

DISTRIBUTION AND SIZES OF INFORMAL AUTOMOBILE MECHANIC WORKPLACES IN KANO METROPOLIS, NIGERIA

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Abstract

Locations of informal economic activities are important in the urban spatial planning especially in cities of developing nations. Roadside automobile repair services, otherwise known as roadside mechanics are amongst the small businesses or informal industries that are common to all cities in Nigeria. This paper aimed at describing the spatial characteristics of the informal mechanic workplaces in Kano metropolis. Quantitative data related to the number, location and spatial pattern of distribution of the informal automobile workplaces were used. Direct field observation and measurements were employed while secondary data were collected from National Automobile Technicians Association (NATA). GIS based Nearest Neighbour Analysis was used to determine the locational pattern of distribution of the mechanic's places. It is found that there are a total of 1,763 registered garages located within the six local government areas of Kano metropolis. These were grouped into 58 units. The nearest neighbour index 0.4 was less than 1 and the z score of (-15.8) was less than 1.96; thus the spatial pattern of distribution of the garages has a clustered pattern. Based on their sizes, the workplaces were classified into 3 classes: large, medium and small garages. Majority of the workplaces are located on trunk B, that is state government roads, and trunk C which are minor roads. It is concluded that the large number and high concentration of the garages in some of the metropolitan local government areas is an indication of their and the high demand of their services by the public. It is recommended that statutory land allocation by the state ministry of Land and Physical Planning should take into cognisance the needs of the informal mechanics.

Keywords: Garages, Location, Cluster, Roadside, Nearest Neighbour Analysis.

Introduction

The location of economic activities within the cities is very important, as every urban centre requires them not only as essential land use elements but also as a catalyst for urban growth and development (Adams, 2010). The study of urban informal economy provides a formidable information gap because some or all areas of informal economic activities are off the formal documentation. Within the cities of developing countries of the world, informal economic activities can be found in various locations, especially where government regulations or formal business structures are absent or difficult to enforce. These activities are often a response to the lack of formal employment opportunities, and they contribute significantly to the economy in many regions, even though they may not be captured in official statistics (Nduka, *et al.*, 2016). According to Abubakar (2019) some common locations where informal economic activities are prevalent within the urban centres include: streets and roadsides, informal residential

neighbourhoods, public transportation nodes, workshops and home-based production areas; as well as parks and recreational areas.

In Nigeria, the economic depression which occurred in the 1980s, led to the introduction of Structural Adjustment Programme (SAP). The programme promoted extensive trade in second-hand vehicles in the country. The low purchasing power of the middle-income class, the devaluation of the Nigerian currency and inadequate planned public transportation in the Nigerian cities made the use of the second-hand cars the only option for Nigerians. Consequently, there was a massive importation of used vehicles, also known as “*Tokunbo*” into the country (Nduka, *et. al.*, 2016).

The widespread importation and use of these types of vehicles, the age of the vehicles and the general absence of enforcement of quality regulations as well as the insufficient standard automobile repair services led to the proliferation of informal garages or workshops in the cities of Nigeria. These workplaces offer repairs and other services for the *tokumbo* vehicles thus, they became some of the small businesses or informal industries that are common to all cities in Nigeria (Amfo-Otu & Agyemang, 2016; Abubakar & Abba, 2021).

As aspects of the urban structure, the informal automobile mechanic workplaces are significant components of urban land use and economy, because the sector offers prospects for the crowd of unemployed population and relatively cheaper services for the general public (Onyemaechi, 2013). In most of the Nigerian cities, policies and bye-laws that regulate the establishments of informal businesses and the infrastructure necessary to support them are either non-existence or inadequate; accessing land for these services is largely through the informal ways and also there is no good record keeping on the workplaces (Jelili *et al.*, 2017). The foregoing are some of the reasons why the locations of roadside automobile mechanics, like many other informal services in Nigeria, remained without official planning (Onyemaechi, 2013). The implication is that the total number of these informal activities outweighs that of the formal enterprises in Nigeria (Gunu, 2003).

In Kano metropolis, automobile workplaces had evolved sporadically since the 1970s. As parts of the informal economy, they had grown and spread across every major road within the metropolitan area. They occupy available vacant plots within the residential areas; they also occupy available open spaces such as parking spaces, gardens, undeveloped commercial and industrial plots. The workspaces can spring up besides, behind or within any form or type of land use or on road intersections. Most of these informal services are also located within relatively close physical proximity to automobile spare parts markets (Abubakar & Abba, 2021).

