

ASSESSMENT OF THE LOCATIONAL EFFECTS OF JANKARA MOTOR SPARE PARTS MARKET ON ROAD TRANSPORTATION IN LAGOS STATE.

**SODIYA O. O. (MURP, MNITP, RTP)
URBAN AND REGIONAL PLANNING DEPARTMENT
THE FEDERAL POLYTECHNIC ILARO
email: tplsodiya@gmail.com**

Abstract

Jankara Motor Spare Part Market is one of the Motor Spare Parts Market in Lagos State, has been intensified due to the ever increasing demand for Used Motor Spare Parts (known as Tokunbo). Problems identified in the study area include; illegal parking of vehicle along the roads, sales and servicing of vehicle along the road, and the dumping of vehicular waste in the drains. The aim of the research is to assess the locational effects of the market on road transportation in the study area and make necessary recommendations. A traffic count and on-spot assessments were carried. The research revealed that cars had the highest number of vehicles plying the road with one thousand, four hundred and ninety five (1495) daily, representing 44% of the total number of vehicles plying the road. An average of 19 mins added travel time was recorded on the roads during the dry season, while 28 mins added travel time was recorded on the road period during the raining season. An average of twenty (20) vehicle were parked daily at each road side of the study area, and a complete encroachment of Ope- Ewe road by the market activities was identified. Recommendations made include; urban renewal in the form of rehabilitation, proper monitoring of activities by appropriate government agencies, and the location of annex of the market.

Keywords: *Motor Spare Part Market, Road Transportation, Parking, Vehicular Waste, Road Encroachment.*

1.0 INTRODUCTION

The high cost of purchasing new motor spare parts in Nigeria has necessitated the increasing demand for Used Motor Spare Parts, often referred to as Tokunbo Motor Spare Parts, and this phenomenon has intensified markets activities. Ukpebor (2012) noted that the used auto mobile spare parts are good demand in Nigeria, and that the diversified range of used mechanical and body parts of cars and engines has brought spare parts business, as it offer big

variety of affordable price. The increasing demand for Tokunbo motor spare part has been manifested in the high intensity of market activities, which has significant effects on road transportation. However, Ukpebor (2012) observed that the increasing growth of industrialization and modernization currently sweeping through many African countries had led to an increase demand for capital goods.

It is on this premise that Olaseni (2011) observed that transportation problems in Nigeria is multi

facets and multi-dimensional in nature, as several factors are responsible for the traffic bottleneck, particularly in the urban areas of Nigeria and that one of the causal factors of traffic bottleneck is the location of activities such as the motor spare part market, onroad transportation.

Motor Spare Part Market, (popularly referred to as Tokunbo Motor Parts Markets) are located in different parts of Lagos, and these include; Ladipo Motor Spare Parts in Mushin (the biggest spare-parts market in Lagos), Owode Motor Spare Parts Owode, Lagos, and Jankara Motor Spare Parts Market. The Jankara Motor Spare Parts Market in Ijaiye, Lagos State has witnessed increasing demand for used motor spare parts in Nigeria, and other part of Africa, and this has made the activities of this market booming, hence, expanded its activities beyond the designated geographical boundaries, which in turns has posed challenges to the free flow of traffic within the study area. The 39 years-old Jankara auto spare parts market, located in Ijaiye, in Ojokoro Local Council Development Area of Lagos is an age long market which hold its attraction to many Lagosians and others both within and outside the country and often referred to as Jankara Orisumibare Motor Spare Parts.

The high level of intensity of commercial activities in the market has aggravated the effects of its location on transportation. The aim of the research is to assess Jankara Motor Spare Part Market on Road Transportation in the study area. Method adopted involved the empirical investigation on the traffic situations, parking and environmental assessment that relates to transportation within the study area. It is therefore important to note that the potential effects of activities were made mandatory to be

understudied in the Environmental Impact Assessment (E.I.A) Act Cap E12, LFN 2004, (earlier as Environmental Impact Assessment (E.I.A) Decree No. 86, of 1992), for major projects that are stipulated in the law, and therefore becomes an indispensable tool in planning and developments. The E.I.A is a systematic process of identification, prediction, evaluation, and presentation of probable consequences of a proposed action at a stage in the decision making process, where serious environmental negative effects can be minimized or avoided. Hence, this paper assessed the locational effects of Jankara Spare Parts Market on transportation in Lagos state in order to make necessary recommendations for improved urban environment.

