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# The challenges of on-street parking in Nigerian Cities' transportation routes

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#### **Abstract**

Parking is an integral component of the transport system. It plays a crucial role in the management of traffic and congestion. On-street parking constitutes one major problem that makes traffic situation chaotic in Nigeria cities. Most roads in Nigeria cities are narrow and lack pedestrian lanes. There are cases of double parking along these narrow roads thereby causing traffic congestion. This is due to the non-availability of off-street parking facilities along the transportation routes. This study examines the challenges of on-street parking in Nigerian cities' transportation routes using Ibadan North-East Local Government area as a case study. Both primary and secondary data which were collected in 2009 were used in the study. Among the issues examined in the study are the situation of existing parking facilities along the transportation routes in the area; perception of road users (drivers and passengers) about motorist's parking behavior and the effect of on-street parking in the area. Policy implications are discussed in the paper.

Keywords: On-street parking, Urban transport, Urban roads, Ibadan, Nigeria

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#### 1. Introduction

The role of transport in our daily activities cannot be overemphasized and without it, the necessities of life would be difficult to achieve. As wonderful as the role of transport may be in our daily activities, it has been noted to possess myriads of negative effects. This is why in the literature transport is describes as the maker and breaker of the cities. Ogunsanya (2002) confirmed how transport has built cities over the year in some urban areas in Nigeria and how it has gradually destroyed them. Filani (2002) and Ikporukpo (1994) stated that inadequate and poorly maintained infrastructure facilities, accident; the relative immobility of the disadvantage, waiting for a long period at the bus-stop, pollution from transportation; traffic congestion and parking problems are becoming acute in the city.

Cities function as commercial and industrial centre. Buses, trucks and cars move goods and passengers in and out of cities on daily basis. The way cities are organized constitutes a potential for increasing demand for motor based travel. Parking is vital to ensure people have access to goods and services which they need. It plays a significant role in city's economy. Parking becomes a necessity when one recognizes the fact that urban centre are characterized by interrelated and complex land use activities which requires well-planned and efficient performance of the transportation system.

On-street parking is a form of parking that involves all metered and unmetered parking along the road sides. It is a temporary driving a vehicle or maneuvering a vehicle in a certain location for different purpose e.g. commercial purposes. On-street parking exists as a result of non-availability of space for off-street parking and it is known as nearest to destination routes. On-street or surface parking are located and developed on a place of vacant land. On-street parking tends to be safe in case whereby charges are been paid for each parking space occupied otherwise, it is unsafe. There are two forms of on-street parking, official and non-official parking. The official on-street parking includes bank car parks, administrative car parks, religion car parks, office car parks, and recreational car parks and media car parks. However, non-official onstreet parking is referred as kerbs as its nearness to destination. These include commercial parks, shopping parks, etc. Motor Park in the past was designed for reason of prestige to promote a company's image and to give the passengers a feeling of well being and safety. Parking is one of the experience that people have when traveling to a destination and it plays a crucial role in managing traffic and congestion as it is generally recognized that town center depends on a rapid turn-over of parking to meet the demand for short-stay visit. Convenient and affordable parking is considered as a sign of welcome, but the case is the opposite in the study area. It is highly discouraging that parking has become a serious problem that confronted the road users in the study area.

The study examine the challenges of on-street parking in Ibadan North East Local government with a view to proffer measures aimed at finding a lasting solution to the problems. The objectives of the study include: examination of the effect of on-street parking situation in the area; ascertaining the level of existing surface parking facilities along the transportation routes in the area; and evaluation of the perception of road users (drivers and passengers) with respect to motorist's parking behavior and the effect of on-street parking in the area.

#### 2. Brief literature review

The significant role of transport in the movement of people, good and services from origin to destination which thus improved the socio-economic status and the general development of the nation cannot be overemphasized. Oyesiku (2002) stated that the primary function of any transport is the movement of goods and passengers from point of origin to the various point of destination. Transportation is a process that involves movement of commuters, good and services from a given point of origin to specific destination. As observed in the literature, transport brings people and goods to people, returning enormous benefits to economic.

