Analysis of the Intra-Urban Challenges of Small Freight Distribution among Market Women in Alimosho Local Government Area of Lagos State, Nigeria.

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ABSTRACT

This study analyzes the intra-urban challenges of small freight distribution among market women in Alimosho Local Government area of Lagos State, Nigeria. The study focused on frequency of trips, estimation of distance travel, transport cost, mode of distribution and travel time of the market women. A total of 150 copies of structure questionnaire were administered systematically using convenience sampling at the 10 major/regional markets. Multiple regression technique was used to test the study hypothesis. The study discovered that market women travel an average of 14km daily. The study also established that the factors affecting their mobility effectiveness have no significant impact on trip frequency to the regional/selling markets. The study recommends: the use of high-capacity buses with under cabin to accommodate the market women small freights; adequate security surveillance along major road corridors in Alimosho LGA to prevent early morning attack on market women, among others.

Keywords: intra-urban, market women, small freight, travel challenges, freight distribution, supply chain network.

BACKGROUND TO THE STUDY

Transportation is a fundamental process of achieving an efficient flow of socio-economic activities especially the movement of people; sustain supply chain and enhancement of societal growth and economic development. Without mobility, it will be impossible to fulfill the demand and supply of Laboure, goods and services. Transportation increases satisfaction of goods or people by changing the geographical position of goods through the supply chain network. In other words, it creates time and place utilities. Oyesiku, (2002) describe transport as a fundamental human activity and needs from ‘‘Womb to Tomb’’. He makes a clarification that Transport is inherently central to development of nations as it is not only a necessity of life but have a resultant effect on all aspects of our existence.

Intra-Urban Challenges of Small Freight Distribution among Market women is concerned with obstacles that informal distributor or suppliers of agricultural, chemical, clothing, building material and general domestic product at the down-stream level of the society faced in their daily business of goods transfer from the major/regional market to their point of sales. Mobility is a fundamental human need and it is dependent on the need to move out of the house to a workplace or market. However, travel behaviour becomes known when the

daily pattern of movements are summed up (number of trips, but sometimes indicated as total distance, total travel expenditure and total travel time).

Importantly, market women mobility is essential in the society because they form the bulk of informal agricultural and finished goods distributors and retailers. For this set of travelers, daily travel behaviour is a key to the sustainability of their livelihood and lack of affordable, timely and appropriate transport perpetuates poverty to them. Cities all over the world are characterized by a set of activities that account for the concentration of people in them. Such activities are distinctively urban and include those arising from manufacturing, trading, delivery and other tertiary activities (Solanke, 2014). Intra-urban travel represents an expression of an individual's trip behaviour from one urban location to another. It is habitual in nature and it tends to be routine in definite pattern.

Transport System forms the basic fulcrum that facilitates movement of goods and services in the present generation and should be capable of taking care of incoming generations. Therefore, it should be affordable, efficient, available, safe, and supports economic development of our emerging mega city. As noted by Busari, Oyedepo, Modupe, Bamigboye, Olowu, Adediran and Ibikunle (2017), the Nigeria urban transport system is inadequate both in quality and quantity considering an increase in population growth and depressed economy condition of an average Nigerian. Most of the urban trips in Nigeria are made by road, walking, rail and water-based modes. Road and walking accounted for about 95% of both freight and passenger transport in a sharp contrast to its natural advantage of being good for short to medium distance freight haulage. While the remaining 5% were mainly by rail and water (LAMATA, 2022). As such, transportation system is beset with numerous challenges. There is evidence of skewed modal development tilted in favour of road transportation to the disadvantage of other means of transportation.

The problem of intra-city travel challenges is common all over the major cities of the world; the condition of intra-urban travel is becoming more intricate and hectic on daily basis. The city planners now have the challenges to manage urban travel demand and supply in order to sustain city socio-economic growth and development. As affirmed by Dike, Ibe, Ejem, Erumaka and Chukwu, (2018), the intra-city urban transport challenge in Lagos, Nigeria had led to the rapidly growing mass mobility needs and personal automobile usage, within a context of increasingly constrained resources.

The mobility challenge of city such as Lagos with over dependence on unimodal (road) transport is overwhelming to the city planners, the dwellers and importantly the market women who engaged in the down-stream supply chain businesses. Market women in Lagos are faced with limited funding because not all have organized source of funding to finance their businesses, at the same time, balancing responsibility both business and family life, coping with fear of failure, gender inequality, unfavorable business environment, absence of support from husband or families and the unavailability of fund support network discourage most of them from gathering necessary capital to sustain their businesses.

However, due to the nature of their capital formation, market women mostly engaged in small freight supply and distribution and the fact they cannot individually engage a truck or pick up to carry the good as at when due, they usually waste a lot of time in gathering their small freight together before vehicles can deliver the purchased products to individual locations or selling points.

This challenge is aggravated by the lack of provision for small freight in the organized public transportation (such as rail, ferry, Bus Rapid Transit and Lagos Bus Service Limited buses). Therefore, this group of distributors and retailers struggle hard with the rickety trucks and popular Danfo buses to get their goods to the local market and stores (where the good are sold) at exorbitant cost making the selling prices higher than usual.

The situation is such the rickety buses and pickup vehicles that operate at the odd hours (4am-6am & 8pm-10pm) of the day are major carriers of the small freight merchandize by the market women from the major/regional

markets to their various selling points at the individual localities. It may even take days before some of the goods are delivered to owners. And more so, those dealing in perishable goods suffer loss of money due to damages incurred during the transshipment process.