2.0 DEFINITION OF PROBLEM

The importance of quality environment cannot be overemphasized as Obabori et al (2009) cited by Ahmed and Ajayi (2019) described the environment as an embodiment of both natural and man-made elements of earth. Jinadu (2003) observed that one major product of urbanization which poses serious challenges to urban planners is rapid urban growth, especially that which is devoid of proper planning and control. Hence, the high demand for urban goods, resulting from ever increasing urban population has make urban markets to manifest a high level of non-compliance to planning regulations. However, Layiwola (2003) observed that the urban areas experiences road transport problem that are more severe due to high rate of urbanization, resulting into the locational effects of some urban activities which their potential effects were not considered at the initial planning.

Problems identified in the study area include: illegal parking of vehicle along the roads by the buyers of the Motor Spare Parts; sales and servicing of vehicle along the roads thereby limiting the spaces for movement; dumping of vehicular wastes inside the drains of the roads resulting into its blockage and leading to flooding when the level of rain burst is very high; traffic bottleneck inform of hold-up along the roads within the location of the market, resulting into add-travel time, particularly during the peak period; and the activities of the market outside its legal confined zone resulting into vehicular/pedestrian conflict.

30 LITERATURE REVIEW

Oladiti and Kamarise (2014) cited by Ahmed and Ajayi (2019) described environment as the surrounding phenomenon of the earth, and a single complex entity which contains both the flora and fauna, with their interactive mechanism. However, Agbola (2006) cited by Kadiri (2009) observed that urbanization has constituted huge challenges to the received knowledge, (both in theory and in practice) in Urban planning and management, and that Lagos has kept growing in leaps and bounds. He noted that the population growth rate of the metropolis has progressively been increasing from 5.5percent per annum in the mid-eighties to between 12 and 13percent in the year 2002; while it is no longer new that Lagos will be the third largest city in the world by year 2020, with an estimated population of above 25million people.

Fagbohun (2007) observed that two major forces are attributable to the high stimulant of urbanization process in most part of the world including Nigeria, namely; centrifugal forces and centripetal forces,

describing centrifugal forces as decentralizing forces, while centripetal forces as magnetic attraction while Kadiri (2009) observed that the increasing population of Lagos state has led to the expansion and intensification of markets activities, and thereby, posing greater challenges on the existing infrastructures, which roads are inclusive. However, Agunbiade (2007) noted that human, unlike other animals have the ability to manage the planet wisely, with the capacity to control human actions and monitor their impact for the purpose of achieving environmental sustainability

4.0 THE STUDY AREA

Jankara Motor Spare Parts Market is located in Ifako-Ijaiye local Government Area of Lagos state, under the Ijaiye- Ojokoro Local Council Development Area. The market has been in existence for thirty nine years in its present location, and enjoyed a large patronage beyond the boundaries of Lagos. The market is a market for Used Motor Spare Parts, known as Tokunbo. It is accessed by Lagos – Abeokuta Expressway via Ijaiye-AgbadoStation Road, Kola – Alakuko Road via Alhaji Akbu Adeniji Road, and Alakuko – Agbado Oja Road. Major landmarks to the market include; the Bola Ahmed Tinubu Ultra-Modern Shopping Complex, PHCN branch office, Uptown Hospital, to mention few. The spatial coverage of the market is 42,642m² (4.26 hectares).

5.0 RESEARCH METHODOLOGY

An On-Spot assessment of roads within the location of the Motor Spare Parts Market was carried out. These assessments include; roads assessments, the spatial coverage of the market’s activities, types and

arrangement of activities in and outside the market, and the types and conditions of the market facilities.

A traffic count survey was conducted at four locations of roads within the study area. Four days were selected for the traffic count, and these days were: Monday; Wednesday; Friday; and Saturday, between 7am and 7pm. Four (4) locations of two points each (making the total point to be eight points) along the roads within the study area were identified and added- travel time survey was conducted. The two seasonal periods were captured

Summary of Traffic Outcome

Table 1: Location A – Jankara Junction to Segun Coker Junction

Day/Date	Car	Mini Bus	Truck	Motorcycle	Tricycle	Total
Monday	2061	951	13	1809	812	5646
Wednesday	1961	782	09	1410	619	4781
Friday	2151	831	14	1587	660	5243
Saturday	2455	933	16	1506	674	5584
Total	8628	3497	52	6312	2765	21254
Average	2157	814	13	1578	691	5314

Table 2: Location B – Jankara Junction from Segun Coker Junction

Day/Date	Car	Mini Bus	Truck	Motorcycle	Tricycle	Total
Monday	1972	1006	18	2013	720	5729
Wednesday	1531	837	15	1577	685	4645
Friday	2049	964	16	1750	753	5532
Saturday	2095	1037	25	1505	452	5114
Total	7647	3844	74	6845	2610	21020
Average	1912	961	19	1711	653	5255

for this survey, and two days (Thursday and Saturday) were selected. Parking along the road survey was conducted and four days were selected (Monday, Friday, Saturday and Sunday).