The literature shows that one of the major objectives of transportation planning is to ease the movement of passengers and goods on urban roads. However, in many towns and cities all over the world, there is undesirable degree of traffic congestion on urban roads. The provision of new roads is often expensive and most municipal government usually considers the option of widening existing roads which involves the destruction of houses and properties. The literature reveals that widening of roads and concomitant destruction of buildings are not necessarily the panacea needed in controlling traffic congestion on our roads.

As observed in the literature, categories of space in urban centre include exchange space and movement space which related to motor park, interchange point etc. As city transportation system expands, it takes up more spaces. The construction of new roads, the expansion of the existing roads, the building of parking lot requires the acquisition of part of the exchange space, the more space allocated to transport, the greater the requirement for more traffic space. Automobile therefore has an insatiable appetite for space, it uses space at home, at work, shopping and even when some spaces are empty, and it is tied up or reserved for the automobile. Automobile do not only have exclusive space for moving, they also have a" zone of influence" which expands as the speed and quantity of traffic increases, thus reducing the effectiveness of exchanges space and the level of interaction.

Unlike other urban problems, crisis in urban transportation quickly manifest itself in congestion, delay, accident, parking difficulties and environmental pollution. Ayeni (1983) described these as the most pressing and most visible urban problem of Nigeria cities. Oduola (1981) explained that most urban congestion problems are caused by the sub-optimal manner in which the roads are used. Road side and on roads parking, roads side trading and total disregard of traffic regulation by road users are significant human contribution to the traffic problem. In Lagos for instance, Ogunsanya (1986) observed that illegal parking alone account for 30 percent of the cause of delay along Bangbose, Igbosere, Ipodo, Bajulaiye, Ereko and Balogun and Ojoo roads in Lagos state.

One of the most fundamental problems in cities as observed in the literature is mobility. Access to transportation that meets the broad scope of economic and social needs of the people is very important. Mobility within the cities is generally the key to economic growth in the developed world. Sustainable mobility need to be among the first problem addressed when talking about ways to make cities more sustainable. As observed in the literature, sustainable mobility development implies that the consumption activities should be able to take into consideration effective utilization of available resource and develop environmental friendly system for the mobility of the people that would not change the natural resources and at the same time have some positive effect on the same environment.

Observation shows that two serious disadvantages facing urban transportation as identified in the literature among others include the following. Firstly was the heavy increase in motor traffic in city centers which often creates almost insoluble parking and garage problems. The second is the vast increase in road congestion. According to Simmon (1996) in the developing countries, parking is a complex and long term problem which cannot be totally eradicated but managed. Buses and trucks have to load and unload passengers and goods. They all need space to park and this pose a problem if required spaces are not available. The usage of vehicle has a direct linkage with parking. This is because after vehicle is driven to a destination, its usefulness greatly diminishes, if there is difficulty in parking. To be effective therefore, transportation system must include adequate parking facilities in all places that attracts vehicle traffic.

The argument in the literature is that the provision of parking for all automobile must be widely recognized as a responsibility where adequate facilities are not otherwise provided. He stressed that major attention should be on on-street parking for passengers cars as parking needs. According to him, to make this possible if there are no available spaces, he proposed for legislation that would be used to acquire land to be devoted to parking lot operation.

## 3. The Study area

The study area is Ibadan North-East Local Government in Oyo State, Nigeria. It was created on 27th day of August 1991. It has an area of 18 km² with a population of 330,399 at the 2006 census. Ibadan North-East Local government headquarter is located along Iwo road which is one of the major commercial centre in Ibadan land. The Local government is endowed with a wide expense of land. The population of the Local Government consisted of civil servants, artisans and traders whose business activity is the buying and selling of different kinds of goods. The commercial activities occur on daily basis while spare part market at Agodi-Gate is a life saving market for the motorist in Ibadan.

#### 3.1. Types of road in the study area

There are three types of roads in the area, secondary arterial, distributor or collector and service or access roads. The secondary arterial road serves as primary network for the entire local government. It is a federal road which begins from Iwo-road up to Bere round about from which all traffic connects to serve the entire local government. Distributor or collector road feeds the major land use in the area. It provides link to various residential places at Idi-Ape, Bashorun, Bere, Orita Aperin and Oje, Oremeji etc. Service or access road connects traffic from residential area to the main network of the road.