Importantly, many of intra-urban travel challenge analysts (Badejo, 2011; Ibrahim, 2012; Solanke, 2014; chen, M., Yu, G., Chen, P., & Wang, Y., 2017; Busari, Oyedepo, Modupe, Bamigboye, Olowu, Adediran and Ibikunle, 2017; Dike, Ibe, Ejem, Erumaka and Chukwu, 2018) are concerned majorly with demand issues and studies in intra-city travel demand literature usually include cost and frequency as causal factors, other factors- such as journey time and capacity to move freights are seldom investigated. Importantly, there is dearth of research on intra-urban small freight supply and distribution challenges faced by the market women in Nigeria. The freight sector in the country is majorly affected and the small freight distributors (market women) with meager capital base suffers the most in terms of mobility difficulties due to none admittance of agricultural, building material and other domestic small freights into the regular buses.

It is against this backdrop that this study undertook an analysis of the intra-urban challenges of small freight distribution among market women in Alimosho Local Government area of Lagos State, Nigeria. furthermore, the research objectives are to: (i) examine the mode choice of market women for easy supply of their goods within the intra-city locations, (ii) determine the trip distance between market women shops and regional markets within the intra-urban sphere (iii) identify the effect of distance and travel time on frequency of supply trips made by the market women to the regional markets and (iv) examine the effects of distance travelled on the cost of freight distribution between regional markets and selling points of market women in the study area. Also, the study hypothesis (H_o) was to confirm if "distance travelled, cost of transportation, travel time and mode of transport used have no significant effect on the frequency of market women's trip to regional/selling markets".

Nonetheless, the knowledge of small freight supply chain difficulty is key to the success of downstream physical distribution of domestic and food products in Nigeria especially for Lagos State that is the most populous state in Nigeria. Travel challenges and behaviour of market women has an undoubtedly spatial component especially in commuting and down-stream distribution and retailing. This can be well understood if the link between residence, selling points, regional market locations and transport modes available can be properly evaluated.

Study Area

Metropolitan Lagos is located at the centre of Lagos State. Lagos State is one of the smallest of the 36 states in Nigeria, located on south-western corner along the narrow elongated coastal flood plain spanning the Guinea coast of the Atlantic Ocean for over 180km, from the Republic of Benin on the west to its boundary with Ogun State in the east. Lagos State lies between latitude 6º2'- 6º4' North; and on longitude 2º45'- 4º20' East. It occupies a total geographical area of about 3,475.1km^2. Lagos Metropolis is made up of sixteen local government areas that are located at the central part of Lagos State. It is home to 85% of the State's population (18.03M out of 21.9M people) with annual increase of 3.2 percent (Lagos bureau of statistics, 2020). From the growth rate of 3.2%, Lagos population is estimated to 24.82M people in the year 2020 while the metropolitan population is estimated to be 21.1M people.

Lagos State is estimated to account for 90 per cent of Nigeria's foreign trade, controls about 80 per cent of the total value of the imports of the country and about 70 per cent of the national industrial and commercial investments are in Metropolitan Lagos**.**

However, Alimosho is located in the north-western part of Lagos state (figure 1.0) and it is the most populous local government area in Lagos metropolis. Her headquarters is located at Ikotun CBD in Isheri land. It inhabited 1,277, 714 population with land area of 185.2 sq. km. and population density of 6,185.2 persons (Nigeria Population Commission, 2006). From the annual increase of 3.2% Alimosho population is estimated to be 1,850,130 persons in 2020.

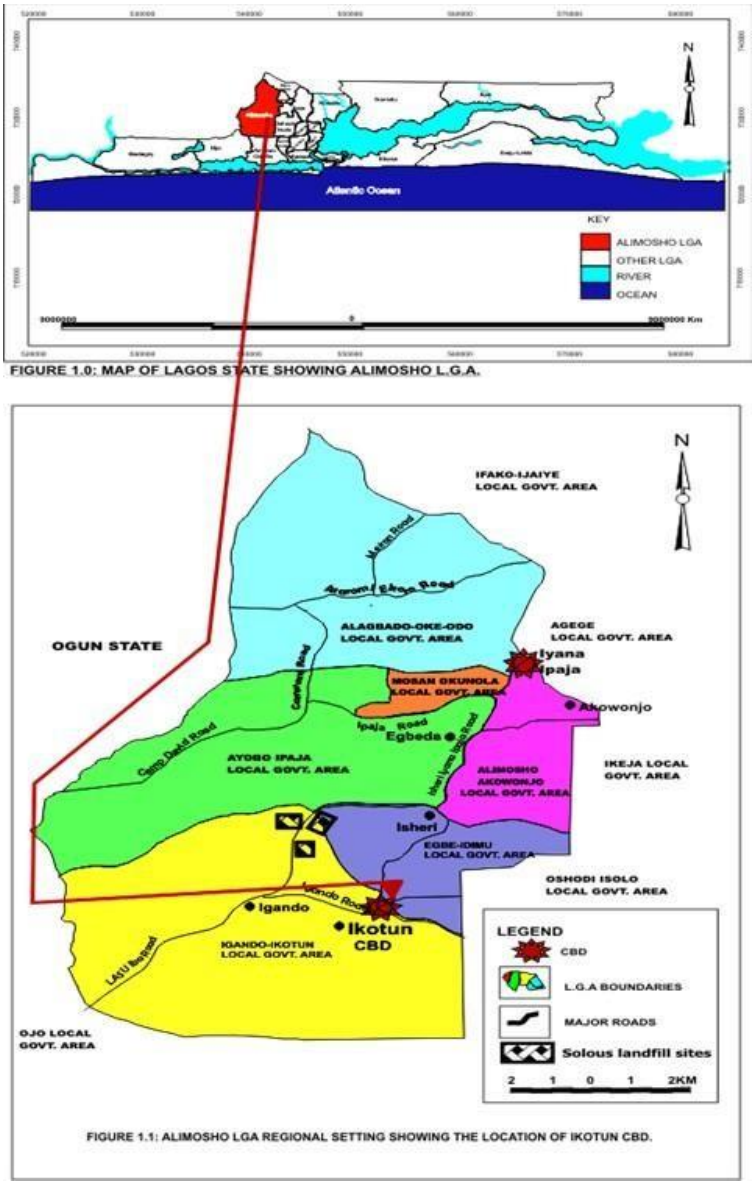

Figure 1.0: Regional setting of Alimosho LGA Showing the Location of Ikotun CBD

Source: GIS Laboratory, School of transport, LASU, Ojo.

