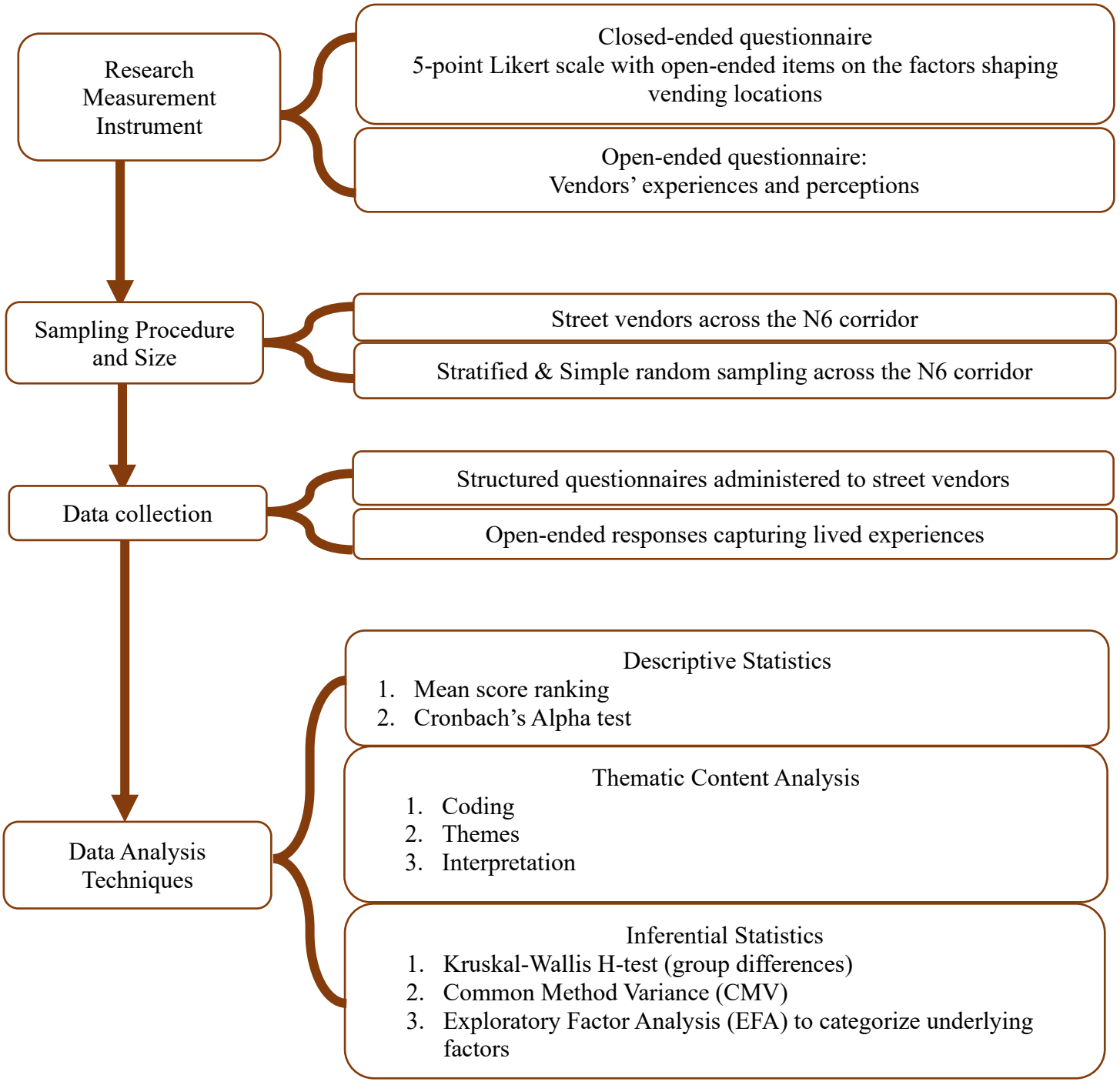

Figure 2: Methodological flow chart

Source: Author's own creation

3.2 Research Design

The study adopted a mixed-methods research approach, combining quantitative and qualitative methods to address the research objectives. Within this approach, a concurrent embedded research design was

employed, where quantitative data constituted the primary strand and qualitative data provided supportive insights. The quantitative component involved a structured survey administered to street vendors across Tech Junction, Anloga Junction, and Amakom Junction to identify and measure the factors shaping vendors' choice of vending locations. The qualitative component was embedded within the survey through optional open-ended questions, capturing vendors' perspectives on how access, governance conditions, and tenure security influence their locational decisions beyond measurable indicators.

3.3 Data Collection

In this study, a structured questionnaire which contained both open-ended questions (4) and close ended questions (15) were used as the primary data collection instrument, reflecting the mixed-methods approach of the study. The instrument was developed based on a comprehensive literature review drawing from databases such as Google Scholar, Scopus, EBSCO, Emerald Insight, and Taylor and Francis, focusing on variables related to access, governance, and tenure security in urban informality. To ensure reliability and validity, a pilot study was conducted and the instrument was reviewed by experts from department of planing at the Kwame Nkrumah University of Science and Technology, with feedback incorporated to improve clarity and contextual relevance. The survey questionnaire consisted of two sections: demographic characteristics and Likert-scale items measured on a five-point scale from Strongly Disagree (1) to Strongly Agree (5). Open-ended questions were also included to capture qualitative insights, which were analysed using thematic content analysis.