## 4. Methodology

The methodology employed consisted of the following stages which are highlighted below.

An in-depth review of relevant literatures on the subject of parking in general and on-street parking in particular to obtain series of information from previous research and extraction from published and unpublished text book, journal, articles and web materials were carried out. The information obtained from the exercise was treated as secondary information.

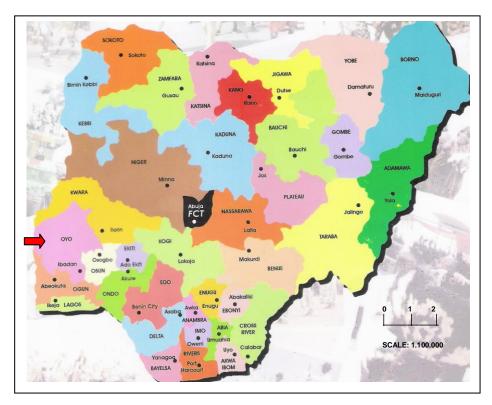


Figure 1. Map of Nigeria showing Oyo state (Source: Ministry of Land, Housing and Dev., Oyo State)

Primary data were collected through the use of questionnaires in line with the objectives of the study and administered to three set of people. The transport operators, commuters and local government official to obtain information as regards to on-street parking problem in the area.

One hundred and fifty questionnaires were prepared in which eighty (80) were designed to get the opinion of transport operators, fifty for commuters and the remaining twenty for the local government official to get their opinion on problems of on-street parking. The questionnaires were administered on weekdays.

Parking space inventory was carried out to obtain information on total length and width of the roads, and other road characteristics. Parking concentration survey was carried out also to obtain information on the number of and the classes of vehicles parked at on-street parking spaces at the period of thirty minutes interval. This was done between 7am – 11am and 3pm – 7pm on Monday, Wednesday and Sunday.

Furthermore, field notes used to record events and observation on research subject were meticulously kept. Photography where necessary were taken although they are not inserted in the paper.

Six areas were selected in Ibadan North East local government which includes Idi-Ape, Agodi-Gate, Oje, Beere, Orita-Aperin and Oremeji (Table1).

A convenience sampling technique was used to elicit information from the respondents. The collected data were analyzed using descriptive statistical techniques.

|              | 1                   |           |                            |  |  |  |  |
|--------------|---------------------|-----------|----------------------------|--|--|--|--|
| Location     | Transport operators | Commuters | Local government officials |  |  |  |  |
| Idi Ape      | 10                  | 5         |                            |  |  |  |  |
| Gate         | 20                  | 12        |                            |  |  |  |  |
| Oje          | 15                  | 12        |                            |  |  |  |  |
| Bere         | 15                  | 10        |                            |  |  |  |  |
| Orita-Aperin | 10                  | 6         |                            |  |  |  |  |
| Oremeji      | 10                  | 5         |                            |  |  |  |  |
| Total        | 80                  | 50        | 20                         |  |  |  |  |
|              |                     |           |                            |  |  |  |  |

Table 1. Names of the area and number of Administered questionnaires

Source: Field survey, May 2009

#### 5. Results and discussion

On-street parking facilities include Kerbs, bus-stops for commercial motors and car parks for private cars. It was discovered that none of these facilities is found in the area thereby causing traffic congestion and accident. In the study area roads are narrow and lack pedestrian lanes. There are cases of double parking along the narrow roads thereby causing traffic congestion; this was due to the non-availability of off-street parking in the area. Also, there are no parking bays or loading bays for transit vehicle such as taxi, buses either to pick up load or unload goods and passengers along the routes. Consequently drivers resort to haphazard parking which not only erodes the aesthetic values of the road way and city structure but also constitutes risks to lives and properties

