Impact of Abandoned Broken Down Vehicles on Road Users in Port Harcourt Metropolis: Implications for Efficient Urban Transportation Planning

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Abstract: *Presently, traffic situation in Port Harcourt metropolis can best be described as chaotic while efforts by previous and current administrations to curb the menace of abandoned broken down vehicles have remained elusive. This paper examined the impact of abandoned broken down vehicles on road users in Port Harcourt metropolis in particular and Nigeria in general. Related literatures on broken down vehicles were reviewed while primary data for the study were obtained by means of structured questionnaire and interviews. Simple random sampling technique was used to select the elements of the study while statistical tools like non-parametric chi-square test, percentages and simple tabular analysis were employed in the analysis of data. The inquiry revealed that there is no statistically significant difference between abandoned broken down vehicles and movement of residents. However, factors contributing to abandoned vehicles were given as the cost of operating and disposing of vehicles, cost and convenience of legitimate disposal, cost of repair and insurance, delay in toying of the vehicles by relevant Agencies and operators' neglect. The study further showed that abandoned vehicles contributed to increase in crime rate, accidents and traffic jams. Based on the findings, the creation of necessary awareness by the ministry of transport on the need to clear the roads, junking of vehicles that exceeds the approved duration of the Road Safety Act (2007) and National Road Traffic Regulations (2014), resuscitating the moribund transport Agency (TIMA-RIV) in the state as well as using GIS and remote sensing techniques to monitor abandoned broken down vehicles were strongly recommended.*

Keywords: *Abandoned, Broken Down, Impact, Urban Transport Planning, Vehicles*

1. INTRODUCTION

This paper is concerned with the impact of abandoned broken down vehicle on road users in Port Harcourt Metropolis and Nigeria in general. At present, not much has been done about the subject matter but great damage has been traceable to it both at workplaces and mobility at large. The importance of considering the impact of abandoned broken down vehicles on road users in urban areas cannot be over emphasised. According to FRSC (2015), the road transport system accounted for over 75% of mobility needs in Nigeria. The abandonment and near collapse of the rail system by successive Federal Governments and the high cost of air travels have put quite a lot of pressure on the nation's road transport industry. It is therefore imperative that plans should be formulated and executed on how free accessibility can be possible to reduce pressure on roads for vehicles, passengers and other road users.

Nigeria became a republic in 1963. Under the republican constitution of Nigeria, certain principal enactments that are traffic related were introduced in the various regions and Lagos.

These enactments according to Okolo (2015) were Road Traffic Laws Cap 116 of 1963 for Eastern Nigeria, Road Traffic Law Cap 118 of 1963 for Northern Nigeria, Road Traffic Law Cap 113 of 1959 for Western Nigeria, Road Traffic Laws Cap 184, Laws of the Federation of Nigeria and Lagos 1958 (later Road Traffic Laws cap 124, Laws of Lagos State 1973) and Road Traffic Act Cap 548 Laws of the Federation 1990 for Abuja. Under the republican constitution, these laws operated under the residual list and not under exclusive or concurrent list. However, under the Road Traffic Act Cap 548 Laws of the Federation (Abuja) 1990 and the subsidiary legislation made pursuant to the Act were only restricted to the Federal Capital Territory Abuja.

In 1988, by virtue of Decree 45 as amended by Decree 35 of 1992, the Federal Road Safety Commission was established by the government of General Ibrahim Babangida. A further amendment to the Act establishing the Federal Road Safety Commission was also made by virtue of Cap 141 Laws of the Federation of Nigeria 1990. At the moment, the latest statutory provision with regard to the functions, duties and scope of operation of the Federal Road Safety Commission is contained in the Federal Road Safety Commission (Establishment) Act 2007.