3.4 Sampling

The inclusion criteria for participation required that respondents be active street vendors operating within the selected locations and directly involved in making decisions regarding their vending spaces. Vendors had to be at least 18 years old. The exclusion criteria included individuals who were not actively engaged in vending (e.g., passersby, customers), vendors operating temporarily for short events, and those unwilling to participate or unable to provide reliable responses. The study adopted a non-probability convenience sampling approach due to the absence of a formal sampling frame for street vendors within the selected locations for the quantitative component. The sampling unit was individual street vendors actively operating within Tech Junction, Anloga Junction, and Amakom Junction along the N6 corridor. This approach was appropriate given the fluid, mobile, and unregistered nature of the informal vending population. A total of 314 respondents were surveyed, distributed as follows: Tech Junction (112), Anloga Junction (90), and Amakom Junction (112). The sample size is considered adequate for multivariate statistical analysis, particularly Exploratory Factor Analysis (EFA), which requires a minimum of 5–10 respondents per variable and at least 150 cases for stable factor solutions (Howard & Howard, 2016). Thus, the sample size satisfies both statistical and practical requirements for robust quantitative analysis (Mensah et al., 2025).

A purposive approach was applied by engaging vendors who were willing and able to provide information on their experiences regarding vending location choices. Open-ended questions embedded within the questionnaire allowed respondents to elaborate on their perspectives, and those who expressed interest were given additional time to provide in-depth responses. This ensured the collection of rich, contextual data reflecting diverse experiences across the three locations (B. O. Boateng et al., 2024).

3.5 Data Collection

The survey instrument, accompanied by a brief introduction outlining the purpose of the study, was administered face-to-face to street vendors across Tech Junction, Anloga Junction, and Amakom

Junction over the data collection period. Given the field-based nature of the study and the absence of formal contact systems, on-site administration was necessary to ensure accessibility and participation.

Data collection was carried out using a mixed-methods approach combining structured questionnaires and open-ended responses. The process was conducted over four weeks, from 25th April 2025 to 24th May 2025, from 8 am to 5 pm each day, across the three selected locations: Tech Junction, Anloga Junction, and Amakom Junction. Data were collected through face-to-face administration of questionnaires to ensure accessibility and clarity, particularly given the informal setting of the study. The instrument included both closed-ended Likert-scale items for quantitative analysis and open-ended questions to capture qualitative insights, which were later analyzed using thematic content analysis. The fieldwork was conducted on both weekdays and weekends to capture variations in vendor presence and activity patterns.

Qualitative data were collected through open-ended questions embedded within the structured questionnaire during face-to-face surveys. Respondents were encouraged to provide detailed explanations of their experiences and motivations, with follow-up probing used where necessary to clarify and enrich responses. Ethical standards were strictly observed, with respondents informed of the study purpose, assured of confidentiality and anonymity, and participation made voluntary. Verbal consent was obtained, no personal identifiers were recorded, and respondents could withdraw at any time. The process was conducted respectfully without disrupting business activities, enhancing data quality and reliability.

3.6 Data Analysis

The data analysis technique comprised both descriptive and inferential statistical methods. Descriptive statistics were used to measure the central tendency, such as the mean and the dispersion (standard deviation) of the data (Langnel et al., 2025). This was subsequently used to rank the factors shaping vendors' choice of vending locations in a hierarchical manner. Cronbach's alpha approach is one of the most common methods for assessing the reliability of scales. Therefore, in this study, an internal reliability test was performed on the Likert-scale items using Cronbach's coefficient alpha. The alpha coefficient ranges from 0 to 1, where higher values indicate greater reliability. According to Monama et al. (2025), an alpha value of 0.9 indicates high reliability, 0.8 moderate reliability, and 0.7 acceptable reliability. Using Statistical Package for the Social Sciences (SPSS) statistical software version 27, the reliability results for the 18 factors confirmed that the measurement scale was 0.932, which is highly reliable, thereby making the data suitable for further statistical analysis. In addition, Common Method Variance (CMV) was assessed using Harman's single-factor test to examine whether a single latent factor accounted for the majority of the variance. The results indicated that no single factor exceeded the threshold of 50%, suggesting that CMV was not a significant concern in this study.

Following the reliability and validity checks, inferential statistical techniques were applied to deepen the analysis. Since the data did not meet the assumption of normality, the Kruskal–Wallis H-test was used to examine differences in responses across the three study locations. Furthermore, Exploratory Factor Analysis (EFA) using Principal Component Analysis with Varimax rotation was conducted to identify and group the underlying factors influencing vendors' locational choices. The suitability of the data for factor analysis was confirmed using the Kaiser-Meyer-Olkin (KMO) measure and Bartlett's Test of Sphericity.

In addition, qualitative data obtained from the optional open-ended responses were analyzed using thematic content analysis, where responses were coded, categorized, and interpreted into meaningful

themes. To ensure anonymity while preserving contextual identification, respondents were assigned unique codes (e.g., SV1, Tech Junction, Anloga Junction, and Amakom Junction), where 'SV' denotes the respondent number and the accompanying label indicates the community and residential category, with community identification ranges applied as follows: Tech Junction (1-112), Anloga Junction (113-203), and Amakom Junction (204-315).

4. Results

4.1: Respondents Profile

Table S1 presents the socio-demographic characteristics of respondents across Tech Junction, Anloga Junction, and Amakom Junction. The sample is predominantly female in Tech and Amakom Junctions (66% each), while Anloga Junction shows a balanced distribution (54% female). Most respondents fall within the economically active age group of 31–45 years. Educational attainment is largely concentrated at the SHS/vocational and JHS levels, with relatively few having a tertiary education. A majority of respondents are married, particularly in Tech Junction (71%). The Akan ethnic group dominates across all locations, and Christianity is the major religion. Income levels are generally low to moderate, with most earning between GH₵1000 and GH₵2000. This shows that most of the respondents have over 10 years of street vending experience, which shows a well-established informal livelihood structure. The respondents' profiles used in this study have been attached as a supplementary file in Table S1 (see supplementary file).