Also, motorist suffers stress in searching for parking space at destination such as Agodi-Gate, Oje, Beere, Idi-Ape Orita-Aperin and Oremeji of the local government area. Lack of loading or parking bay cause illegal on-street parking by motorist which has already reached crisis proportion in the area. Roadside hawking and trading along the road reduces road lane capacity. Rapid increase in the number of motor vehicles in the area has led to serious traffic congestion at peak hours of the day. The problems of on-street parking have made the area inaccessible and reduce the traffic speed and thus increasing traffic congestion as well as longing journey time.

no drainage

## 5.1. Road characteristics in Ibadan North-East local government

Table 2 shows the primary distributor road which serves as both intra and intercity movement of traffic. It has very smooth tarred surface with fair drainage channels. It was dual carriage way. The traffic control on stand (traffic warden) varies from 2-4 at each junction and intersection. Pedestrian sidewalk was absent.

District distributor road has rough tarred surface with no drainage channel. It is intra-city carriage way. The traffic control on stand (traffic warden) varies from 2-3 at each junction. It lack pedestrian sidewalk. It was observed that these two categories of road are experiencing chaotic parking problem because they lead to the central Business District (CBD).

## 5.2. Parking concentration survey

Total

Table 3 shows the parking volume incident on selected areas at the peak period hours of the day between 7am - 11am and 3pm - 7pm on Monday, Wednesday and Sunday. The table shows that the volumes of parking in the evening period of all selected days at almost all the locations are more than the morning period. In some locations, the volumes of motorcycle parking on the road are greater than its counterpart on Monday and Wednesday. Also the table shows that trucks had a greater volume of parking on Monday evening at Bere more than the other locations and than the rest of the day in the week. This is due to the fact that Bere comprises of both commercial and residential landuse thereby encourages parking of trucks on the road. Buses had a greater volume of parking (555) on Wednesday evening at Idi-Ape and Motorcycle (558) at Bere than the rest of the day in the week. The table further shows that at Gate taxi (commercial car) parks on the road to pick up and alight passengers. The evening period had a greater volume of parking in all the days of the week.

Table 2. Road characteristics in Ibadan North-East Local Government

No. of traffic Condition of Road Surface sidewalk

| 5/NO | Road way       | No. of Lanes | Control on Stand | Width (m) | & Drainage                                  |
|------|----------------|--------------|------------------|-----------|---------------------------------------------|
| 1    | Primary roads  | 2            | 2                | NII       | Very smooth tarred                          |
|      | Idi-Ape        | 2            | Z                | NIL       | surface with fair drainage                  |
| 2    | Agodi-Gate     | 2            | 3                | NIL       | smooth tarred surface<br>with fair drainage |
| 3    | Beere          | 2            | 6                | NIL       | smooth tarred surface<br>with fair drainage |
|      | District roads | 4            | 0                | NIII      | Rough tarred surface with                   |
| 4    | Oje            | 1            | 2                | NIL       | no drainage                                 |
| 5    | Orita-Aperin   | 1            | 2                | NIL       | Rough tarred surface with no drainage       |
| 6    | Oremeji        | 1            | 3                | NIL       | Rough tarred surface with                   |

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Table 3. Parking concentration survey volume of parking on selected areas in the local government Monday traffic count

| LOCATION         | PERIOD  | BUS | PRIVATE CAR | TAX | MOTORCYCLE | TRUCK | TOTAL |
|------------------|---------|-----|-------------|-----|------------|-------|-------|
| IDI-APE AREA     | MORNING | 211 | 104         | -   | 232        | 8     | 555   |
| IDI-APE AREA     | EVENING | 207 | 157         | -   | 237        | 12    | 613   |
| ODEMEII ADEA     | MORNING | 355 | 144         | -   | 396        | 4     | 893   |
| OREMEJI AREA     | EVENING | 511 | 196         | -   | 338        | 31    | 907   |
| ORITA-APERIN     | MORNING | 428 | 205         | -   | 404        | 8     | 1045  |
| AREA             | EVENING | 494 | 226         | -   | 518        | 14    | 1252  |
| OIE ICOCIIN ADEA | MORNING | 401 | 120         | -   | 247        | 19    | 787   |
| OJE-IGOSUN AREA  | EVENING | 476 | 196         | -   | 460        | 21    | 1153  |
| BERE AREA        | MORNING | 330 | 217         | -   | 361        | 25    | 933   |
| DEKE AKEA        | EVENING | 451 | 269         | -   | 481        | 43    | 1244  |
| GATE AREA        | MORNING | 272 | 80          | 124 | 450        | 10    | 396   |
| GATEAREA         | EVENING | 398 | 33          | 237 | 447        | 12    | 1211  |