Despite the fact that Kano metropolis is the second most populous city in Nigeria after Lagos, one of the cities with the highest number of vehicles in the country and consequently a city witnessing high proliferation of informal automobile workplaces, there are insufficient academic researches on informal automobile mechanics. The only research work on the subject matter within the study area was conducted by Abubakar and Abba (2021) which assessed how land is accessed for the informal automobile mechanic workplaces in the metropolis. Thus, this research is aimed at describing the number, sizes, and the spatial pattern of distribution of the informal mechanic workplaces in Kano metropolis. This will assist in filling the knowledge gaps and in the development of policy recommendations.

Theoretical frame

The Location of Automobile Mechanics

The location and organization of informal automobile mechanics is meant at achieving a balance between proximity to service and the demand for harmonized aesthetics (Jelili, Olanrewaju & Odunola, 2017). There are no established theories that explain why automobile mechanics are located where they are, however there are theories that explain location of industries generally. These theories can also be applied to location of informal automobile workplaces since they are service industries. Models have been formulated in an attempt to explain the complexities affecting industrial location (Cross & Johnson, 2000). Two of the most commonly quoted models are those based upon the work of Waugh (1995):

- a) The industrialists who seeks the Lowest-Cost Location (LCL) propounded by Alfred Weber in 1909 and this is termed list cost location.
- b) The industrialist who seeks the area which will give the highest profit as propounded by Smith in 1947.

Weber's Model of Industrial Location

Alfred Weber in 1909 derived a model to try to explain and predict the location of industry. Like Von Thunen in the year 1826 before him and Walter Christaller later in 1933, Weber tried to find a sense of order from apparent chaos and made assumptions to simplify the real world in order to produce his model (Adams, 2010). His assumptions are highlighted below:

There was an isolated state with relief, a uniform transport system in all directions, a uniform climate and a uniform cultural political and economic system.

- a) Most of the raw materials were not evenly distributed across the plain.
- b) The size and location of markets were fixed. Transport costs were function of the mass (weight) of the raw material and the distance it has to be moved. This was expressed (km).
- c) Labour was found in several fixed locations on the plain.
- d) Perfect competition existed over the plain (i.e. markets and raw materials were unlimited (Adams, 2010).

In the context of the informal automobile workplaces within the cities, Weber's location model can provide valuable insights into understanding their proximity to the sources of supplies of automobile spare parts and customers. The model highlights the importance of minimizing transportation costs, which is crucial for informal automobile workshops that rely on local suppliers and customers. The model is also relevant because it deals with the issue of access to transportation infrastructure. Informal workshops are located near major roads, highways or public transportation hubs to facilitate the movement of goods, services and customers. The model also emphasizes the significance of transportation infrastructure in determining industrial location. Another area of relevance of the model is in the availability of skilled labour: Informal automobile workshops require skilled labour, such as mechanics and technicians. Weber's model suggests that industries locate where labour costs are minimized, which may explain why informal workshops are usually clustered in areas with a high concentration of skilled labour.

Smith's Model of Industrial Location

Smith's Model of Industrial Location, also known as the "Least Cost Location" model, was developed by economist David Smith in the 1960s. The model aims to explain the location of industries and other economic activities based on the minimization of costs. According to Waugh

(1995), the more important factor in the 19th century was physical, while in modern industry, the factors tend to be human and economic. He observed the following:

- a) That in a primary manufacturing industry, where due to weight loss, the presence of raw materials and sources of energy is more important than the market and other economic factors.
- b) A secondary manufacturing industry initially tied to raw materials and sources of energy but in which economic and political factors have become increasingly more important.
- c) A secondary manufacturing where the nearness of a market and labour supply is more important than the presence of raw material and source of energy.
- d) Modern secondary (quarterly) manufacturing industry where human and economic factors are the most important.

The last two factors are more important in exploring the locations of automobile service or repair industries. Informal workshops often operate with lower labour costs compared to formal enterprises. Smith's model predicts that industries will locate where labour costs are lower, which may contribute to the proliferation of informal workshops in cities. Proximity to demand centres: Informal automobile workshops are often located near areas with high demand for repair services, such as residential neighbourhoods or commercial districts. Smith's model is also significant here because it deals with the issue of competition amongst industries and their agglomeration: Informal workshops are usually clustered in specific areas, creating agglomerations of similar businesses.