4.2: Factors Influencing Vendors' Choice of Vending Locations

The factors influencing vendors' choice of vending location were measured using a five-point Likert scale ranging from strongly disagree (1) to strongly agree (5), as presented in Table 2. The results indicate that the most influential factor was a clear and transparent process (Mean = 4.14, 1st), suggesting that vendors value clarity in how spaces are obtained. This was followed by satisfaction with the acquisition process (Mean = 4.03, 2nd), reflecting general acceptance of existing procedures. Payment of a fee or token ranked third (Mean = 4.02), indicating that financial commitment legitimizes space use, while acquisition through informal authority ranked fourth (Mean = 4.01), highlighting the role of local power structures. Fair allocation of space ranked fifth (Mean = 3.82), emphasizing the importance of equity in reducing conflicts among vendors

The first-ranked factor, process was clear and transparent, recorded a mean of 4.14 and a standard deviation of 1.023. This implies that respondents generally agreed that the acquisition process was understandable, even if it was not entirely formal. This finding suggests that informal systems can still operate with some level of clarity when vendors understand the actors, steps, and expectations involved. For example, most vendors noted that,

> *As vendors, the process is clear, and it gives us confidence in the business. Following the established process reduces the risk of unfair displacement. This reduces anxiety and allows business activities to continue without fear of being pushed out.* (SV 23 and SV 70, Tech Junction, SV 115 and SV 140, Anloga Junction)

The second-ranked factor, satisfied with the acquisition process, had a mean of 4.03 and a standard deviation of 1.072, showing that most vendors were relatively satisfied with how they obtained their spaces. Together, these two results indicate that vendors may not necessarily require a fully formal system before they consider the process acceptable. This shows that predictability, recognition, and the ability to negotiate access without excessive conflict. Alluding to that, most of the vendors narrated that,

> *As vendors, there are no official documents, but the actual process is understood through practice. Learning occurs through others in the environment, and the process becomes less complex over time. Even without formal documentation, the process is recognized as being well-managed.* (SV 121 and SV 134, Anloga Junction, SV 209 and SV 212, Amakom Junction)

The third-ranked factor was paid a fee or token, with a mean of 4.02 and a standard deviation of 1.034. This indicates that payment plays an important role in the acquisition and retention of vending spaces. For instance, majority of the vendors expressed that,

> *In this case, after payment to the authorities, the space is considered safe and secure. This creates a sense that displacement or disturbance by others is unlikely because required obligations have been met. Payment therefore, provides peace of mind and allows business activities to continue without fear*. (SV 153 and SV 178, Anloga Junction, SV 71 and SV 100 Tech Junction)

The fourth-ranked factor, acquired space through informal authority, recorded a mean of 4.01 and a standard deviation of 0.992, confirming the importance of local actors, space managers, leaders, and informal gatekeepers in vending space allocation. These results suggest that vending space access is not purely open or random but is mediated through recognized informal authorities. Most of the vendors shared that,

> *As vendors, we know that once the local authority gives you a place, people here do not question your position. It reassures us that we have a place that is approved and we can trade without having to fight with others. So, because of that, we feel more comfortable knowing people will abide by the authority.* (SV 87, Tech Junction, SV 224 Amakom Junction)

The fifth-ranked factor, fair allocation of space, had a mean of 3.82 and a standard deviation of 1.145, suggesting moderate agreement that space allocation was fair. This means that although vendors accepted the system, some concerns about equity may still exist. Majority of the vendors stated that,

> *We know that you cannot just take a place if you want to sell. There's always a boss or someone familiar with the area who has to permit to sell in a spot, and that permission usually involves a small fee. If you do not have this approval and the payment, it is hard to get and maintain a peaceful spot*. (SV 236, Amakom Junction, SV 170 Anloga Junction)

Other relatively important factors included supported by local actors, ranked 6th with a mean of 3.71, and pay dues to retain space, ranked 7th with a mean of 3.62. This shows that continued use of vending space depends not only on initial access but also on maintaining local support and fulfilling financial obligations. The factor never forcefully displaced ranked 8th with a mean of 3.55, while invested due to security ranked 9th with a mean of 3.54. These results indicate that some vendors feel reasonably secure, but this security is not absolute. The lower-ranked items, such as received proof of right to space with a mean of 2.28 and acquisition followed accepted procedure with a mean of 2.30, show weak formal documentation and limited institutional protection. For instance, most vendors narrated that,

> *As vendors, operations are mainly based on non-documented payments and agreements. Daily activities rely on trust and mutual understanding with authorities, even without formal documentation to confirm ownership of the space. As a result, access to the space is not fully secured because it depends on informal arrangements.* (SV 186 and 165, Anloga Junction, SV 211 and SV 299, Amakom Junction)

The normality tests in Table 2 showed that all variables were statistically significant under both the Kolmogorov-Smirnov and Shapiro-Wilk tests, with p-values of 0.000. Since these p-values are below 0.05, the assumption of normality was violated. Therefore, the Kruskal-Wallis H-test was appropriate because it is a non-parametric test used to compare differences among three or more independent groups when data are not normally distributed. The null hypothesis was that there is no statistically significant difference in responses among vendors in Tech Junction, Anloga Junction, and Amakom Junction. The alternative hypothesis was that there is a statistically significant difference in responses among the three communities. The Kruskal-Wallis test results showed that the p-values for all factors were greater than 0.05, including process clarity, $H = 1.405$, $p = 0.495$; satisfaction, $H = 2.039$, $p = 0.361$, and payment of fee/token, $H = 1.137$, $p = 0.566$.

Based on the Kruskal-Wallis results in Table 2, the null hypothesis was retained for all the factors because none of the Asymptotic Significance values was below 0.05. This means there were no statistically significant differences in the responses of vendors across Tech Junction, Anloga Junction, and Amakom Junction. For example, views on acquiring space through informal authority were not significantly different across communities, $H = 1.195$, $p = 0.550$. Similarly, fair allocation of space showed no significant difference, $H = 1.889$, $p = 0.389$, while supported by local actors also showed no significant difference, $H = 0.925$, $p = 0.630$. This shows that vendors across the three study communities share similar experiences regarding space acquisition, payment, informal authority, fairness, and security of vending space. This suggests that street vending space governance across the three junctions follows a similar informal structure, where local authority, payment, and social acceptance remain central to space access and retention. The non-significant Kruskal-Wallis H-test results indicate that responses were consistent across the three communities, suggesting minimal group-based bias in the data. This consistency reduces the likelihood that observed patterns are driven by location effects rather than underlying measurement issues. Hence, the dataset was further examined using Common Method Variance to assess whether a single source or method systematically influenced vendors' responses and shaped their choice of vending locations.