6.0 RESULTS AND DISCUSSION

Data collected on the traffic generation, the parking of vehicle along the roads and the add travel time of vehicles plying the roads within the study area are presented for the purposes of analysis and interpretations of results.

Table 3: Location C – Jankara Junction to Agbado Station Junction

Day/Date	Car	Mini Bus	Truck	Motorcycle	Tricycle	Total
Monday	1881	997	12	2157	645	5692
Wednesday	1051	716	7	1115	480	3369
Friday	2015	776	14	1330	705	4840
Saturday	2184	862	10	1412	513	4981
Total	7131	3351	43	6014	2343	18882
Average	1783	838	11	1504	586	4721

Table 4: Location D – Jankara Junction from Agbado Station Junction

Day/Date	Car	Mini Bus	Truck	Motorcycle	Tricycle	Total
Monday	1779	882	14	1831	661	5167
Wednesday	1221	547	6	1446	512	3732
Friday	1637	683	8	1645	552	4525
Saturday	2108	906	12	1737	573	5336
Total	6745	3018	40	6659	2298	18760
Average	1686	755	10	1665	575	4690

Table 5: Location E – Jankara Junction to Kola Road

Day/Date	Car	Mini Bus	Truck	Motorcycle	Tricycle	Total
Monday	1981	281	15	547	150	2974
Wednesday	1101	185	7	450	102	1845
Friday	1315	247	12	783	119	2476
Saturday	1334	371	11	328	142	2186
Total	5731	1084	45	2108	513	9481
Average	1433	271	11	527	128	2370

Table 6: Location F – Jankara Junction from Kola Road

Day/Date	Car	Mini Bus	Truck	Motorcycle	Tricycle	Total
Monday	1745	315	14	719	124	2917
Wednesday	863	208	8	309	118	1506
Friday	1215	251	12	520	115	2113
Saturday	1511	384	17	311	130	2353
Total	5334	1158	51	185	487	8889
Average	1334	290	13	465	122	2222

Table 7: Location G – Jankara Junction to Clem Road

Day/Date	Car	Mini Bus	Truck	Motorcycle	Tricycle	Total
Monday	833	148	7	126	25	1139
Wednesday	716	114	7	102	19	958
Friday	729	131	9	120	23	1012
Saturday	1010	172	10	189	26	1407
Total	3288	565	33	537	93	4516
Average	822	141	8	134	23	1129

Table 8: Location H – Jankara Junction from Clem Road

Day/Date	Car	Mini Bus	Truck	Motorcycle	Tricycle	Total
Monday	945	215	10	139	19	1328
Wednesday	693	192	6	105	14	1010
Friday	717	202	10	121	21	1071
Saturday	966	277	11	128	25	1407
Total	3321	886	37	493	79	4816
Average	830	222	9	123	20	1204

Researcher's Field Survey, January 2019

The Traffic situation of the study area was understudied through the traffic count survey conducted. Table 1- Table 8 show the traffic survey outcome of the Location of the Motor spare market. The analysis on traffic count revealed that car has the highest number of vehicle plying the roads in the study area with Forty-seven thousand, eight hundred and twenty-five (47, 825), representing 44.4%, out of one hundred and seven thousand, six hundred and eighteen (107, 618) vehicle plying the road. Motorcycle recorded thirty thousand, eight hundred and twenty seven (30, 827) representing 27.8%, making it second in position of traffic volume by vehicle. On a daily basis, an average of one thousand

four hundred and ninety five (1,495) cars plying the road, and an average of nine hundred and sixty three (963) motorcycle plying the road within the study area. Truck recorded the lowest number of vehicle plying the road in the study area, with three hundred and seventy five (375), representing 0.4% of the total number of vehicle.

Added-Travel Time (in minute) by location

The two seasonal variations were considered while the analysis of the added-travel time involved the identification of the inbounds and out bounds of roads within the study area.