Conceptual And Theoretical Explanation

Concept of Market Women

The concept of market women grew out of the informal use of the phrase “market women” to refer to the group of women who are either uneducated or unskilled to engage in formal business but find solace in informal petty trading in agricultural, food and beverages, building material and clothing. They are usually found along road sides, market edges, street markets and now in planned section of organized major markets in all local government areas of Nigeria. This group of women now constitutes formidable force that is well recognized by government and pulls lot of political influence through the overall state market leader called “Iya-Oloja”.

This concept is reinforced by the assertion of Olatokun (2007) that 38 percent of Nigeria women are involved in petty trading at markets, also suggesting that about the same number of Nigerian women also work long hours for five, six or more days every week to contribute to the family income. Importantly, the bulk of domestic consumables and utensils are traded and distributed by the market women and the domestic supply chain network is largely controlled by them.

Concept of Urban Movement

The reasons for urban movements can either be obligatory (scheduled activities such as home-to-work trips) or voluntary (non-compelling) trips such as recreation, family/friend visitor leisure (Rodrigue & Ducruet, 2020). These journeys can be classified into: Pendulum, Professional, Personal, Touristic and Distribution Movements. Urban areas are the most complex settings in which the mobility of passengers and freight is taking place. Mobility refers to a trip undertaking in order to satisfy a purpose and most cases through a collective transportation which is provided for publicly accessibility functional areas of the city (Jackiva, Yatskiv et al., 2017).

The efficiency of public transit systems is based upon transporting large numbers of people and freight towards achieving economies of scale due to specialization which characterized urban areas. In urban area of Nigeria, market women spend much of their time travelling between their sales point and the regional markets where they buy their merchandize. Mobility also tends to involve longer distances, but evidence suggests that commuting times have increased relatively over the last 20 years in Nigeria. In Lagos metropolis for instance, approximately 1 to 4 hours per day is spent on average commuting between urban centers (Olorunnimbe, 2020). Experiences have shown that the area of investment for women especially in Nigeria still remains relatively limited. This is because mobility is pivotal to women's empowerment (Mahadevia, 2015), whereas in many localities in Nigeria, fewer women have their own private car and public transport system does not cater for the small freight needs of market women. Small freight pickups were not regulated and freight fares were not controlled. Truck operators fixed outrageous prices that are above the market women affordability.

However, since cities are dominant centers of production and consumption, urban activities are accompanied by large movements of freight. These movements are mostly characterized by delivery trucks moving between industries, distribution centers, warehouses, and retail activities involving women travelling for small freight distribution and purchase. Even though the mobility of freight especially small market freight in particular within cities tends to be overlooked but is part of an emerging field related to city logistics. This concept serves as one of the fulcrums for this study as it provides explanation for urban distribution movement which the market women are also involved.

Ullman's Theory of Spatial Interaction

Spatial interaction is a realized movement of people, freight or information between points of origin and destination. It is a transport demand/supply relationship expressed over a geographical space.

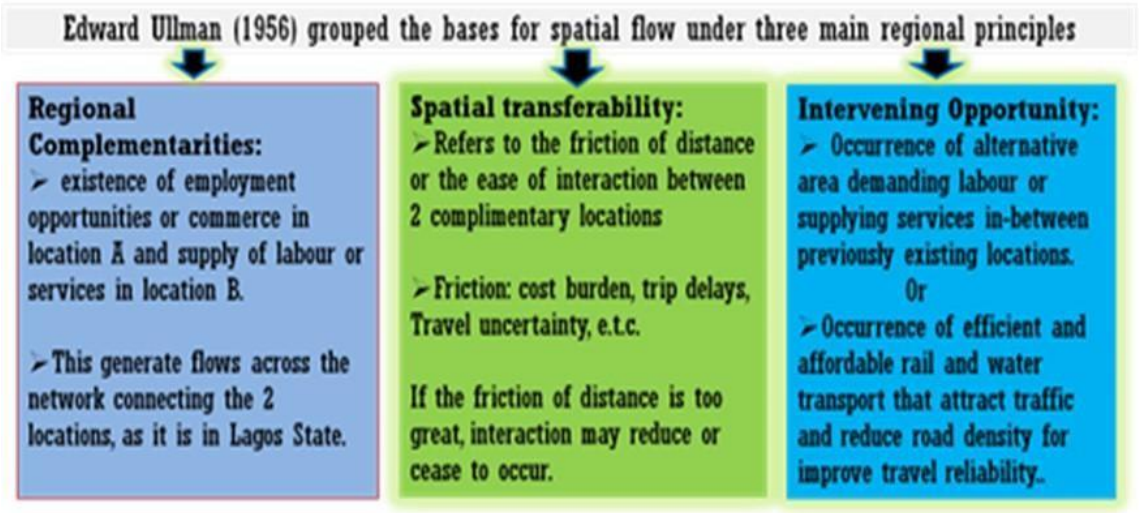

Figure 2.0: Principles of Spatial Interaction.

Source: Olorunnimbe, R.O. (2020).