2: Mean Ranking and Differences of the factors shaping vendors' choice of vending among the three locations

Factors	Mean Rank			Normality Test				Kruskal-Wallis H-test	
	Mean	Std. Deviation	Rank	Kolmogorov-Smirnov		Shapiro-Wilk		Kruskal-Wallis H	Asymp. Sig
				Statistic	Sig.	Statistic	Sig.		
Clear and transparent process	4.14	1.023	1st	.287	.000	.784	.000	1.405	.495
Satisfaction with process	4.03	1.072	2nd	.252	.000	.789	.000	2.039	.361
Token/fee payment	4.02	1.034	3rd	.256	.000	.820	.000	1.137	.566
Informal authority access	4.01	.992	4th	.267	.000	.819	.000	1.195	.550
Fair space allocation	3.82	1.145	5th	.253	.000	.812	.000	1.889	.389
Local support backing	3.71	1.179	6th	.223	.000	.833	.000	.925	.630
Dues-based retention	3.62	.932	7th	.220	.000	.885	.000	2.842	.242
Low harassment risk	3.55	1.107	8th	.188	.000	.866	.000	.248	.883
Confident of no eviction	3.54	1.008	9th	.190	.000	.885	.000	.955	.620
Protective regulatory rules	3.30	.901	10th	.284	.000	.836	.000	.797	.671
No strong connections required	3.05	1.128	11th	.288	.000	.761	.000	2.581	.275
Minimal challenges	3.05	1.096	11th	.325	.000	.765	.000	1.156	.561
Recognized vending space	2.72	1.293	13th	.247	.000	.757	.000	1.767	.413
Security-driven investment	2.71	.817	14th	.296	.000	.849	.000	.754	.686
Positive manager relations	2.66	1.123	15th	.215	.000	.841	.000	.621	.733
No forced displacement	2.63	1.077	16th	.181	.000	.862	.000	.644	.725
Standard acquisition procedure	2.30	.792	17th	.320	.000	.750	.000	.772	.680
Proof of space rights	2.28	.857	18th	.346	.000	.715	.000	2.148	.342

Source: Authors' own creation

4.3 Common Method Variance for Influencing Vendors' Choice of Vending Locations

Table 3 shows the method variance for shaping vendors' choice of vending locations. Harman's single-factor test was used to test for Common Method Variance (CMV) by performing a Principal Component Analysis (PCA). The premise of this test is that CMV may be an issue if one factor explains more than 50% of the variance. The null hypothesis is that there is no general latent factor that accounts for most of the variance, and the alternative hypothesis is that there is a general latent factor that explains most of the variance. The results show that the first component had an eigenvalue of 8.610 and accounted for 47.833% of the variance. Therefore, the null hypothesis held, as this value is less than 50%. This implies that the responses are not excessively reliant on a particular method of measurement. Additionally, this result is consistent with the previous findings of the Kruskal-Wallis H-test that found no differences between the three communities. The lack of group bias and dominant method bias suggests a multidimensional rather than unidimensional structure in the data. This confirms the use of Exploratory Factor Analysis (EFA) to explore the underlying latent variables. As such, EFA is crucial here as it helps to condense the variables into factors and offers insight into the factors that influence vendors' vending locations.

Table 3: Common Method Variance for influencing vendors' choice of vending locations

Total Variance Explained						
Component	**Initial Eigenvalues**			**Extraction Sums of Squared Loadings**		
	Total	**% of Variance**	**Cumulative %**	**Total**	**% of Variance**	**Cumulative %**
1	8.610	47.833	47.833	8.610	47.833	47.833
2	3.214	17.858	65.691			
3	1.403	7.793	73.484			
4	.937	5.204	78.688			
5	.862	4.792	83.479			
6	.678	3.766	87.245			
7	.624	3.469	90.714			
8	.487	2.706	93.420			
9	.349	1.940	95.360			
10	.213	1.183	96.542			
11	.175	.970	97.512			
12	.146	.813	98.325			
13	.124	.687	99.012			
14	.077	.429	99.441			
15	.061	.340	99.781			
16	.023	.130	99.911			
17	.014	.079	99.990			
18	.002	.010	100.000			

Source: Authors' own creation

4.4: Classification of the Factors Influencing Vendors' Choice of Vending Locations

The EFA was conducted using PCA to identify the underlying dimensions shaping vendors' choice of vending locations as seen in tables 4, 5 and 6. The assumption for factorability requires adequate sampling and sufficient intercorrelations among variables. The null hypothesis states that the data are not suitable for factor analysis, while the alternative hypothesis states that the data are suitable. The

KMO measure was 0.854 (see table 4), exceeding the minimum threshold of 0.50 (Kaiser, 1974), indicating acceptable sampling adequacy. Bartlett's Test of Sphericity was statistically significant (χ^2 = 6731.761, df = 153, p = .000), leading to rejection of the null hypothesis and confirming that the variables are sufficiently correlated for factor extraction.

Following extraction using the Kaiser criterion (eigenvalues > 1), three principal components were retained. The first component had an eigenvalue of 8.719, explaining 48.441% of the variance; the second had 3.283, explaining 18.236%; and the third had 1.369, explaining 7.607%. The cumulative variance explained was 74.285%, exceeding the acceptable threshold of 60%, indicating strong explanatory power (see Table 5). The null hypothesis that the extracted components do not significantly explain variance was therefore rejected. These results confirm that vendors' locational choices are influenced by multiple underlying factors rather than a single dimension.