Methodology

The Study Area

Kano metropolis lies between latitudes 11° 50' to 12° 07' N and longitude 8° 22' to 8° 47' E, with altitude of 472 meters above sea level (Olofin, 2014). It is bordered by Minjibir LGA to the Northeast and Gezawa LGA to the East, Dawakin Kudu LGA to the South East and Madobi and Tofa LGAs to the South West (Figure 1). The metropolis is among the fastest growing cities in Nigeria (Nabegu, 2010). The expansion of the city is swallowing the peripheral area vis-à-vis the surrounding lands which is gradually taking over by urban structure and site acquire an urban character.

The metropolis is located at the central part of Kano closed settled zone and therefore having high population density due to industrialization and other economic developments, it has also through time became a cosmopolitan city with different ethnic groups (Ibrahim, 2014). The population of the Kano Metropolis based on the 2006 population census was 2,826,307 (National Population Commission, 2010). However, in the year 2019, the metropolis was projected to be populated by about 4.5 million people (Mohammed *et al*, 2019), making it second largest after Lagos (Liman, 2015). Presently, based on the inter-census population growth rate of 2.6 (Federal Republic of Nigeria, 2009), the population of the metropolis is projected to be well over 5 million.

There are many small scales commercial, hand craft and other land use services done by individuals or groups, along the major roads and within the residential areas (Ibrahim, 2014). The city is expanding rapidly due to several factors such as peace and tranquillity and outright acceptance of strangers who have different cultures and beliefs as well as the expansion of trading, commercial and industrial activities (Tanko & Idris, 2014).

Kano metropolis is unique among the leading industrial centres of Nigeria. The industrialization emerged from within the urban society with a comparatively advanced pre-colonial handicraft

and mercantile capitalist tradition (Ibrahim, 2014). Historically, the advanced pre-colonial economy encouraged dense peasant settlements in the pre-urban areas surrounding the city. Both of these factors, an advanced pre-colonial economy and dense peasant settlements continue to exert influence on the structure, consciousness and action of Kano's fledging industrial working class (Lubeck, 2007).

The volume of trading activities conducted on daily basis in the markets, notably Muhammadu Abubakar Rimi Market (Sabon-Gari), Kwanar Singer, KantinKwari, Kurmi and Dawanau signify not only its great potentials, but its eminence as market for various products (Tanko & Idris 2014). Other land uses include agricultural in the extreme end of the metropolis, especially in Kumbotso and Ungogo Local Government Areas. The opportunities for joint ventures in the existing state owned enterprises such as the multi-mellion Daula Hotel, Magwan Water Restaurant and many privates own hotels and restaurants (Tanko & Idris, 2014).