Regional Complementarity explains movements generated due to the presence of demand at one location and a supply at the other location. This trip is associated with economic rationale achieving a purpose. On the other hand, spatial transferability refers to the ease of achieving the movement within an affordable means. This involves the cost of overcoming the "friction of distance" or distance barrier either as travel time or travel cost. If the friction of distance is too great, interaction may cease to occur. More so, intervening opportunity is considered as the reason for reduction or elimination of interaction between two complementary locations. Complementarity will only generate a flow if there is no intervening or close location providing same service. The flow of goods occurring between two complementary locations may be diverted to a third location. For instance, in order to have market women interaction with a regional store market, there must not be a closer market that offers a similar array of goods. Otherwise, the women will likely buy their market products from the closer one that is easily accessible due to travel time and cost. This theory provided the background for understanding the challenges of urban distributional movement which this study focused on.

RESEARCH METHODOLOGY

This study relied on survey research design inculcating both the qualitative and quantitative research approaches. Data were collected from both primary and secondary sources and structured questionnaire was used as the instrument for the collection of data from primary sources. The questionnaire was sub-divided into two parts namely: survey of demographic information of respondent and mobility characteristics and freight distribution challenges of market women Alimosho Local Government Area of Lagos State, one hundred and fifty (150) numbers of questionnaire was administered to market women across the major market while Fifteen (15 each) was administered at each of the identified 10 major market within the study area.

The population of the study includes all the market women in the identified 10 market and because this is infinite population because of lack of population data and sample frame. Therefore, convenience sampling technique was purposefully adopted while fifteen (15) women each were chosen for questionnaire administration at each market. The data collected from the field survey were analyzed using the descriptive and inferential statistical tool from the SPSS package. Descriptive statistical methods were used to calculate the frequency and percentage of responses while results were presented using table and chart. Also, multiple Regression tool was used for the hypothesis testing. Table 1.0 shows the detail of data analysis techniques.

Table 1.0: Research Objective, Variables and Statistical Method for Analyzing Them

S/N	Objective	Variables	Statistical tool
1	identify the mode choice for easy goods distribution	Frequency of mode usage for supply trips by market women	Simple percentage & frequency distribution
2	determine the distance from markets to selling points	Distance function in km	Frequency Table and Charts
3	determine the effect of distance and travel time on frequency of trips to regional markets.	Distance function, travel time, trip frequency	Regression tool and Cross-tabulation
4	examine the effect of distance on cost of freight distribution between regional markets and market women shops	Distance travelled, cost of transport	Regression tool

Source: Fieldwork by Author, 2023.

ANALYSIS OF FINDINGS AND INTERPRETATION OF RESULTS

Demographic Information of Market Women in the Study Area

The age distribution of the respondents shows that majority (46.3%) is between 31 to 40 years, followed 25.5%

in age group 41-50 years. The respondent in the age range 21-30years and 41-50 years constituted 13.4% each while age range 20 years and below forms the least with 1.3%. The implication of this is that majority of the market women are full-grown adults in the marriage ages and the possibility of family responsibility on them may be high. This may suggest that some of them are bread winners of their family or that they work to support their families. However, the findings also revealed that majority (79.9%) of the market women are married while 7.4% each were divorcee and single. This result supported the assumption that many of them engage in the informal distribution and sales business to support their families either as wives or breadwinners.

Considering the ethnic background of the market women, the findings shows that Majority (51%) are Yorubas, followed by less majority (37.6%) who are Igbos and other ethnic groups (such as Edo, delta and Benin Republic) who made up 10.7% of the responding market women in Alimosho LGA of Lagos State. The Hausas represent the least group with 0.7% representation among the market women. This result implied that Lagos State is a cosmopolitan city and that all the major ethnic groups are represented among the market women. More so, the educational background of the respondents as observed in the survey findings revealed that most (45.6%) possessed secondary school leaving certificate (WASCE). While both Primary School Leaving and B.Sc. degree certificate constitute 15.4% each. Market women with OND are 12.1% whereas those with HND degree are 6.7%. Other forms of educational qualifications constitute 4.7%.

The implication of this result is that majority of (60%) of the market women in the study area have the minimum useful education that cannot gain them employment in the official business settings and that may be reason for venturing into petty trading and retailing supply activities. Also, the result may also implied that those with higher education degree may be engage in the small freight business due to inability to secure white collar jobs and therefore settle down with the petty trading and retailing distribution business as the last hope.

Further, the analysis of market women monthly income revealed that majority (24.8%) earns between ₦41,000 to ₦80,000 on their trading business. This is followed by fewer majorities who earns ₦81,000 to ₦150,000 on their trade. Other findings are presented in table 2.0

Table 2.0: Percentage Distribution of Market Women Income in the Study Area

Monthly Income of Respondents	Frequency	Percent
Below ₦10,000	8	5.4
₦11,000 - ₦20,000	21	14.1
₦21,000 - ₦40,000	21	14.1
₦41,000 - ₦80,000	37	24.8
₦81,000 - ₦150,000	33	22.1
₦151,000 - ₦200,000	15	10.1
Above ₦200,000	14	9.4
Total	149	100.0

Source: Fieldwork by Researcher, 2023.

It can be confirmed from this result that majority of the market women cannot raise adequate capital to individually engage the service of a freight pickup vehicle, let alone purchase a vehicle of their own to transfer purchased goods from regional markets to their stores. It can also be inferred that the kind of meager revenue they earn can only sustain their petty business and cannot raise their business to formal level that can registered with corporate affairs commission and cited on the stock exchange.

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Mobility Characteristics and the Challenges of Freight Supply by Market Women

Alimosho LGA has ten major/regional markets dealing in various kinds of agricultural, building material, clothing, chemical, plastics and domestic utensils. The markets are well distributed across the entire land area of the Local Government Area. These markets operate daily, weekly and periodic sales of goods to customers from near and far away from them. The names and locations of these markets are as listed in table 3.0 while figure 3.0 shows the geographical locations of these markets.