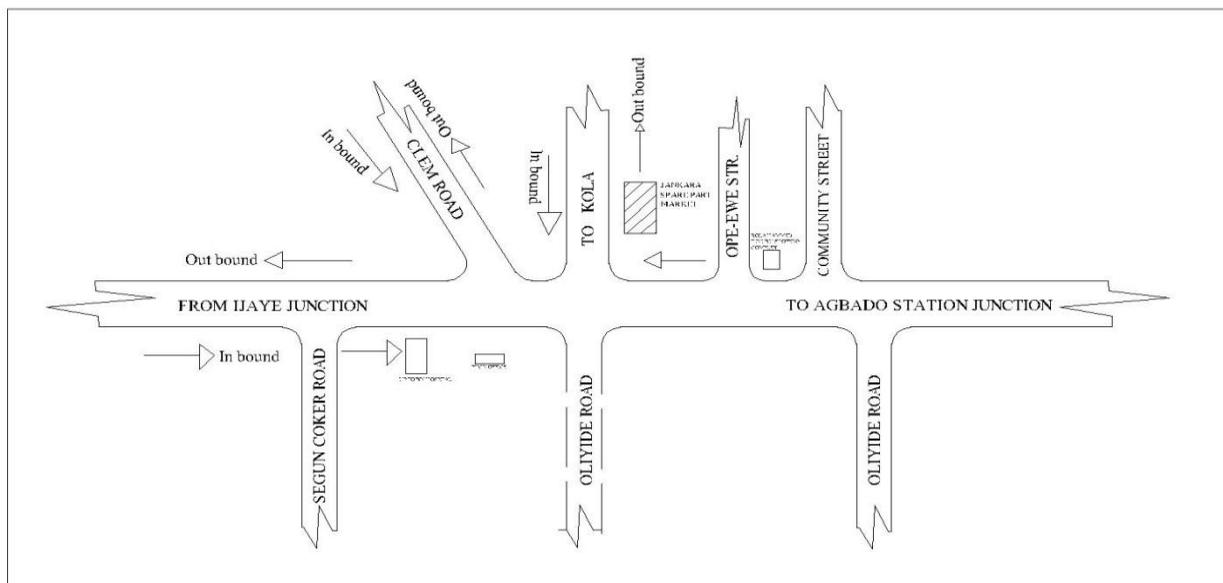


Plate 1: Roads in the study area showing the inbounds and outbound to the market

The comparison of the expected and observed time is very essential in the analysis of the added-travel time, while the consideration of the seasonal

variations in this research upholds the significant effect of weather condition on the travel time of vehicles in any geographical area.

Table 9: Analysis of Added-Travel Time (in minute) by location

Case 1 (Dry Season)				Case 2 (Raining Season)		
Junction to Junction	Expected	Observed	Added-Time	Expected	Observed	Added-Time
Inbound: Segun Coker - Jankara	5	30	25	7	45	38
Outbound: Jankara - Segun Coker	7	27	20	8	43	35
Inbound: Clem -Jankara	5	25	20	6	35	29
Outbound: Jankara to Clem	6	15	9	7	21	14
Inbound: Kola road-Jankara	7	29	22	8	37	29
Outbound: Jankara-Kola road	7	27	20	8	33	25

Researcher’s Field Survey, January 2019

Table 9 shows the analysis of the Add-travel time on the three (3) inbound and three (3) outbound of the study area. Two categories of survey were carried out, namely: the expected time of vehicle plying the

roads within the study area when the Motor spare part market activities are dormant and the observe time of vehicle plying the roads within the study area when the activities of the Motor spare market are

active. These surveys were conducted at different seasonal period (that is, the dry season, and the raining season). The add-travel time is therefore calculated as the difference between the expected time of vehicle travelling along the roads, and the observed time of vehicle travelling along the roads. It is important to note that the expected time for this study is Thursday, between 7am and 10am (during

environmental sanitation for market), while the observed time is the time when the market activities are on.

The analysis revealed that an average of 19 mins was recorded as added-time of vehicle plying the roads during the dry season, while an average of 28 mins was recorded in add-time of vehicle plying the roads during the raining season.

Road Side Parking

Table 10: Parking Survey Analysis (Road Side Parking)

Day	Jankara Junction – Community Junction	Jankara Junction – Kola Junction
Monday	25	12
Friday	18	26
Saturday	23	28
Sunday	6	10

Researcher's Field Survey, January 2019

Table 10 shows the parking survey analysis (Road Side Parking), resulting from the location of the Motor Spare Part Market understudied (that is Jankara Motor spare part market).