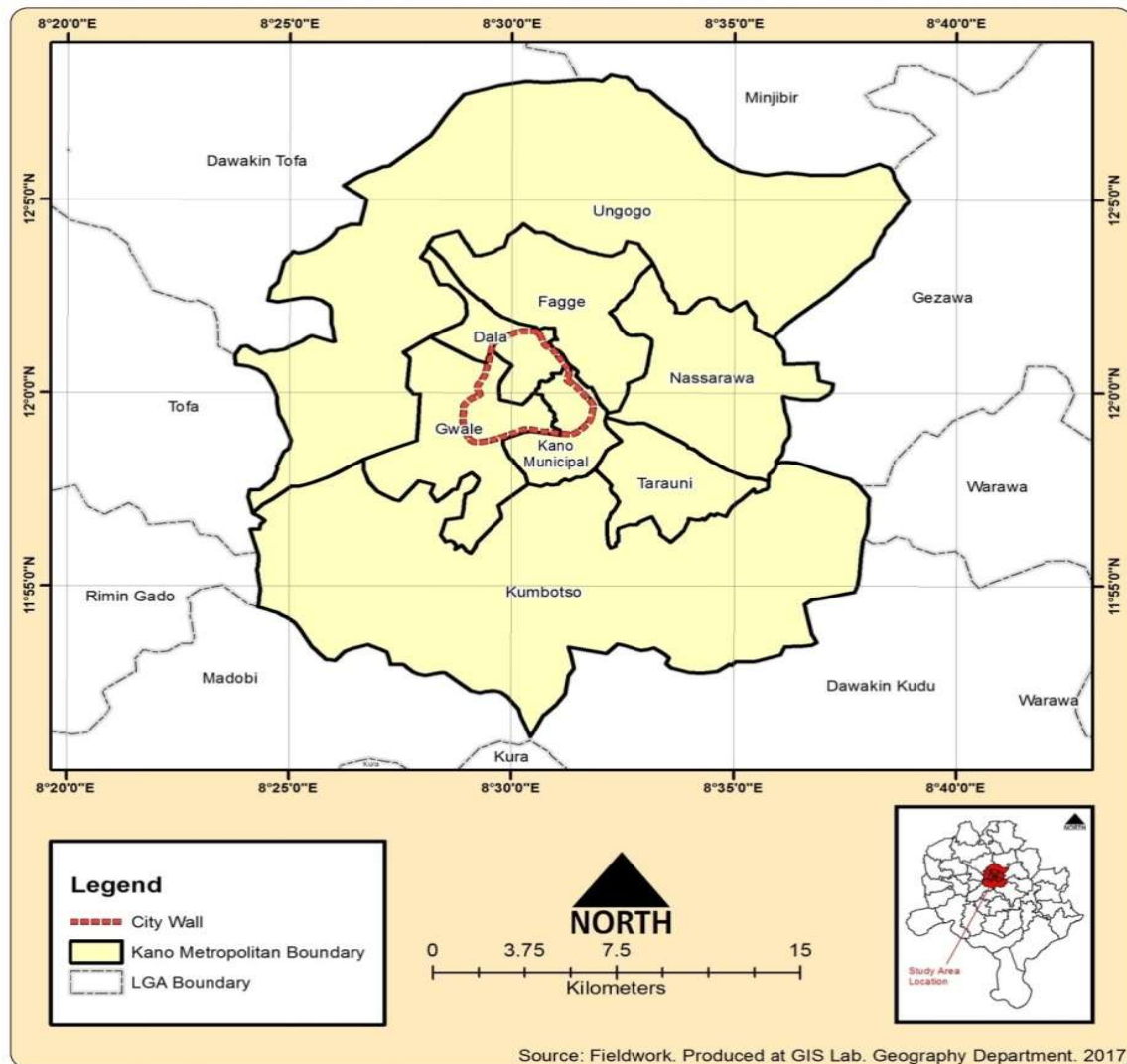


Figure 1: Kano Metropolis

Source: GIS laboratory, Geography Department, BUK

Types and Sources of Data

The research basically used quantitative data and geo-spatial data related to the number, location and spatial pattern of distribution of the informal automobile workplaces. These were generated from primary sources which include direct field observation and measurements. Secondary data were collected from National Automobile Technicians Association (NATA) and from Kano State Ministry of Lands and Survey. The entire informal automobile garages in the metropolis form the population of the study. The study is restricted to just those informal automobile garages that are registered with the National Automobile Technicians Association (NATA). These garages are found within some six (6) Local Government Areas of the metropolis namely Dala, Fagge, Tarauni, Municipal, Nasarawa, and Gwale. The local government areas comprised of 1,763 registered garages which were used as the population of this study. The workplaces were grouped by NATA in all the local government areas of the metropolis into different clusters or units for ease of administration

Observation and direct field measurement were used to identify and record the locations of each of the automobile garage in the area using Geographical Positioning System (GPS). While measuring tape was used to measure the sizes of the workplaces and their distance to the roads. GIS based Nearest Neighbour Analysis was used to determine the locational pattern of distribution of the informal automobile mechanics places.

Results and Discussion

Inventory and Locations of Informal Automobile Mechanic Workplaces

There are a total of 1,763 registered informal automobile workplaces located within the six local government areas of the study area. These were grouped into 58 units by the National Automobile Technicians Association (NATA) on the bases of their physical proximity to one another and for administrative conveniences (Table 1). The units, being a group of 10 or more garages, do not strictly coincide with the political boundaries of the six local government areas of the study area; as such some of them operate within the boundaries of more than one local government area. This means that due to the proximity of some local government areas, a unit can cross two local government areas.

Table 1: Number of informal auto-mechanic workplaces

S/N	Local Government Areas	Number of Units	Number of Garages
1.	Nasarawa	20	856
2.	Dala	9	258
3.	Fagge	15	201
4.	Tarauni	4	264
5.	Gwale	3	72
6.	Kano Municipal	7	112
	Total	58	1,763

Source: Abubakar and Abba (2021).