As at November 15, 2007, The Federal Road Safety Commission (FRSC) disclosed that Nigeria had not less than 7, 000, 000 registered vehicles operating on its roads (Oluwatosin, 2008). This figure to an extent raises an alarm on road users and its residents towards better road safety practices. Nigerian roads are generally bad and not widened enough and as a result, a vehicle breakdown would mean an increase on the existing pressure on roads and thus there would be a delay in working hours for employees, traffic Jam and its related impacts. Abandoned and broken-down vehicles do not only result to a delay in working hours but also parking spaces for vehicles are competed for and if not checked properly and evacuated could breed criminals and also lead to unnecessary accidents especially at nights.

For many countries, abandoned broken down vehicles are not issues. Laws are strictly adhered to and agencies in charge of towing and evacuating are carrying out their duties especially in countries like Britain, USA and other law-abiding countries. But in Nigeria, we see abandoned broken down vehicles littered everywhere. The problem is not an absence of law or agencies but commitment to its execution. The existing Road Traffic Acts to a reasonable extent has not succeeded especially on the area of towing broken down vehicles, (Oluwatosin, 2008).

The Road Traffic Act is geared towards ensuring accessibility on road and reduction in crime rate. Accessibility refers to the ability of people to reach the destinations they must visit in order to meet their needs and desire to visit to satisfy their wants. An understanding of how these factors interact to affect the lives of urban and sub-urban residents should be a major concern to urban planners. Traffic Jam has become a common problem in Port Harcourt metropolis. To workers, students, business personnel and other urban dwellers, travels delay in schedule is becoming a normal situation.

The impact of abandoned broken down vehicles on road users is enormous. This is because road users' activities in the metropolis has become very risky due to the negative impact of this situation. The overdependence on road transport has made mobility a point of concern. Port Harcourt is faced with diverse insecurity such as militancy, kidnapping, cultism, picking pockets and theft (breaking shops to steal). Some of these crimes has been traced to abandoned vehicles which serves as homes for criminals. Port Harcourt is blessed with industries and so commercial activities thrive well. These commercial activities need vehicles to convey their products. Cars are owned by workers and other stakeholders in the city. Most cars on the road needs parking spaces which sometimes are occupied by abandoned broken down vehicles, (Magnus, 2016).

Abandoned broken down vehicles is a peculiar issue in our society because the concept is vague and ambiguous, but a casual look at our environment reveals the impact it has on our roads and road users particularly in major towns and cities. Williams (2013) defined a broken down vehicle as the mechanical failure of a motor vehicle in such a way that the underlying problem prevents the vehicle from being operated at all, or impedes the vehicles operation so much, that it is very difficult or nearly impossible, or dangerous to operate, or else at risk of causing further damage to the vehicle.

Onamusi (2011) viewed it as a quality-of-life problem; they are unsightly, and they symbolize and contribute to signs of disorder and decay. This can be partly due to the fact that once a single car is dumped in a vacant lot or on an access road, it can attract other abandoned vehicles and illegal dumping, turning the area into a de facto junk yard. Dehn, (2004) noted that abandoned broken down vehicles can undermine the quality of life by potentially contributing to further problems such as; occupying scarce parking spaces in urban areas, obstructing street, obstructing drivers' vision especially at nights, being used by the homeless or street prostitutes, combustible gasoline and other dangerous fluids and attracting children.

The term "abandoned broken down vehicles is often applied loosely to different types of nuisance vehicles. That is to say a distinction can be made between "retired" vehicles and end-of-life (ELVS)".

From a retirement perspective, the original vehicle is no longer in normal, active use (at least within the confines of the United States). However, from an end-of-life perspective, only the first two cases-recycled or abandoned are vehicles permanently retired and as such, are considered "end-of-life" (ELVS), (Bevely, 2017). For purposes of this paper, the focus is on the impact of permanently retired vehicles.