Table 3.0: Location and Distribution of Major Markets in Alimosho LGA

S/N	Local Government	Names of Market	Location and Market distribution
1	Alimosho	Olugbede Model Market	Egbeda
2	Alimosho	Egbeda Market	Egbeda
3	Ayobo/Ipaja	Olorunda Market	Baruwa, Ipaja
4	Ayobo/ Ipaja	Owode Market	Ipaja
5	Ayobo/ Ipaja	Ayobo Market	Ayobo
6	Igando/Ikotun	Ikotun Market	Ikotun
7	Igando/Ikotun	Igando Market	Igando
8	Agbado/Oke-odo	Kontagowa International Market	Super, Abule-Egba
9	Agbado/Oke-odo	Oke-odo Ile-epo Market	Oke-odo, Ile-epo
10	Iyana Ipaja	Iyana Ipaja Modern Market	Iyana Ipaja

Source: Fieldwork by Author, 2023.

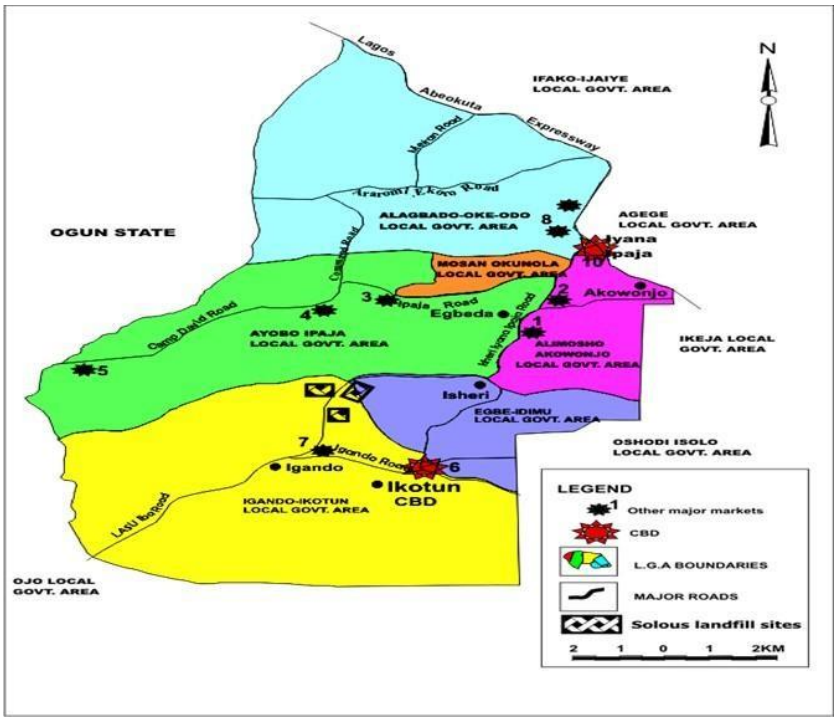

Figure 3.0: Major Markets in Alimosho LGA and the Connecting Major Roads.

Source: GIS, laboratory, School of Transport and Logistics, LASU, Nigeria.

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Importantly, the type of products being distributed or sold by market women in the study area fall into eleven categories as presented in table 4.0 and figure 4.0. The most sold and distributed goods are the raw unprocessed food stuffs (25.5%). This is followed by fabrics, clothing and shoes with 16.8%, fresh fruits and vegetables (14.1%) and beverages/drinks with 10.7% responses. These class of products clearly shows that it requires more than bicycle and tricycle to move them from the major/regional markets to the local markets or stores where they are been sold or kept for further distribution. Only buses and pickup trucks can economically transfer these products in an efficient manner.