For instance, the Unguwa Uku garage unit located in Kumbotsho local government area overlapped into Tarauni and Nasarawa local government areas. This is because the mechanic workplaces at Court Road, Farm Centre and Hausawa are in parts both in Kumbotso and the other two local government areas. Fagge local government area comprises of units such as Kwakwaci, Zungeru Road, Katsina Road, Sabon Gari, Airport Road and Federal Secretariat. These also overlapped into the boundaries of Dala local government area. The units in Kano Municipal local

government area comprises of IBB Road, Dan Agundi, Sharada, Tashar Bala and Railway units (Table 2 & Figure 1). Some of the units such as Kwakwaci, Kofar Ruwa, IBB Road and Gidan Boss were further divided into sub-units. For example, Kwakwachi is divided into units A to D, Kofar Ruwa comprises of A to H sub-units, and IBB Road has units 1 and 2, while Gidan Boss has 13 sub-units.

Table 2: Distribution of mechanic workplace units across Local Government Areas

S/N	Local Government Area	Workplace Units
1.	Nasarawa	CBN, Dakata, Hadeja Road, Nassarawa, Hotoro, Independence Road, Katsina Road Kinsway, Sauna and Yankaba,
2.	Tarauni	Tarauni, Farm Centre, Hausawa, Hotoro and Unguwa Uku.
3.	Fagge	Airport Road, CBN, Federal Secretariat, Eldorado, IBB Road, Sabon Gari and Zungeru Road.
4.	Gwale	Aminu Kano Way, Kofar Ruwa I, II, III & IV
5.	Kano Municipal	IBB Road, Railway Road, Sharada and Gandu.
6.	Dala	Aminu Kano Way, Gwammaja, Federal Secretariat and Kofar Ruwa.

Source: NATA (2022) and Fieldwork (2022).

A close observation of the various units of the automobile workplaces in the area shows that the units operate as Geographical Clusters. These clusters are the concentration of similar economic, social or cultural activities in a specific geographic area. The automobile workplace clusters are defined by the close physical proximity of their garages and they are characterized by concentration or density of the garages, similarities of services offered, common specialization, networking, knowledge sharing and competitive advantage.

Nasarawa, Tarauni and Dala local government areas have the highest number and density of mechanic workplaces in the metropolis (Table 1 & Figure 1). This is connected with the high population concentration and the presence of most economic activities of Kano State in these areas. Based on the 2006 population census, these are the most populous local government areas in the state. Nasarawa has 596, 411 people, Dala has 418, 759 people and Tarauni has 221, 844 people (National Population Commission, 2010). Also, some of the largest markets of the state such as Kwari, Sabon-Gari, Singer, Kofar Wambai, Kofar Ruwa and Farm Centre are situated within these local government areas. Furthermore, most of the hotels and relaxation places of the city are found there (Abba & Sulaiman 2021). Lastly, most of the informal automobile technicians are settlers that came from other parts of the country and mostly reside in Sabon-Gari, Fagge, Brigade and other parts of Nasarawa local government area. Therefore, the high concentration of the automobile garages in these local government areas may be due to the proximity of the places of residence of the automobile technicians.

In other words, these local government areas are the most urbanized parts of the metropolis as such they generate the highest demand for automobile repair services. These areas also supply adequate labour force for the auto mechanic industries at cheap and affordable rates. These explanations corroborate with the Smith's assumptions that economic enterprises will locate where labour cost are lower and where there is proximity to demand centres (Waugh, 1995).