1.1. The Study Area

Port Harcourt was founded in 1912 by the British in an area traditionally inhabited by the Ikwerre people. It was named after Lewis, Viscount Harcourt, Secretary of State for the Colonies. The initial purpose of the port was to export the coal which geologist Albert Ernest Kitson had discovered in Enugu. In August 1913, the Governor-General of Nigeria, Sir Fredrick Lugard wrote to Harcourt, then Secretary of State for the Colonies, "in the absence of any convenient local name, I would respectfully ask your permission to call this Port Harcourt". To this the Secretary of State replied "It gives me pleasure to accede to your suggestion that my name should be associated with the new Port". (Lewis Vernon Harcourt 1st Viscount Secretary Port State, Economic expert.com.).

The weather and climate of the region show that mean annual temperature is 280c. According to Oyegun (1999) the annual range of temperature in Port Harcourt is 3.80c while humidity is 85%. Oyegun (1999) further affirmed that the intensity of hamattan during the day season months of December to February is very low. He also added that rainfall in the region exhibits a double maxima regime with peaks in July and September with a little dry season in August. The highest monthly rainfall of 3,496.1mm and 3,578.4mm occur in July and August respectively. However, the climate of the region is a function of its geographical location within the humid tropics, the short distance away from the Atlantic Ocean, the urban factor of pollution and the prevailing tropical maritime air mass which blows over the region for most of the year.

The Soils of the region consist of various types of superficial deposits overlying thick tertiary sandy and clayey deposits which, are over 100m thick in places. The consistently high rainfall and temperature of the region encourage intense chemical weathering of the rocks, which result in the formation of clay minerals that are ubiquitous in the region. These are soils derived from the older sediments and those formed on younger Quaternary and Recent alluvium. The older soils have textures dominated by coarse sandy clays and loose reddish brown sandy loam top soils. The younger soils have textures which, vary from sand to clay but are mainly loamy.

These soils are generally poorly drained but have rich humus layers on the top soil. Nitrogen and potassium are the most deficient minerals in the soils of the region because of intense leaching due to the heavy rainfall. Volcanic parent materials, which derive from the Oban highland, make the soils of the region rich in phosphorus. The high forest area and the mangrove swamps are rich in organic matter even though they require to be draining and properly managing to be able to support arable agriculture.

The city of Port Harcourt had a humble beginning in 1913 as a fishing settlement with an initial population of 5, 000 persons. Census figures for the city through its history are 7,185 in 1921, 15,201 in 1931 and 71,634 in 1953. The 1963 census gave the city's population as 179,563 and in 1973 it was 213,443. The 1991 census fixed the population of Port Harcourt and Obio/Akpor Local Government at 645,883. The projection for 1996 by the National Population Commission is 832,471 for the two local government and the interim figures for the 2006 National census is over one million (NPC, 2006). The picture, which emerges from these increases shows that the city and its region have witnessed an unprecedented growth with attendant urban sprawl (Wizor, 2014).

The unprecedented growth witnessed in the region has been accounted for by two major factors which are: High fertility rate and Increased Migration. While the former is constant for developing countries, the later has arisen because of the influx of people into the region from other parts of the country and the world (Adeyemo, 2003). Reasons for this influx of people into the region according to Adeyemo (2003) include the fact that the city is a state capital and a railway terminus. Other reasons for this phenomenal growth are because the city is a major industrial center as it has a large number of multinational firm as well as other industrial concerns, particularly business related to the petroleum industry, has the second largest seaport in Nigeria and an international airport. The city plays host to

the Rivers State University, Captain Elechi Amadi Polytechnic, Ignatius Ajuru University of Education and University of Port Harcourt, which interestingly is not within the actual constraints of the city. In addition, it has three stadiums (Sharks stadium, liberation stadium and Adokiye Amasamaka stadium) and two refineries.