The first component, which is Access and Allocation Mechanisms, had the highest explanatory power after rotation (37.024% of variance). The assumption is that factor loadings above 0.50 indicate strong relationships between variables and the component. The null hypothesis assumes weak or insignificant loadings, while the alternative assumes strong loadings. Variables such as informal authority (0.763), clear processes (0.807), absence of challenges (0.832), payment of fees (0.815), and fair allocation (0.903) loaded strongly on this component. Additional variables like no need for strong connections (0.917) and accepted procedures (0.846) further strengthened this factor in Table 6. Since all loadings exceeded 0.50, the null hypothesis was rejected. This indicates that vendors prioritize structured, predictable, and relatively fair allocation systems when selecting locations. As the vendors explained,

> *The way leadership manages the process makes it simple to understand and follow. It creates a sense of fairness, reducing the need to struggle or compete unfairly for space. This fosters comfort and stability, as the system operates in a manner that benefits everyone.* (SV 256 and SV 313, Amakom Junction, SV 7 and SV 59 Tech Junction).

The second component, termed Institutional Relations and Governance Environment, explained 21.118% of the variance after rotation. The assumption remains that high factor loadings show a strong influence on location choice. The null hypothesis assumes that relational and governance factors do not significantly influence vendor decisions, while the alternative suggests they do. Variables such as good relationship with space managers (0.828), investment due to security (0.809), low risk of harassment (0.722), and clear protective rules (0.708) loaded significantly on this component. Since all values exceeded the acceptable threshold, the null hypothesis was rejected. This demonstrates that vendors prefer locations where governance structures are supportive and relationships with authorities are positive. Highlighting the importance of institutional cooperation, for example majority of the vendors stated that,

> *From my experience, when the authorities are cooperative and not always chasing us away, it makes it easier to focus on selling and earning a living. It also gives me some peace of mind, because I know I can work here without constant fear of being disturbed or driven away.* (SV 144 and SV 128, Anloga Junction, SV 30 and SV 92 Tech Junction)

The third component, identified as Tenure Security and Spatial Stability, explained 16.142% of the variance after rotation. The assumption is that tenure security and stability are critical determinants of location choice. The null hypothesis assumes that security-related variables are not significant, while the alternative assumes they are influential. Strong loadings were observed for confidence of no eviction (0.924), clearly recognized space (0.749), community support (0.691), and payment of dues to retain

space (0.587). The variable never forcefully displaced (0.515) also met the minimum loading threshold. Given these results, the null hypothesis was rejected. This indicates that vendors are highly influenced by perceived tenure security and community acceptance when choosing locations. Most vendors emphasized that,

> *We feel secure here because the arrangement gives us some assurance that we can continue selling without sudden disruption. Even though nothing is written down, the way things are managed makes me believe my space is relatively stable for now.* (SV 137 and SV 201, Amakom Junction, SV 17 and SV 43 Tech Junction)

The EFA results confirm that vendors' choice of vending locations is shaped by three key dimensions: allocation, cooperation/relations, and security. The assumption that location choice is multidimensional is supported by the high cumulative variance explained (74.285%). The null hypothesis that these factors do not significantly influence location decisions was rejected based on strong factor loadings and statistical adequacy tests. The conclusion is that vendors' decisions are not random but are structured around procedural clarity, institutional relationships, and tenure security.

Table 4: KMO and Bartlett's Test of the factors influencing vendors' choice of vending locations

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		**.854**
Bartlett's Test of Sphericity	Approx. Chi-Square	6731.761
	df	153
	Sig.	.000

Source: Authors' own creation

Table 5: Total Variance Explained for the factors influencing vendors' choice of vending locations

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	8.719	48.441	48.441	8.719	48.441	48.441	6.664	37.024	37.024
2	3.283	18.236	66.678	3.283	18.236	66.678	3.801	21.118	58.143
3	1.369	7.607	74.285	1.369	7.607	74.285	2.906	16.142	74.285
4	.910	5.055	79.340						
5	.776	4.310	83.650						
6	.670	3.724	87.374						
7	.503	2.795	90.169						
8	.421	2.338	92.507						
9	.296	1.644	94.151						
10	.278	1.543	95.694						
11	.189	1.049	96.743						
12	.168	.934	97.676						
13	.118	.656	98.332						
14	.113	.627	98.959						
15	.082	.456	99.415						
16	.059	.327	99.742						
17	.034	.188	99.929						
18	.013	.071	100						

Source: Authors' own creation

Table 6: Rotated Component Matrix of the factors influencing vendors' choice of vending locations

Factors	Component 1	Component 2	Component 3
Access and Allocation Mechanisms			
Informal authority access	.763		
Clear and transparent process	.807		
Minimal challenges	.832		
Token/fee payment	.815		
No strong connections required	.917		
Fair space allocation	.903		
Proof of space rights	.836		
Standard acquisition procedure	.846		
Satisfaction with process	.820		
Institutional Relations and Governance Environment			
Security-driven investment		.809	
Low harassment risk		.722	
Protective regulatory rules		.708	
Positive manager relations		.828	
Tenure Security and Spatial Stability			
Dues-based retention			.587
Recognized vending space			.749
Confident of no eviction			.924
No forced displacement			.515
Local support backing			.691

Source: Authors' own creation

5. Discussion

Component 1: Access and Allocation Mechanisms

The principal component in Table 6 named Access and Allocation Mechanisms, explained the largest share of variance and was defined by nine variables. Within this component, the variables show a hybrid governance arrangement where informal authority coexists with structured procedural norms. This aligns with Birago *et al*. (2025), who argue that urban informality operates through negotiated systems rather than the absence of order, and Hartati (2018), who found that access to vending space is often mediated through informal but socially recognized institutions. Similarly, Addi *et al.* (2026) highlight that informal markets develop internal regulatory systems that mimic formal allocation processes. The prominence of fairness and transparency also supports Akuoko, Amoako and Owusu-Ansah (2022), who noted that perceived procedural justice enhances compliance and stability in informal trading environments. In addition, Carré, Horn and Bonner, (2018) show that informal workers often rely on negotiated governance arrangements to secure space, while Bansah (2017); Acheampong (2019) argue that access to urban space is shaped by planning controls, local power relations, and institutional recognition. Sowatey *et al.* (2018) further observe that informal trading spaces are sustained through social networks, negotiation, and local legitimacy. These results, therefore, confirm that access to vending space is not arbitrary but follows socially embedded rules that balance flexibility with order.