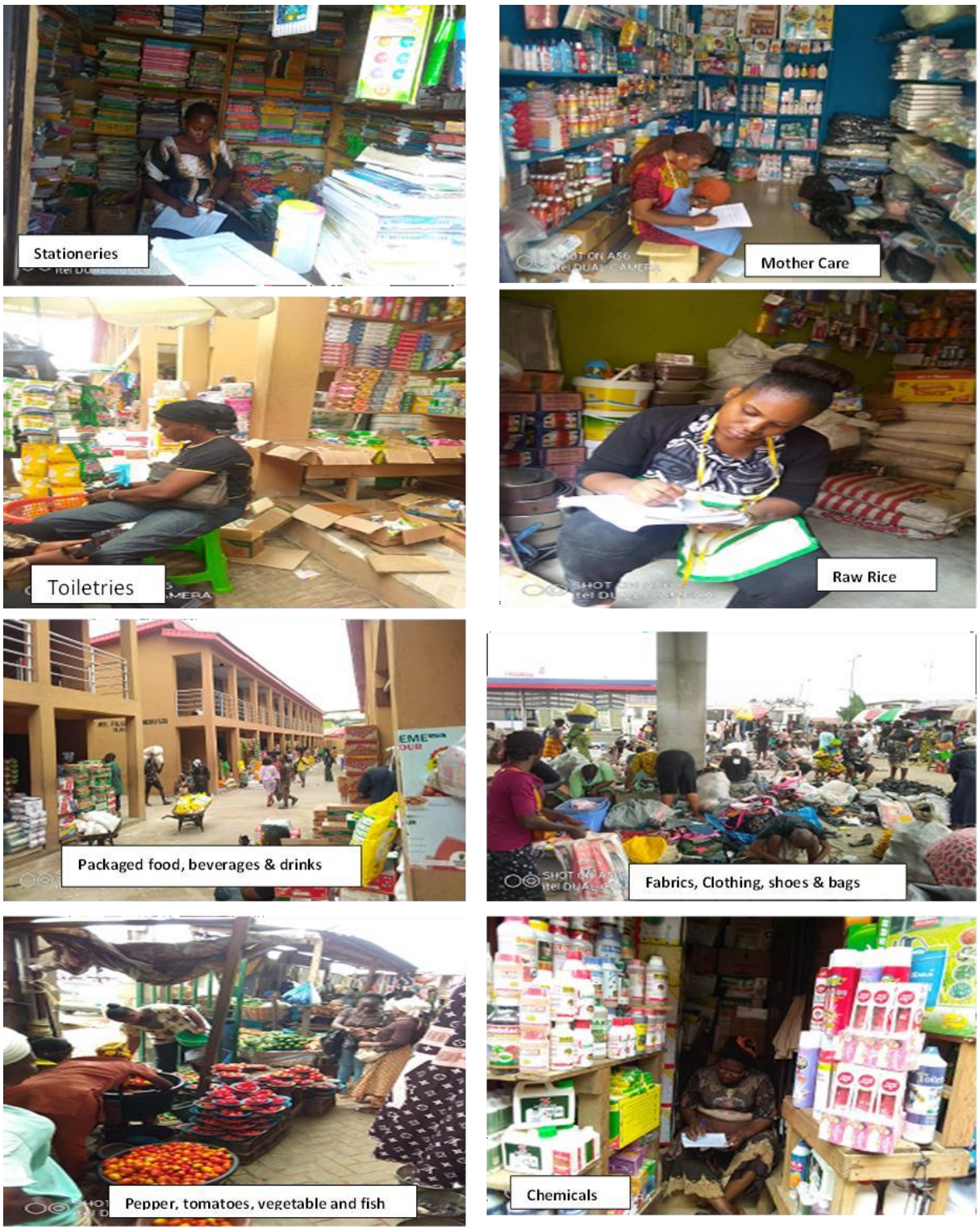

Figure 4.0: Types of Goods Sold and Distributed by the Market Women in Alimosho LGA. Source: Author's Fieldwork, 2023.

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Table 4.0: Types of Goods Distributed/Sold by Market Women in the Study Area.

S/N	Types of goods distributed/sold by market women	Percentage
1	Domestic and farm Chemicals	1.3%
2	Beverage/drinks	10.7%
3	Plastics wastes and building materials	3.4%
4	Rice, beans, Pepper, Tomatoes, Spices and other raw food stuffs	25.5%
5	Frozen foods	4.7%
6	Fabrics, clothing, Shoes and Bags	16.8%
7	Fresh Fruits and Vegetables	14.1%
8	Processed and packaged foods	7.4%
9	Confectioneries- Baking Ingredients	5.4%
10	Mother Care and Toiletries	6.0%
11	Others	4.7%
	Total	100%

Source: Fieldwork by Researcher, 2023.

Importantly, the result of study findings on the most effective and affordable mode of transport for freight supply among market women in Alimosho LGA revealed that the unorganized public transport was favored by majority (75.2%) of the market women (mode share of 40.3% and 34.9% by tricycle/Keke Napep and commercial minibus/pickup truck respectively. This was followed by motorcycle (18.1%), private car (4.7%) and others (carts, wheel barrows and head portage) with 1.3%. The organized BRT/LBSL buses constitute the least (0.7%) used mode of goods distribution among the small freight business operators in the study area. This result as shown in figure 5.0 indicated that only 4.7% of the market women possess personal means of commuting which they use for distributing their small freight business.

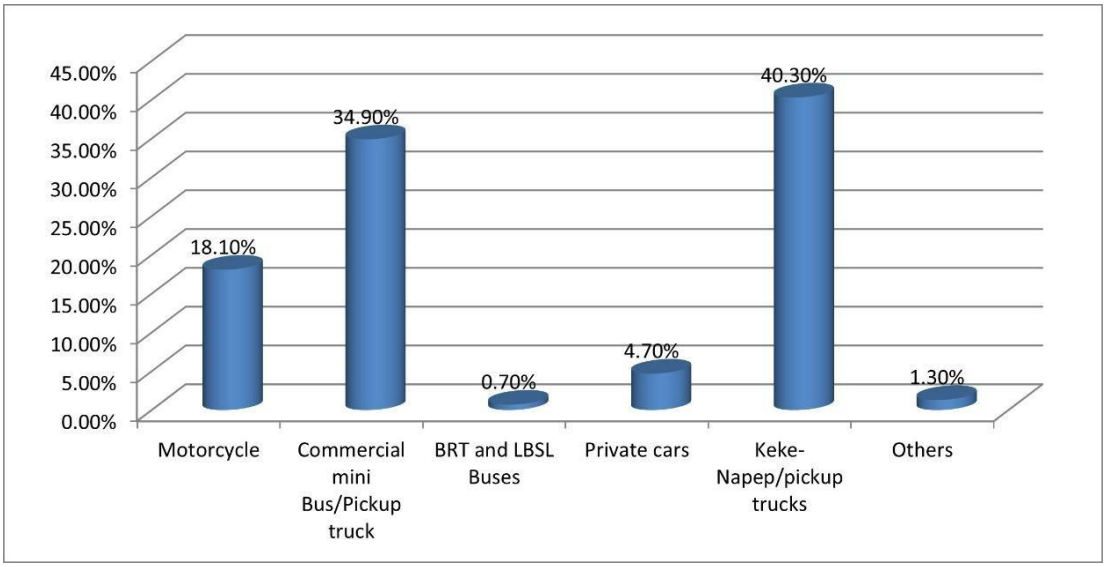

Figure 5.0: Mode share of effective means of goods distribution by market women

Source: Author's fieldwork, 2023.

This is a confirmation of the earlier findings that most market women do not have the means to buy personal means of commuting.