The main city of Port Harcourt is the Port Harcourt town in the Port Harcourt City Local Government Area, consisting of the former European quarters now called Old Government Reservation Area (GRA) and new layout areas. The Port Harcourt Urban areas (Port Harcourt Metropolis) is made up of the City itself and Obio/Akpor Local Government Area. Port Harcourt city, which is the capital of Rivers State is highly congested. At its inception, the city limits extended from the UTC junction to the New layout market. Owei et al (2008) asserts that Diobu and Borikiri became part of the city in 1969. They further stated that, consequent on rapid industrial and commercial growth of the city in the 1960's, Port Harcourt expanded to include Ogbum nu Abali East and West, Obio l and II and Oroworukwo. After the local government reforms of 1976, the Port Harcourt City and Obio/Akpor Local Government Councils had their northern limits stretching from Choba to Rukpokwu and eastwards, to Iriebe. The City is sprawling in nature.
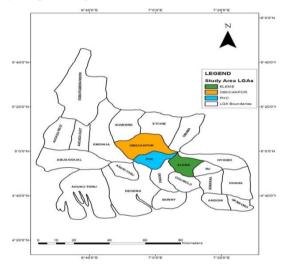

Figure1. *Rivers State showing the Metropolis (Source: GIS Laboratory, Department of Geography and Environmental Management, University of Port Harcourt, Nigeria)*

A law was passed by the state House of Assembly during Governor Amaechi's administration to spread development to the surrounding communities as part of the effort to decongest Port Harcourt. The greater Port Harcourt City as it is officially known spans eight local government areas that include: Port Harcourt, Okirika, Obio/Akpor, Ikwerre, Oyigbo, Ogu/Bolo, Tai and Eleme, (Obinna, et al, 2010). Today, Port Harcourt City yearns for re-planning, renovation, regeneration, rehabilitation, redevelopment, of the physical elements of growth and the resuscitation of the social element of city development.

2. MATERIALS AND METHODS

The research population for this study comprises all major roads within the study area. Four major roads namely Port Harcourt/Aba (PH/Aba) Expressway, East/West road, Ikwerre road and Ada-George road were purposively sampled. The target population chosen by Purposive Sampling Technique (PST) are street hawkers, shop owners near road, commercial drivers, passengers, students, and car owners.

The sample size for the study was determined using Baridam (2007) which is expressed in symbols as:

$$Z = e$$

$$\frac{\overline{Q}}{\sqrt{n}}$$

Where the confidence level chosen to accommodate the tolerable error is 95% and the allowable error (e) is 4. The standard deviation computed from the pilot study is 28.5

Thus, the required sample size is derived as follows

$$1.96 = \dfrac{\dfrac{4}{28.5}}{\sqrt{n}} \quad = \quad \dfrac{1.96 \times 28.5}{4} \quad = 13.965$$

$$\dfrac{= 13.965}{\sqrt{n}}$$

Therefore, n = 195

The sample size for this study therefore is 195 respondents

The sampling technique used to select the sampling units and elements of sample is the simple random sample (SRS) sampling technique. It involves a sample chosen by chance which ensures neither favouritism by the sampler nor self-selection by respondents thus guaranteeing all individuals an equal chance to be chosen.

The data used to determine the outcome of this study were collected from mainly primary sources via descriptive questionnaire, which were distributed to street hawkers, shop owners close to the road, commercial drivers, passengers, students and car owners. The research questions for the study are analyzed by means of descriptive statistics such as percentages, grouped frequency distributions and tabulation. The hypotheses for the study however, were tested by means of the Chi-square test.

The Chi-square is mathematically stated as:

$$X2 = E \frac{(F0 - F2)2}{Fe} \quad \text{or} \quad E \frac{(0 - E)2}{E}$$

Where F is frequency

O is observed frequency

E is expected frequency

Descriptive questionnaires were designed with varied forms of questions to ensure the minimization of variable errors. The observational and focus group interviews were used to collect the data for sensitive issues thus minimizing systematic errors. Thus, the instruments used are reliable, valid and no error pattern was established.

3. RESULTS AND DISCUSSION

65 copies of the questionnaires were distributed to each category of respondents across the four major sampled roads of Port Harcourt Metropolis.