These findings can be explained using Institutional Theory and Social Exchange Theory. Institutional Theory suggests that vendors' behaviour is shaped by established norms, rules, and accepted procedures, which provide predictability and legitimacy in accessing space (Aksom, 2020). Social Exchange Theory further explains that payment of tokens and adherence to procedures represent reciprocal arrangements, where vendors exchange compliance for access and security (Kim et al., 2018). In this study, the presence of clear procedures, accepted practices, and proof of rights reflects institutionalized norms governing space allocation, even in informal settings. Vendors conform to these rules because they provide legitimacy and predictability. Vendors are willing to comply with payments and procedures because they receive access, protection, and stability in return.

Component 2: Institutional Relations and Governance Environment

This principal factor, labelled Institutional Relations and Governance Environment, was defined by four variables. Within this component, the findings indicate that beyond access, the nature of governance and institutional engagement plays a critical role in shaping vendors' locational decisions. The presence of low harassment, clear rules, and positive relationships with space managers creates an enabling environment that encourages vendors to invest and remain in a location. This supports F. D. Boateng (2020), who observed that constructive engagement between authorities and street vendors reduces conflict and enhances operational stability. Similarly, Barra & Papaccio (2024) emphasized that supportive regulatory frameworks improve vendor productivity and spatial permanence within informal economies. Boamah and Ofori-yeboah (2023) further argue that inclusive urban governance reduces the vulnerability of informal workers by improving their security of workspaces.

Bansah (2017); Acheampong (2019) also note that street trading outcomes are strongly shaped by planning regulations, enforcement practices, and the degree of recognition given to informal economic actors. In addition, Forkuor, Akuoko and Yeboah (2017) and Koster and Nuijten (2016) show that negotiation, tolerance, and everyday governance relationships influence how vendors secure and maintain trading spaces in cities. The institutional theory posits that behaviour is shaped by established rules, norms, and governance structures that provide legitimacy and predictability (Aksom, 2020). In this study, clear rules and reduced harassment reflect institutional arrangements that support vendor

activities. Social Exchange Theory explains that vendors maintain positive relationships and comply with regulatory expectations in exchange for security and operational freedom (Kim et al., 2018). Therefore, the governance environment functions as a system of mutual exchange, where trust and cooperation between vendors and authorities influence the selection and sustainability of vending locations.

Component 3: Tenure Security and Spatial Stability

This principal factor, labelled Tenure Security and Spatial Stability, was defined by five variables. Within this component, the findings highlight that vendors' locational decisions are strongly influenced by perceived security of tenure, continuity of use, and social acceptance. The ability to operate without fear of eviction, combined with recognition of space rights and support from local actors, creates a stable environment for economic activity. This supports Sackey (2025), who emphasized that secure property rights enhance investment and economic productivity. Similarly, Bansah (2017); Acheampong (2019) and Boamah and Ofori-yeboah (2023) argue that secure access to urban space is central to the survival and productivity of informal workers. Akuoko, Amoako and Owusu-Ansah (2022), also found that tenure security in informal trading spaces improves business continuity and reduces vulnerability among street vendors.

In addition, Akuoko, Amoako and Owusu-Ansah (2022) and Sowatey *et al.* (2018) observed that informal traders often depend on negotiated recognition, local support, and tolerated occupation to maintain their trading spaces. The role of community backing further reinforces the importance of social legitimacy in sustaining informal spatial claims. The property rights theory suggests that individuals are more likely to invest and remain in spaces where their rights of use are secure and protected (Musah et al., 2024). In this study, confidence of no eviction and recognized space reflect perceived rights that encourage stability. Institutional Theory further explains that these rights are embedded in formal and informal rules, including dues payment and community norms (Aksom, 2020). Therefore, tenure security and spatial stability emerge from a combination of institutional arrangements and perceived rights, which together influence vendors' decisions to select and remain in specific vending locations.

7. Conclusion and Recommendations

This study aimed to identify, categorize, and analyze the key factors that shape vendors' choice of vending locations within the context of urban informality in Ghana. The findings revealed that vendors' decisions are not random but are structured around clear processes, fair allocation practices, supportive governance systems, and perceived security of tenure. The study identified that transparent procedures, reduced harassment, good relationships with space managers, and confidence in non-eviction significantly influence location choices. These results contribute to the discourse on urban informality by providing an analytical framework that explains how institutional and social factors interact to shape spatial behaviour in informal economies.

Compared to previous empirical studies within the urban informality and street vending literature, the key knowledge gap identified is the absence of a structured analytical taxonomy explaining how vendors select and retain vending locations. This study addresses this gap by categorizing the determinants into three core dimensions: access and allocation mechanisms, institutional relations and governance environment, and tenure security and spatial stability. The implications for urban planners and municipal authorities lie in providing a practical framework for assessing and managing street vending systems more effectively. This supports the design of interventions that enhance transparency, fairness, and efficiency in space allocation. Early identification of governance and allocation

challenges, coupled with proactive measures, can reduce conflicts, improve compliance, and promote urban order while sustaining livelihoods.

it is critical to create a good atmosphere of collaboration between vendors and authorities through structured dialogue platforms which could improve trust and compliance. The introduction of simplified registration systems and clearly defined operational guidelines can further enhance governance efficiency and accountability.