Furthermore, it was also discovered that majority (67.5%) of the market women leave home before 7am daily. This is for the purpose of getting cheaper transport to the market and to gain the advantage of buying cheap bulk goods in early morning market especially those dealing in agricultural and clothing products. While others (32.5%) leave around 8am and above to their various markets and stores. Personal discussion with this group of market women revealed that those who leave home 8am and after are the women with personal vehicle and those whose stores/shop/selling point are closer to their homes or are not travelling to the regional market to purchase their merchandize. More so, it was also found that majority (43%) of the of the market women spent 20-30 minutes at bus stops before getting vehicle to convey them to the market while fewer majority (25%) spent above 30 minutes before boarding vehicles to their destinations especially on their return journey from regional market with their goods. The remaining 32% of the market women spent 3-12 minutes waiting at bus stops to board vehicles to their destinations. The implication of this is that more time and useful hours of the day are wasted trying to get their goods delivered to selling point or customers at various locations within the Alimosho LGA.

Furthermore, an examination of the travel time between market women's home/shops and regional market as show in figure 6.0 revealed that most (70%) of them spent 1-2 hours travelling between their shops/home to the regional markets where goods are purchased in bulk. Field observation shows that this long travel period is a result of perennial congestion occurring along major road corridors within Alimosho LGA. Experience also shows that daily peak periods congestion is constant along Egbeda, Iyana Ipaja, Ikotun, Igando, Ayobo, Ipaja, Ilepo-super section of Lagos-Abeokuta expressway and Akowonjo Roads. This travel delays encourages the bus and other vehicles operators within Alimosho LGA to hike their fare charges at all time.

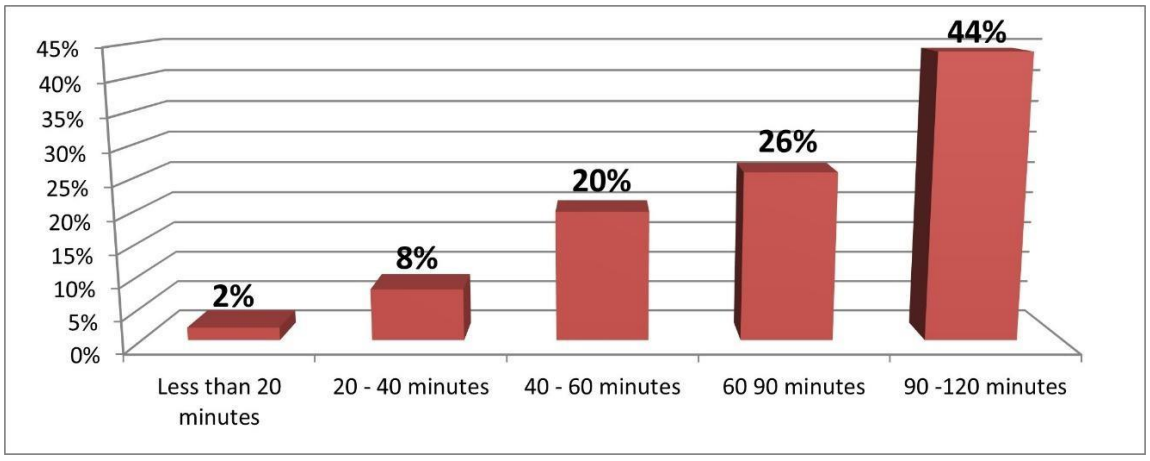

Figure 6.0: Travel Time between Market Women Home/Shop and Regional Markets

Source: Fieldwork by Researcher, 2023.

In the same vein, the frequency of market women trip to regional markets as revealed by the findings shows that 55.7% of them visit the markets daily for their businesses especially those dealing with perishable food products and those who have additional stores at the regional markets. This means that most of the women traveled longer distances than those who visit the market: twice weekly (29.5%), five times a weekly (10.1%), thrice weekly (0.7%) and four times a week (0.7%). However, the result of trip frequency might also be connected with the need to reduce the amount of money spent on transportation daily, which made the women to reduce their visits to the regional market except if they cannot afford to be absent from the markets daily.

It was also found that majority (43.6%) of the women expended ₦700-₦1000 on individual transport to market daily, followed by less majority (26.8%) who spent ₦500 - ₦700 daily and 17.4% of the women who spent ₦300- ₦500 as daily transport cost. Market women who spent ₦100 - ₦300 daily on transport constitute 9.4% while others who spent above ₦1000 daily transporting themselves to market forms the least group with 2.7%.

This implied that majority of the market women in the study area will spend at least ₦21,000 - ₦30,000 monthly on transportation. If this amount is compared with monthly income of majority (78%) of the market women, it will be found that it is above the 15% limit of monthly income specified to be expended on transport internationally.

Considering the distance travelled between market women home/shop and the regional markets, the study found that majority (38.9%) of them travelled 6-10km to the regional market. Also, 28.9%, travelled 10-15km, 17.4% travelled 1-5km while 10.7% travelled 15-20km to the regional market. Those who travelled above 20km to the regional markets constitute 4% of the total respondents. The implication of this result is that market women in Alimosho travel an average distance of 14km (which is synonymous with ₦400 journey) from their home/shop to the regional market. And this also means that transport cost will erode on their monthly profit. On the other hand, findings on the cost of transport these products from regional market to selling points and local stores shows that market women spend between ₦500 and ₦20,000 per delivery with majority (40.9%) spending ₦1000 –₦2,000, fewer majority spends ₦500 – ₦1,000 while lesser majority (18.1%) spend ₦2,000 – ₦5,000 transporting their goods to the local markets and shops as shown in figure 7.0.