Table1. *Distribution and Retrieval of Questionnaire*

Category of Male and Female	Number Distributed	Number Retrieved	(%) [App. To 1d.p.]
15 – 30	65	62	31.8
31 – 46	65	58	29.7
Over 47	65	60	30.8
Total	195	180	92.3%

Source. *Survey Data, 2019*

The overall response rate is good. 180 out of 195 copies of questionnaire distributed were retrieved; this amounted to 92.3% response rate. This response rate is achieved because copies of the

questionnaire were personally delivered and retrieved from the respondents. The copies of the questionnaire were distributed to male and female in the age brackets shown above. An equal number of questionnaires were distributed to all age brackets.

Table2. *Distribution and Retrieval of Copies of Questionnaire Per Road Representing the Four Major Roads in Port Harcourt Metropolis*

Major roads	Number Distributed	Number Retrieved	Percentage
PH/Aba Expressway	45	43	22.0
East/West	65	60	30.8
Ikwerre	43	41	21.0
Ada-George	42	36	18.5
Total	195	180	92.3%

Source. *Survey Data, 2019*

The response from each of the sampled road is good. 43 out of 45 from Port Harcourt /Aba Expressway, 60 out of 65 from East/West road, 41 out of 43 from Ikwerre road and 36 out of 42 from Ada-George road with an overall response rate of 180 out of 195

3.1. Research Question One

What are the major causes of vehicle break down and why are they abandoned?

Table3. *Analysis of Major Causes of Vehicles Breakdown and why they are abandoned permanently on Roads.*

Causes	PH/Aba Road	%	East/West Road	%	Ikwerre Road	%	Ada-George Road	%
Road Condition	4	2.2	6	3.3	8	4.4	5	2.8
Delay in owing Vehicle	24	13.3	36	20	17	9.4	15	8.3
Vehicle Operators Neglect	15	8.3	18	10	16	8.9	16	8.9
Total	43	23.8	60	33.3	41	22.7	36	20

Source. *Survey Data, 2019*

The response to this research question as shown above indicate that delay in towing vehicles is the major reason for the breakdown of vehicles and permanent abandon. Thus, 13.3%, 20%, 9.4% and 8.3% of the respondents along Port Harcourt/Aba Expressway, East/West road, Ikwerre road and Ada-George road respectively noted that the reason why vehicles are permanently abandoned is due to delay in towing of these broken down vehicles and it is more of a failure on the part of the Agencies in charge of evacuating the broken down vehicles. However, 8.3%, 10%, 8.9% and 8.9% of the respondents of Port Harcourt/Aba Expressway, East/West road, Ikwerre road and Ada-George road respectively, noted neglect of vehicle operators as a major cause of abandoned broken down vehicle in Port Harcourt Metropolis. Only 2.2%, 3.3%, 4.4 and 2.8 respectively of the respondents of the four major roads sampled, affirmed road condition as a factor for vehicle breakdown and abandonment on roads in Port Harcourt Metropolis.

3.2. Research Question Two

What challenges do abandon broken down vehicle pose to road users?

Table4. *Challenges of Abandoned Broken Down Vehicle on Road Users*

Challenges Posed	Frequency of Responses	Percentage %
Traffic Jam	76	42.2
Working Hours	68	37.8
Accidents	28	15.6
Others	8	4.4
Total	180	100%

Source. *Survey Data, 2019*

Analysis of table 4 above reveals that out of a total of 180 respondents, 76 respondents representing 42.2 % indicated that traffic jam in the urban areas is considerably challenged. Similarly, 68 persons representing 37.8% noted that working hours is challenged due to abandoned broken down vehicles. 28 persons representing 15.5% noted that abandoned broken down vehicle contributes to road accidents in the city while 8 persons representing 4.4% noted that only little challenge is posed. This implies that abandoned broken down vehicles on urban road can have a great effect on movement in the urban areas. Thus, various categories of urban dwellers, workers, students and other road users are affected.

3.3. Research Question Three

Can increase in crime rate be traceable to abandoned broken down vehicle?