Future research should adopt longitudinal approaches to examine how access mechanisms, governance environments, and tenure security evolve across different cities within different countries. Also, further studies could apply Structural Equation Modelling to validate the factor structure and test causal pathways.

Funding: There was no external funding for this research.

Data Availability Statement: The datasets utilized and/or analyzed during this study are available from the corresponding author upon reasonable request.

Acknowledgements: The authors would like to express their sincere gratitude to the street vendors at Tech Junction, Anloga Junction, and Amakom Junction for their willingness to participate in this study and share their experiences. We also appreciate the support and guidance of our academic supervisors and the cooperation of all individuals who contributed to the successful completion of this research.

Human Ethics and Consent to Participate declarations: Not Applicable

Conflicts of Interest: The authors indicate that there is no conflict of interest.

References

Acheampong, R. A. (2019). *Spatial Planning in Ghana*. 269–288. https://doi.org/10.1007/978-3-030-02011-8

Addi, B., Amoako, C., Takyi, S. A., Abagna, G., & Amponsah, O. (2026). Exploring the street economy in African cities : A review of practices , regulatory policies , and challenges of urban governance in Ghana. *Journal of Urban Affairs*, *48*(2), 515–534. https://doi.org/10.1080/07352166.2024.2410279

Addi, B., & Pacchi, C. (2021). *The Space Of Street Vending In Urban Policy Planning, Ghana: Steategies And Practices Towards Inclusion*.

Adei, D., Braimah, I., Mensah, J. V., Mensah, A. A., Agyemang-duah, W., Adei, D., Braimah, I., Mensah, J. V., & Acquah, A. (2021). Improving upon the working environment of informal sector workers in Ghana : The role of planning PUBLIC HEALTH & PRIMARY CARE | REVIEW ARTICLE Improving upon the working environment of informal sector workers in Ghana : The role of planning. *Cogent Medicine*, *8*(1). https://doi.org/10.1080/2331205X.2021.1911441

Adhikari, D. B., & Phil, M. (2017). *Informal Street Food Trade : A Source of Income Generation in Urban Nepal*. *23*(1), 1–17.

Afua, J., Haleegoah, S., Akuoko, K. O., Dwumah, P., Marfo, K. A., Forkuor, J. B., Frimpong, B. N., Asante, B. O., & Brobbey, L. (2020). *Factors influencing consumption of street vended local foods (SVLFs) in Urban Ghana*. *14*(December), 395–406. https://doi.org/10.5897/AJFS2020.2029

Aksom, H. (2020). *How institutional theories explain and fail to explain organizations*. *2017*. https://doi.org/10.1108/JOCM-05-2019-0130

Akuoko, P. B., Amoako, C., & Owusu-Ansah, J. K. (2022). Compliance, resistance and innovations: reflections of informal traders' responses to kejetia redevelopment in central Kumasi, Ghana. *African Geographical Review*, *41*(4), 452–467. https://doi.org/10.1080/19376812.2021.1945466

Allison, N., Ray, K., & Rohel, J. (2021). Mobilizing the streets : the role of food vendors in urban life. *Food, Culture & Society*, *24*(1), 2–15. https://doi.org/10.1080/15528014.2020.1860454

Avenyo, E. K. (2018). *Working Paper Series Data set and descriptive analysis*. *31*.

Azunre, G. A., Amponsah, O., Takyi, S. A., & Mensah, H. (2021). Informality-sustainable city nexus: The place of informality in advancing sustainable Ghanaian cities. *Sustainable Cities and Society*, *67*(August 2020), 102707. https://doi.org/10.1016/j.scs.2021.102707

Bansah, D. K. (2017). *Governance Challenges in Sub-Saharan Africa : The Case of Land Guards and Land Protection in Ghana*.

Barra, C., & Papaccio, A. (2024). Does Regulatory Quality Reduce Informal Economy ? A Theoretical and Empirical Framework. *Social Indicators Research*, *172*(2), 543–567. https://doi.org/10.1007/s11205-024-03319-6

Birago, P., Adams, T., & Haller, T. (2025). Balancing customary and statutory governance to sustain informality in Ghana ' s public spaces. *Cities*, *165*(May), 106127. https://doi.org/10.1016/j.cities.2025.106127

Boamah, N. A., & Ofori-yeboah, F. (2023). *Political environment , employee tenure security and firm performance in middle- income economies*. https://doi.org/10.1108/JED-06-2022-0105

Boateng, B. O., Mensah, H., Simpeh, E. K., Opoku, P., Osei, B., Mensah, H., Simpeh, E. K., & Opoku, P. (2024). Tackling local environmental challenges with livelihoods strategies : insights from small-scale farmers in the vulnerable region of Ghana. *International Journal of Agricultural Sustainability*, *5903*, 1–19. https://doi.org/10.1080/14735903.2024.2399407

Boateng, F. D. (2020). *Perceived police fairness : exploring the determinants of citizens ' perceptions of procedural fairness in Ghana perceptions of procedural fairness in Ghana*. *9463*. https://doi.org/10.1080/10439463.2019.1632311

Carré, F., Horn, P., & Bonner, C. (2018). *Collective Bargaining by Informal Workers in the Global South : Where and How It Takes Place*. *October*.

Cunningham, W. (2024). *Urban Informality in Sub-Saharan Africa Profiling Workers and Firms in an Urban Context*. *February*.

Dewi, I. (2022). *Process of Vendor Bill Payment*. *1*(1), 1–6.