# Wednesday traffic count

| LOCATION     | PERIOD  | BUS | PRIVATE CAR | TAX | MOTORCYCLE | TRUCK | TOTAL |
|--------------|---------|-----|-------------|-----|------------|-------|-------|
| IDI-APE AREA | MORNING | 205 | 83          | -   | 227        | 12    | 529   |
| IDI-APE AREA | EVENING | 555 | 107         | -   | 442        | 36    | 1180  |
| OREMEJI AREA | MORNING | 305 | 178         | -   | 348        | 12    | 843   |
| OKEMEJI AKEA | EVENING | 311 | 171         | -   | 389        | 4     | 907   |
| ORITA-APERIN | MORNING | 449 | 204         | -   | 446        | 13    | 1112  |
| AREA         | EVENING | 487 | 202         | -   | 501        | 14    | 1197  |
| OJE-IGOSUN   | MORNING | 430 | 154         | -   | 294        | 25    | 903   |
| AREA         | EVENING | 461 | 112         | -   | 492        | 22    | 1087  |
| BERE AREA    | MORNING | 399 | 119         | -   | 291        | 18    | 907   |
| DEKE AKEA    | EVENING | 527 | 347         | -   | 558        | 21    | 1453  |
| GATE AREA    | MORNING | 204 | 100         | 199 | 457        | 14    | 974   |
| GATE AREA    | EVENING | 428 | 111         | 261 | 473        | 21    | 1294  |

# Sunday traffic count

| LOCATION     | PERIOD  | BUS | PRIVATE CAR | TAX | MOTORCYCLE | TRUCK | TOTAL |
|--------------|---------|-----|-------------|-----|------------|-------|-------|
| IDI-APE AREA | MORNING | 107 | 62          | -   | 118        | 2     | 289   |
| IDI-APE AREA | EVENING | 252 | 96          | -   | 225        | 3     | 593   |
| OREMEJI AREA | MORNING | 299 | 95          | -   | 223        | 9     | 626   |
| OKEMEJI AKEA | EVENING | 226 | 113         | -   | 265        | 15    | 619   |
| ORITA-APERIN | MORNING | 346 | 103         | -   | 335        | 4     | 788   |
| AREA         | EVENING | 441 | 88          | -   | 378        | 7     | 914   |
| OJE-IGOSUN   | MORNING | 380 | 98          | -   | 196        | 8     | 682   |
| AREA         | EVENING | 460 | 143         | -   | 189        | 18    | 810   |
| BERE AREA    | MORNING | 363 | 99          | -   | 258        | 33    | 753   |
| DEKE AKEA    | EVENING | 241 | 192         | -   | 376        | 25    | 834   |
| GATE AREA    | MORNING | 169 | 83          | 159 | 413        | 6     | 830   |
| GATE AREA    | EVENING | 278 | 88          | 199 | 375        | 8     | 948   |

Source: Field survey, 2009

## 5.3. Socio-economic characteristics of the respondents

## 5.3.1. Sex distribution of the respondents

Table 4 shows that majority of the respondents were male.

Table 4. Sex distribution of the respondents

| SEX    | TRANSPORT OPERATOR<br>N=80 | COMMUTER<br>N=50 | LOCAL GOVT. OFFICIAL<br>N=20 |
|--------|----------------------------|------------------|------------------------------|
| MALE   | 84%                        | 64%              | 90%                          |
| FEMALE | 16%                        | 36%              | 10%                          |
| TOTAL  | 100%                       | 100%             | 100%                         |

Source: Field survey, 2009

## 5.3.2. Age distribution of the respondents

Table 5 shows that majority of the respondents were between age 21-50 years.