Along Jankara- Agbodo Station Road (that is Jankara Junction to Community Junction), an average of Eighteen (18) vehicle were parked either for sales servicing, while along Jankara-Kola Road (known as Alhaji Akbu Adeniji Road), an average of twenty-two (22) vehicle were parked either for sale or servicing. However, other vehicle that were parked for other purposes apart from those for sales and servicing were not capture in the data collected, as their purposes for parking were not easily identified.

The locational effect of Jankara Motor Spare Parts Market on transportation in the study area is assessed in term of the traffic intensity of the area, based on the activities of motor spare parts, through court survey, the number of vehicle parked along the corridor of the market, sales and serving of vehicle, and the travel add time survey outcomes which is used to assess the traffic intensity implications on flow, from traffic generated in the study area, dues to the activities motor spare part market.

On traffic survey outcome, car has the height percentage of vehicle playing the roads with the study area into 44.4% while Jankara Junction to Segun Coker Junction generate the highest traffic flow from car with eight thousand six hundred and twenty-eight (8628), represent total number of cars 18% out of 47807 plying the roads in the study area.

From the above analysis, the contribution of the Jankara Motor Spare Part Market is significant when compared to the overall composition of land uses in the study area. It should be burner in mind that the corridor within the study area serve also as bye pass to major communities of both Lagos and Ogun State and this also contribute to the traffic intensity of the road, within the study area. However, intensity of the market activities both interm of patronage and spatial coverage has shown that the market is a major factor of traffic generation within the study area. Parking along the roads for the purposed of sales of vehicle and servicing has limited the space for the passage of both vehicle and pedestrian. These activity take place in three major road. Within the study area (where the motor spare parts market is rated). Two major roads, out of the three road are collector roads, while the remaining one road is the access road. The collector roads are Jankara to Agbado Station Road (Jankara Junction to Ope-Ewe Junction) and Jankara – Kola Road (Alhaji Akbu Adeniji Road). Analysis on parking along the roads, revealed that an average of eighteen (18) daily vehicle are parked along the Jankara – Agbado Road (Jankara Junction – Ope-ewe Junction), and twenty-two (22) vehicle parked along the Jankara-Kola Road (Alhaji Akbu Adeniji Road) daily.

The Ope-Ewe Street has its roadsides full of vehicle parked either for sale or serving. The case of this street is unique as the stretch of the street is full of the market activities, thereby making it impossible for other uses of the road to make use of the road.

A major factor responsible for the added travel time in the study area is the parking of vehicle along the roads due to the motor spare part activities. This phenomenon has limit the space provide for the

passage of both vehicle and pedestrian. The major contributory factor of flooding during rain burst in the study area is the dumping of waste along the drains generated from the market. It is important to note that the location of the spare part market is a major factor of landuse conversion in the study area. The buildings along the corridor where the market is located has experiencing the conversion of residential building use to commercial use, hence, it adds up to the consequences on transportation particularly in the area of waste generation, and parking.

7.0 CONCLUSION AND RECOMMENDATION

7.1 Conclusion

The demand for Used Motor Spare Parts in Nigeria, has intensified the activities of the market, and this has resulted into various problems of transportation in the study area. The Jankara Motor Spare Parts Market has grown to a level that its location posed a question of whether to be relocated or not. The existence of the market has put pressure on the road due to its activities, and its effects often become unbearable, particularly during the peak period of traffic. Hence, recommendations are made and these are to improve market activities, which its effects on transportation are minimal and bearable for the achievement of the planning goals.

7.2 Recommendations

The relocation of sections of the market to another area within Lagos is necessary, in order to reduce the high intensity of the market in the study area. The area recommended to accommodate the relocation is

the Command Area, under the Agbado Oke Local Council Development Area.

Also, it is imperative to embark on the planning of the market through the preparation of a Motor Spare Part Market Plan. The landuse composition of the physical layout plan should consider; parking of vehicle; accessibility within the market area for the movement of people and goods; provision of waste collection facilities; and the arrangement of shops by vehicle type/model. It should be noted that the Market Plan should be a 10year plan

A continuous monitoring of traffic within the market area is imperative. Hence, the services of trained transport personnel are required, while public enlightenment campaign is recommended for the sellers of the spare parts, particularly on environmental sanitation (such as the dumping of waste), and also, on periodic maintenance of the facilities within the market.

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