Dovey, K. (2024). *Inventraset assemblages : The spatial logic of informal street vending , transport and settlement*. *61*(12), 2265–2289. https://doi.org/10.1177/00420980231223060

Eesley, C. E., Eberhart, R. N., Skousen, B. R., Cheng, J. L. C., Eesley, C. E., Eberhart, R. N., Skousen, B. R., & Institutions, J. L. C. C. (2018). *Institutions and Entrepreneurial Activity : The Interactive Influence of Misaligned Formal and Informal Institutions Institutions and Entrepreneurial Activity : The Interactive Influence of Misaligned Formal and Informal Institutions*. *April 2026*.

Forkuor, J. B., Akuoko, K. O., & Yeboah, E. H. (2017). *Negotiation and Management Strategies of Street Vendors in Developing Countries : A Narrative Review*. https://doi.org/10.1177/2158244017691563

Fuseini, I., & Kemp, J. (2015). *Land Use Policy A review of spatial planning in Ghana ' s socio-economic development trajectory : A sustainable development perspective*. *47*, 309–320.

Ghana Statistical Service (GSS). (2021). *2021 Population and Housing Census*. General Report on Population and Housing Census 2021.

Hartati, D. W. I. R. (2018). *Spatial Decision Support System for resource location allocation towards equitable accessibility Case study : Java Island , Indonesia*.

Hendri, D. (2025). *Balancing Survival and Stability : The Dual Impact of Government Aid on Post-Relocation Income Recovery for Street Vendors*. 202–219.

Howard, M. C., & Howard, M. C. (2016). A Review of Exploratory Factor Analysis Decisions and Overview of Current Practices : What We Are Doing and How Can We Improve ? A Review of Exploratory Factor Analysis Decisions and Overview of Current Practices : What We Are Doing and How Can We Improve ? *International Journal of Human-Computer Interaction*, *32*(1), 51–62. https://doi.org/10.1080/10447318.2015.1087664

Kiaga, A. (2020). *The Transition from the Informal to the Formal Economy in Africa*. *December*.

Kim, A. H., Kankanhalli, A., Lee, S., Kim, H., Kankanhalli, A., & Lee, S. (2018). *Examining Gifting*

Through Social Network Services : A Social Exchange Theory Perspective. *29*(4), 805–828.

Koster, M., & Nuijten, M. (2016). *Coproducing urban space : Rethinking the formal / informal dichotomy*. *37*, 282–294. https://doi.org/10.1111/sjtg.12160

Lagankhel, I., Bal, M. L., & Salike, I. P. (2025). *Journal of Engineering Issues and Solutions Computational Analysis of Street Vendor and Pedestrian*. 89–110.

Langnel, D., Mensah, H., Mawuena, B., Eric, A., & Simpeh, K. (2025). Equity in access to ecosystem services among riparian residents in Greater Kumasi , Ghana. *Discover Cities*. https://doi.org/10.1007/s44327-025-00058-2

Mensah, H., Rafiyan, S., Simpeh, E. K., & Bedu-addo, K. (2025). *Urbanisation and green space management in peri-urban Ghana : mapping patterns and stakeholder perspectives*.

Monama, L., Ferreira-schenk, S., Sgammini, R., & Mathlaku, K. A. (2025). *Investigating How People and Culture Risk Perception Influences Risk Management in the South African Banking Sector*. *15*(5), 273–284.

Musah, I., Nanor, M. A., & Adarkwa, K. K. (2024). Implications of perceived tenure security and property rights protection in Burkina Faso Implications of perceived tenure security and property rights. *Cogent Social Sciences*, *10*(1). https://doi.org/10.1080/23311886.2024.2323754

Nyarku, K. M., & Oduro, S. (2018). *Effect of legal and regulatory framework on SMEs growth in the Accra Metropolis of Ghana*. https://doi.org/10.1177/1465750317742842

Olaniran, T. O., & Aule, T. T. (2025). Systematic approach to sustainable urban development : reviewing challenges of informal settlements and peri-urban growth in sub-Sahara Africa. *Urban, Planning and Transport Research*, *13*(1). https://doi.org/10.1080/21650020.2025.2495660

Onstein, A. T. C., Ektesaby, M., Rezaei, J., Tavasszy, L. A., Damme, D. A. Van, Onstein, A. T. C., Ektesaby, M., Rezaei, J., & Lóránt, A. (2020). *Importance of factors driving firms ' decisions on spatial distribution structures*. *5567*. https://doi.org/10.1080/13675567.2019.1574729

Phanuel, W., Darbi, K., Hall, C. M., & Knott, P. (2018). *The Informal Sector : A Review and Agenda for Management Research*. *20*, 301–324. https://doi.org/10.1111/ijmr.12131

Sabbi, M., & Mensah, C. A. (2015). *Juggling Administrative Institutions : Local State Actors and the Management of Urban Space in Kumasi , Ghana*. https://doi.org/10.1007/s12132-015-9262-8

Sackey, N. A. (2025). *The role of Intellectual Property as a tool for business development in the informal economy of Ghana*. *October 2023*, 406–427. https://doi.org/10.1111/jwip.12338

Siegmann, K. A. (2016). *Understanding the globalizing precariat: From informal sector to precarious work 1*. *2*, 111–123. https://doi.org/10.1177/1464993415623118

Sowatey, E., Nyantakyi-frimpong, H., Mkandawire, P., Arku, G., Hussey, L., Amasaba, A., Sowatey, E., Nyantakyi-frimpong, H., & Mkandawire, P. (2018). *Spaces of resilience , ingenuity , and entrepreneurship in informal work in Ghana*. *3475*. https://doi.org/10.1080/13563475.2018.1480933

Steel, W. F., & Anyidoho, N. A. (2016). Informal-formal linkages in market and street trading in Accra. *African Review of Economics and Finance*, *8*(2), 171–200.

Wirtz, J., Liu, S. Q., & Chun, H. H. (2026). *Platforms in the peer-to-peer sharing economy*. *May*. https://doi.org/10.1108/JOSM-11-2018-0369

Supplementary Files

This is a list of supplementary files associated with this preprint. Click to download.

- SUPPLEMENTARYFILE.docx