Table 5. Age distribution

| AGE           | TRANSPORT OPERATORS<br>N=80 | COMMUTERS<br>N=50 | LOCAL GOVT. OFFICIALS<br>N=20 |
|---------------|-----------------------------|-------------------|-------------------------------|
| < 20 yrs      | 5%                          | 8%                | -                             |
| 21 – 30 years | 23 %                        | 46%               | -                             |
| 31 – 40 yrs   | 35%                         | 16%               | 30 %                          |
| 41 - 50 yrs   | 28 %                        | 27%               | 50%                           |
| 50 yrs above  | 9%                          | 3 %               | 20%                           |
| TOTAL         | 100%                        | 100%              | 100 %                         |

Source: Field survey, 2009

## 5.3.3. Marital status

Table 6 shows that majority of the respondents were married.

Table 6. Marital status

| MARITAL STATUS | TRANSPORT OPERATORS | COMMUTERS | LOCAL GOVT OFFICIALS |
|----------------|---------------------|-----------|----------------------|
|                | N=80                | N=50      | N=20                 |
| SINGLE         | 27.5%               | 48%       | 100%                 |
| MARRIED        | 65.5%               | 52%       |                      |
| OTHERS         | 5%                  | -         |                      |
| TOTAL          | 100%                | 100%      | 100%                 |

Source: Field survey, 2009

## 5.3.4. Educational status

Table 7 shows that most of the respondents were secondary school leavers.

Table 7. Education status

| EDUCATIONAL STATUS | TRANSPORT OPERATORS<br>N=80 | COMMUTERS<br>N=50 | LOCAL GOVT. OFFICIALS<br>N=20 |
|--------------------|-----------------------------|-------------------|-------------------------------|
| NONE               | 4%                          | 10%               | -                             |
| PRY SCHOOL         | 29%                         | 18%               | -                             |
| SECON SCHL         | 40%                         | 48%               | 70%                           |
| TERTIARY           | 27%                         | 24%               | 30%                           |
|                    | 100%                        | 100%              | 100%                          |

Source: Field survey, 2009

# 5.3.5. Occupation characteristics

Table 8 shows that majority of the respondents were self-employed.

Table 8. Occupational status

| OCCUPATIONAL CHARACTERISTICS       | TRANSPORT OPERATORS<br>N=80 | COMMUTERS<br>N=50 |
|------------------------------------|-----------------------------|-------------------|
| PUBLIC SERVANT                     | 6%                          | 8%                |
| COMPANY EMPLOYEES<br>SELF EMPLOYED | 11%<br>83%                  | 10%<br>72%        |
| OTHERS                             | -                           | 10%               |
| TOTAL                              | 100%                        | 100%              |

Source: Field survey, 2009

# 5.4. Purpose for which vehicles are used

Table 9 shows that purpose for which vehicles are used for on the road were commercial purpose (50%), private used (19%), company used (16%) and public used (6%).

Table 9. Purpose for which vehicles are used

| PURPOSE    | FREQUENCY | PERCENTAGE |
|------------|-----------|------------|
| COMMERCIAL | 40        | 50.0       |
| PRIVATE    | 19        | 19.0       |
| COMPANY    | 16        | 16.0       |
| PUBLIC     | 5         | 6.0        |
|            | 80        | 100        |

Source: Field survey, 2009

## 5.5. Respondents' assessments of parking facilities

Table 10 shows that the only available parking facility along the route is light provision and tarred surface along on-street parking. Other parking facilities and parking lots are in adequate.

Table 10. Respondents' assessments of parking facilities

| DADIANC FACILITIES & DADIANC                                                                                           | AVAI      | LABLE     | NOT AVAILABLE |           |  |
|------------------------------------------------------------------------------------------------------------------------|-----------|-----------|---------------|-----------|--|
| PARKING FACILITIES & PARKING LOTS                                                                                      | OPERATORS | COMMUTERS | OPERATORS     | COMMUTERS |  |
|                                                                                                                        | N=80      | N=50      | N=80          | N=50      |  |
| Waiting shed with sitting provision Tarred smooth surface Drainage with concrete slabs Kerbs Light Provisions Dustbins | 13%       | 10%       | 87%           | 90%       |  |
|                                                                                                                        | 81%       | 60%       | 19%           | 40%       |  |
|                                                                                                                        | 0%        | 0%        | 100%          | 100%      |  |
|                                                                                                                        | 13%       | 0%        | 87%           | 100%      |  |
|                                                                                                                        | 56%       | 50%       | 44%           | 50%       |  |
|                                                                                                                        | 38%       | 36%       | 62%           | 64%       |  |

Source: Field survey, 2009

## 5.6. Activities engaged in after parking

Table 11 shows that majority of the operators engage in loading and off-loading after parking (50%) followed by business shop (37.5%). This indicates that majority of the operators were commercial motorists.