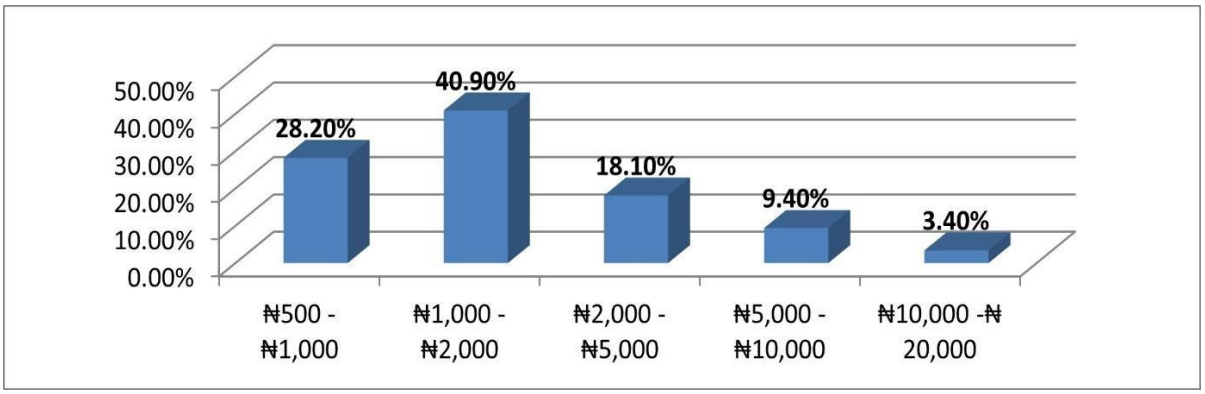

Figure 7.0: Cost of Conveying Goods from Major Market to Selling Market/local stores.

Source: Author's fieldwork, 2023.

Nonetheless, an examination of the responses of market women on product acquisition and supply chain network revealed that majority (36.9%) affirm the high cost of transportation to and from the major/regional markets as the greatest obstacle to their businesses. Lesser majority (31.5%) assert the non-availability of public transport for small freight carriage as their greatest obstacle. This is followed by 23.5% who says security challenge of robbery attack during early morning travel is their major problem. Other responses to the daily business challenges of the market women are presented in table 5.0.

Table 5.0: Challenges On Daily Activities of The Freight Distribution by Market Women

Challenges/Obstacles	Percentage
High cost of transport to major market	36.9%
Security challenge of robbery attack during early morning travel	23.5%
Non-availability of public bus for goods carriage	31.5%
Need to attend to children for early school attendance	3.4%
Others	4.7%
Total	100.0%

Source: Author's fieldwork, 2023.

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Test Of Hypothesis

The examination of factors influencing the frequency of trips to markets by market women in Alimosho LGA was evaluated and confirm with the multiple regression analytical tool. The dependent variable is the frequency of trips, while the independent variables are; distance from home to market, cost of transportation, travel time and mode of transport used from home/selling points to the regional markets. Table 6.0 shows the summary of the multiple regression analysis. It contains the coefficient of determination (R^2), which is a measure of the fitness of the regression model. The R^2 calculated was 0.02. When converted to percentage it is 2% and it means that the explanation of the dependent variable provided by the independent variables is 2%. The low percentage shows that distance from home to market, cost of transportation, travel time and mode of transport used have very weak influences on respondents' trip to regional market and selling points. This may means that the market women will visit the regional market irrespective of the constraints or obstacles.

Table 6.0: Multiple Regression and Analysis of Variance Result

Source of Variation	R^2- Regression coefficient	R- Correlation coefficient	Sum of Squares	Mean Square	F-Ratio	Computed Significance/coefficient of determination
Regression	0.02	.142	22.114	5.528	.740	.566
Residual			1075.685	7.470		
Total			1097.799			

Source; Author's fieldwork, 2023.

However, the regression result further shows that the independent variables have no effect on the dependent variable as the computed F-ratio is given is 0.74 and the significance value of the coefficient of determination is 0.566 (insignificant at both 95% and 99% level of confidence). This clearly shows that calculated significance is greater than 0.05 which means the independent variables have no significant effect on the market women frequency of travel to the regional/selling markets in Alimosho LGA OF Lagos State, Nigeria.

Therefore, the hypothesis (H_o) that distance travelled, cost of transportation, travel time and mode of transport used have no significant effect on the frequency of market women's trip to regional/selling markets was confirm and accepted.

CONCLUSION

Despite numerous constraints the market woman has continued to play a significant role in the Nigerian society. Apart from many of them being the breadwinner for their family, they also recorded some resounding successes in the public arena of Nigeria. In Lagos, market women worked closely with the early nationalists especially the great Herbert Macaulay who encouraged them to form a central organization under the leadership of Madam Alimotu Pelewura in 1923. This development has been sustained since then and political authorities now reckon with them as an important component of the supply chain network especially at the downstream level.

However, the effect of distance, transport cost and travel time affect their movement to both regional markets and selling markets in Alimosho LGA. The study explicitly expressed that the challenges of small freight distribution among the market women is enormous and these range from high cost of transportation, security challenge of robbery attack during early morning travel, non-availability of public bus for goods carriage and the delay in getting goods purchased to the selling points and local stores/shops.

The study concluded that without affordable and efficient mobility, it will be hectic for market women to move their goods or products from their major market to their selling market.

RECOMMENDATIONS

The following recommendations are expected to bring sustainable solution to the challenges of small freight supply among market women in Alimosho LGA of Lagos State.

1. The managers of BRT and LBSL services should consider the use of high-capacity buses with under cabin in order to accommodate the market women small freight distribution at a cheaper rate and improve on the overall supply chain system of Lagos State.

2. Government should consider partnering with the private sector to provide long-term repayment plan on higher purchased pick-up trucks for small freight operators in order to strengthen the supply chain network This will improve supply efficiency and reduce the transport cost burden on the market women.

3. Security surveillance should be intensified along major road corridors in Alimosho to prevent early morning attack on market women. This will further eliminate "one-change" syndrome and safeguard the running capital of the market women both along the road and at the market places.

4. Transport planning agencies should consider the improvement of roads and traffic situation across major roads in Alimosho LGA and regulate transport fare across the State. This will reduce travel time and possibly reduce increase in transport cost due to congestion.

5. Government at State and Federal level should consider given interest free loan to market women in order to increase their capital base and empower them to improve their business sustainability.

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