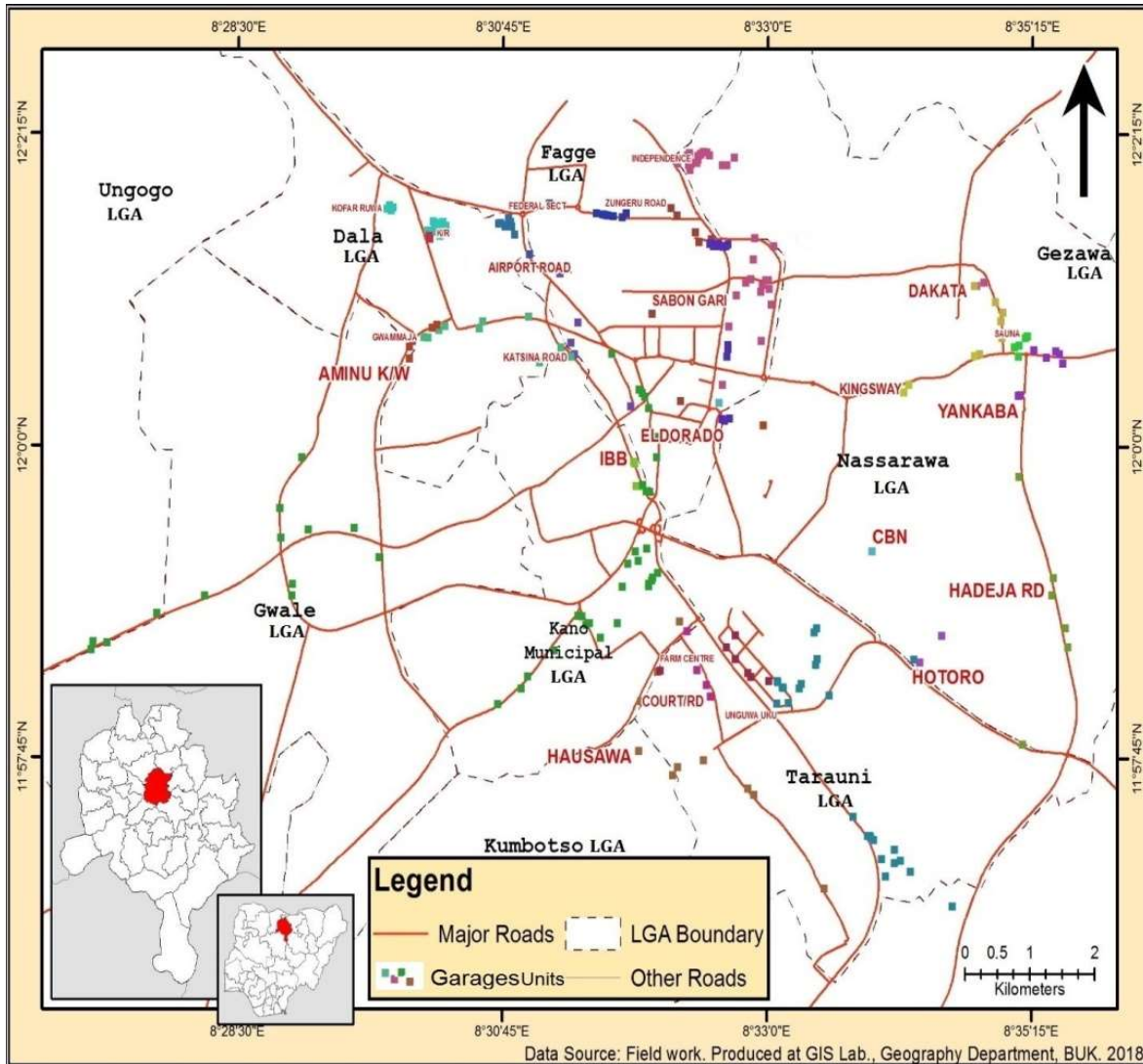


Figure 1: Informal automobile garage units

Source: Field Survey and Data Analysis (2022).

Spatial Pattern of Distribution of the Automobile Workplaces

The spatial distribution of the automobile workplaces was determined using GIS based nearest neighbour technique. Result shows that the distribution of the garages in the metropolis has a cluster pattern (Figure 2). This is because the nearest neighbour index 0.4 is less than 1 and the z score of (-15.8) is less than 1.96. Also, because the p – value is 0.00 means the pattern is significantly different from random at 99% confidence level. The result shows five major clusters of informal automobile workplaces in Fagge, four clusters in Nasarawa, four clusters in Dala, three clusters in Tarauni, three clusters in Gwale and two clusters in Kano Municipal local government areas. This result is in agreement with the findings of Akinbinu (2001) in Ibadan, which observed that auto repair workers exist in the form of clusters with three of such clusters in Iba North, two in Ibadan South-west and one in Oluyole.

The inference that can be drawn from this result is that just like other socio-economic activities within urban centres the garages are neither evenly distributed nor randomly distributed within

the metropolis. As explained earlier, the establishment of the automobile repair garages in the study area is greatly influenced by the proximity to major population centres such as residential neighbourhoods, nearness to key economic hubs such as markets and proximity to major roads and streets. Therefore, the workplaces tend to concentrate heavily in some particular locations within the urban area and not the others. It is thus only natural to find them in clusters along roads and streets, close to major markets and business districts and near key residential neighbourhoods. Weber's model (1909) suggests that industries will locate where they can benefit from external economies of scale, such as shared knowledge, specialized labour, and transportation infrastructure. Thus, in Kano metropolis the informal auto workplaces are clustered together in specific areas, creating agglomerations of similar businesses.