ACTIVITIES FREQUENCY PERCENTAGE

Shopping 10 12.5
Loading & Off-Loading 40 50
Business 30 37.5

TOTAL 80 100

Table 11. Activities engaged in after parking

Source: Field survey, 2009

## 5.7. Duration of parking and walking

Table 12 shows that most of the operators parked their vehicles for more than 31minutes on the road (35.5%) while most of the commuters walking duration takes between 21 - 30 minutes (56%) which is equivalent to 300 - 500 meters on foot along the road.

**OPERATORS COMMUTERS** DURATION OF PARKING N=80 N = 50< 5 minutes 6% 6 -10 minutes 17.5% 11 - 20 minutes 27% 20% 21 - 30 minutes 14% 56% 31 mins and above 35.5% 24% TOTAL 100% 100%

Table 12. Duration of parking and walking

Source: Field survey, 2009

## 5.8. Effect of on-street parking

Table 13 shows that the major effect of on-street parking is congestion. Others are accidents, longing time for journey and restricted movement.

## 5.9. Causes of congestion on the road

Table 14 shows that majority of those that responded to this question are of the view that lack of parking lots (56%), absence of loading bays (36%) are the major cause of traffic congestion on the road.

Table 13. Effect of on-street parking

| EFFECT OF ON-STREET  | OPERATOR'S | COMMUTERS | LOCAL GOVT. OFFICIALS |
|----------------------|------------|-----------|-----------------------|
| PARKING              | N=80       | N=50      | N=20                  |
| Traffic Congestion   | 56%        | 10%       | 50%                   |
| Accident             | 25%        | 40%       | 30%                   |
| Longing time Journey | 14%        | 10%       | 10%                   |
| Restricted Movement  | 5%         | 40%       | 10%                   |
| TOTAL                | 100%       | 100%      | 100%                  |

Source: Field survey, 2009

Table 14 Causes of congestion on the road

| CAUSES OF TRAFFIC CONGESTION | PERCENTAGE |
|------------------------------|------------|
| Lack of Parking lots         | 56.0       |
| Absence of loading bays      | 36.0       |
| Others                       | 10.0       |

Source: Field survey, 2009

#### 6. Recommendation and conclusion

The following are important solution towards the improvement of the chaotic parking situation in the area.

- Provision of bus-stops and kerbs for commercial motors and parking lots for private motors.
- Provision of pedestrian walkways and pedestrian overhead bridge crossing at appropriate location.
- Provision of designated and specified park for different vehicles plying different routes as well as off-street parking for inter-city transport.
- Re-organization of market system in the area i.e. street-trading and roadside selling must be totally scraped while government should provide a ready-made alternative place for commercial activities.
- Strict enforcement of traffic rules and regulations in the area which would involves law
  enforcement agent to be compelled to do the works with pride and more elements of efficiency
  and submissiveness in which vehicle found on illegal traffic routes should be punished according
  to the rules of law.
- Provision of parking guidance system that will cater for parking of vehicle during the peak hours
  of the city.
- Provision of subsidized mass transit to reduce the use of unconventional commercial vehicle.
- Widening of the existing roads to provide ease flow of traffic in the area.

The efficient movement of people and goods are vital task and upon it rest the quality of life as observed in the literature; there is no escape from transport because immobility perpetrate poverty.

In Nigeria, to derive the maximum benefits from transport, there is need to urgently address the challenges of on-street parking which has become an epidemic to the environment. It affects smooth flow of traffic and causes traffic congestion, lateness to work, accident and hampering other economic activities.

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