Sizes of Plots for the Informal Automobile Workplaces

The size of the plot of land used for an automobile workplace can be an important factor in several ways. The plot size determines the adequacy of space for operation, storing vehicles, spare parts and equipment. The size is also important for future expansion of the garages. There is no uniformity in the sizes of plots occupied by the automobile garages in the metropolis. This is because there is no any law regulating the sizes of plots of land used for automobile mechanics workplaces in the whole Kano state. Based on their sizes the workplaces were classified into 3 classes: large, medium and small garages (Table 3).

Table 3: Classification of auto-mechanic workplaces based on their size

S/N	Class	Size of Plot (metres)	Example of Workplace
1	Large	22.8m by 30.8m and above	Sunusi Motors Mechanical Engineering workshop, Lawan Dambazau Link off Zaria Road.
2	Medium	15.2 by 15.2 - 22.8 by 30	De-franc Int'l Peugeot automobile, Zungeru Road.
3	Small	9.1 by 6 – 12.2 by 15.2	Sha'ibu Panel Auto-Workshop, opposite FGC Kano, Zaria Road,.

Sources: Fieldwork (2022).

The small garages are usually located right beside the major roads of the metropolis and because they cannot adequately contain many vehicles, they occupy some portions of the pedestrian walkways and the main roads of the metropolis (Plate 1). This impedes the free flow of traffic on some roads and streets such as along North West University Road, Fagge Gidan Boss and others. Some of the implications of small size of plot are that it limits the space available for workshop activities; they also provide limited space for storing vehicles, spare parts and equipment. While the mechanic garages occupying large plots of land are big enough to contain tens of vehicles that are brought for services and repairs.

The findings reveal that, the workplaces in the large size categories constitute the majority (35%). This is an indication of higher preference for the large spaces by the operators of the mechanic garage due to the numerous advantages they offer. Almost all the large workplaces occupy vacant spaces and undeveloped commercial, industrial and residential plots (Abubakar & Abba, 2021). Next to the large work spaces in terms of number are the small garages. These constitute 34.4% of the informal automobile workplaces in the metropolis (Figure 3). This shows that these are also very common in the area. This is due to the fact that the small plots are typically less expensive to purchase or rent, they also require less maintenance and utilities, which can reduce operating

costs. The medium size garages constitute 30.6% (Figure 3) and most of them occupy open spaces such as city parks and gardens located beside major streets.

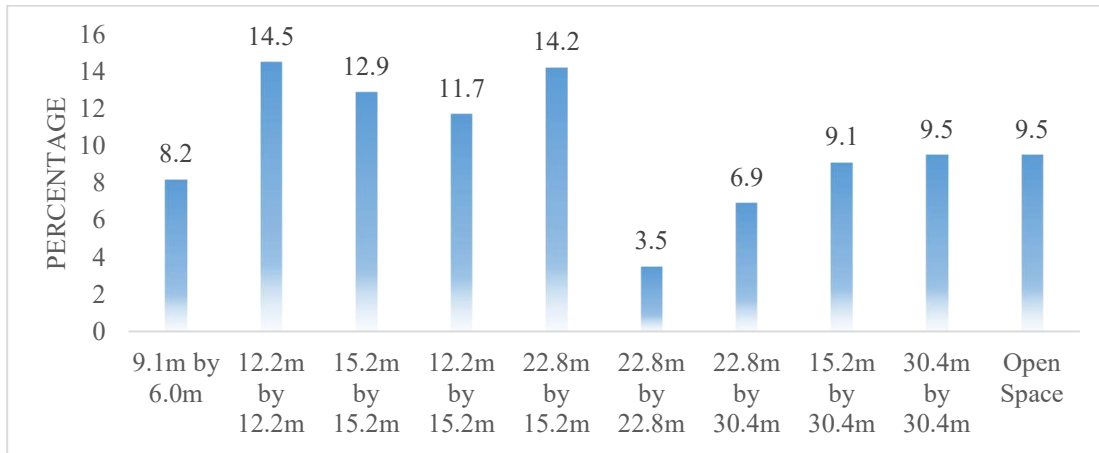


Figure 3: Size of the informal automobile workplaces

Sources: Field work (2022).



Plate 1: Road-side automobile workplace along North West University Road

Source: Field Work (2022).

Distance of the Automobile Workplaces from the Roads

The automobile workplaces are found along all the road types within the metropolis (Table 7). Majority of the workplaces in the metropolis are located on Trunk B Roads (State government roads) and Trunk C Roads (Minor Roads / Feeder Roads). These categories of roads are the transportation arteries that directly connect various residential, commercial, industrial and institutional areas of the city. Therefore they generate high peak-hour traffic as such they are the main sources of demand for auto vehicle repairs and services. There are relatively few garages that are located on Trunk A Roads (Federal Highways) such as Gwarzo Road, Maiduguri Road, Zaria Road and Maiduguri Road. These roads are usually associated with long range travels and vehicles

are mostly serviced and repaired at garages close to the bus stations and parks before the commencement of the long journey.

Majority of the workplaces are located between 30 to 40 meters away from the nearby road. Almost one-third of the garages are located about 20 to 29 metres from the road. Slightly more than one-third are located some 30 to 35 metres from the road. About one-fourth of them have 36 metres to 40 metres distance from the road, while very few of the workplaces are 41 metres to 55 metres away from the road (Table 6). The implication of this is that many of the garages do not conform to the 50 metre minimum distance which all activities located on Trunk A Roads must maintain away from the road as stipulated by the Kano Urban Planning Development Authority (KNUPDA) in 2012. The violation of this regulation has a lot of planning implications as the infringement of the workplaces on the roads and streets may cause road traffic congestion in the metropolis and may hamper smooth traffic flow.

Table 7: Location of the mechanic workplace on different road type

S/N	Workplace	Road Type
1	Saheed technical, Co., Rijiyar Zaki, Gwarzo Road.	Trunk A
2	Ahmadiyya garages, Airport road by Gama, behind cemetery	Trunk B
3	Sunusi motors Mechanical Engineering workshop, behind Bank of the North, off Zaria Road.	Trunk C

Source: Field Work (2022).

Table 6. Distance of the garages from the roads

			Local Government Areas						Total
			TRN	GWL	KMC	FGE	DAL	NSR	
Informal Automobile Garage Distance to Road	20m to 29m	Freq.	12	5	7	23	14	41	102
		Percent	25.0%	38.5%	35.0%	63.9%	30.4%	26.6%	32.2%
	30m to 35m	Freq.	17	2	9	10	11	62	111
		Percent	35.4%	15.4%	45.0%	27.8%	23.9%	40.3%	35.0%
	36m to 40m	Freq.	16	3	4	3	14	36	76
		Percent	33.3%	23.1%	20.0%	8.3%	30.4%	23.4%	24.0%
	41m to 50m	Freq.	2	3	0	0	6	13	24
		Percent	4.2%	23.1%	0.0%	0.0%	13.0%	8.4%	7.6%
	51m to 55m	Freq.	1	0	0	0	1	2	4
		Percent	2.1%	0.0%	0.0%	0.0%	2.2%	1.3%	1.3%
	Total	Freq.	48	13	20	36	46	154	317
		Percent	100%	100%	100%	100%	100%	100%	100%

Sources: Field Work (2022).

Conclusion and Recommendations

Like in other cities and towns in Nigeria and other developing countries, the informal automobile workplaces have become the dominant and uncontested automobile service providers in Kano Metropolis. Their large number and high concentration in some of the metropolitan local government areas is an indication of their flexibility and the high demand of their services by the public; these are responsible for their dominance over the formal automobile mechanic services. The dominance of the large and small plot sizes used for the workplaces and their locations along state roads and minor streets are signs of their informality, economic vulnerability and lack of tenure security.

The paper shows that due to the absence of formal regulations on the location of the workplaces, majority of them do not conform to the 50 metre minimum distance from the roads as stipulated by KNUPDA. This indicates that there is no adequate law enforcement and development control with regards to the locating of the automobile workplaces. The clustered spatial pattern of distribution of the phenomenon shows that mechanic garages are largely located close to one another for mutual benefits and are clustered in areas with high population concentration which provides market and labour force for them.

It is recommended that since the phenomenon of informal economic activities in the metropolis is dynamic, further researches should be conducted to gather more data on the number, location, and characteristics of the informal automobile workplaces so as to have better understanding of them. The information gathered through such studies should be used by the governments to create a more supportive environment for informal automobile workplaces, improving working conditions, promoting environmental sustainability, and fostering economic growth. It is recommended that henceforth, statutory land allocation and urban renewal programmes embarked by the state ministry of Land and Physical Planning should take into cognisance the needs of the informal mechanics.

The Kano Urban Planning and Development Authority (KNUPDA) should develop a regulatory framework which should be simple, inclusive, and flexible and which acknowledges the informal nature of these workplaces. The authority should designate specific areas suitable for informal automobile workplaces, considering factors like accessibility, safety, and environmental impact. Establishment of zoning regulations to separate informal workplaces from residential areas, schools, and other sensitive land uses should also be considered.

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