Table5. *Increase in Crime Rate Traceable to Abandoned Broken Down Vehicle*

Traceable	Frequency of Response							
	PH/Aba	%	East/West	%	Ikwerre	%	Ada-George	%
YES	18	10	32	17.8	20	11.1	17	9.4
NO	21	11.7	18	10	16	8.9	13	7.2
Not Witnessed	4	2.2	10	5.6	5	2.8	6	3.3
Total	43	23.9	60	33.4	41	22.8	36	19.9

Source. *Survey Data, 2019*

87 respondents from PH/Aba Expressway, East/West road, Ikwerre road and Ada-George road representing 48.3% believe that abandoned broken down vehicle can increase crime rate or at least crime rate can be traceable to abandoned vehicles on urban roads. This result is consistent with the study of Taiwo (2017) which linked the increase in crime rate at Ilorin to abandoned vehicles littered around the city. However, 68 respondents from the major roads in this study representing 37.8% do not believe increase in crime rate can be traceable to abandoned broken down vehicle while 25 respondents (13.9%) were undecided because they have not witnessed it before.

3.4. Hypothesis One

H_0: There is no statistically significant difference between abandoned broken down vehicle and increase in crime rate.

H_1: There is

Table6. *Chi-square Test Calculations for Hypothesis One*

O	E	O – E	$(O – E)^2$	$(O – E)^2/E$	Cal. Value	D.F	Critical Value
18.00	20.78	-2.78	7.73	0.37			
32.00	29.00	3.00	9.00	0.31			
20.00	19.82	0.18	0.03	0.00			
17.00	17.40	-0.40	0.16	0.01			
21.00	16.24	4.76	22.66	1.40			
18.00	22.67	-4.67	21.81	0.96			
16.00	15.49	0.51	0.26	0.02			
13.00	13.60	-0.60	0.36	0.03			
4.00	5.97	-1.97	3.88	0.65			
10.00	8.33	1.67	2.79	0.33			
5.00	5.69	-0.69	0.48	0.08			
6.00	5.00	1.00	1	0.2			
180				4.36	4.36	4	7.82

$X2 = \underline{E (f_0 – f_e)^2}$ or $\underline{E (O – E)^2}$

$\quad\quad$ F2 $\quad\quad\quad\quad\quad$ E

E = $\underline{\text{Row total x Column total}}$

$\quad\quad$ Grand total

Therefore, (E)

YES

(PH/ABA EXPRESSWAY)

$\frac{43 \times 87}{180} = 20.78$

EAST/WEST ROAD

$\frac{60 \times 87}{180} = 29$

IKWERRE ROAD

$\frac{41 \times 87}{180} = 19.82$

ADA-GEORGE ROAD

$\frac{36 \times 87}{180} = 17.40$

NO (PH/ABA EXPRESS WAY)

$\frac{43 \times 68}{180} = 16.24$

EAST/WEST ROAD

$\frac{60 \times 68}{180} = 22.67$

IKWERRE ROAD

$\frac{41 \times 68}{180} = 15.49$

ADA-GEORGE ROAD

$\frac{36 \times 68}{180} = 13.60$

NOT WITNESSED (PH/ABA)

$\frac{43 \times 25}{180} = 5.97$

EAST/WEST ROAD

$\frac{60 \times 25}{180} = 8.33$

IKWERRE ROAD

$\frac{41 \times 25}{180} = 5.69$

ADA-GEORGE ROAD

$\frac{36 \times 25}{180} = 5$

The critical value at 4 degree of freedom and at 0.05 significance level is 7.82

3.5. Decision Rule

From the chi-square test analysis on table 6 above, the critical value is 7.82 at 95% significance level. Since the critical value is greater than the calculated value, we accept the null hypothesis which states that "there is no statistically significant difference between abandoned broken down vehicle and increase in crime rate".

Ho2: There is no statistically significant difference between abandoned broken down vehicle and movement of residents

H_2: There is

Table7. *Chi-square Test Calculations for Hypothesis Two*

Challenges Pose	Frequency of Response
Traffic Jam	76
Working Hour	68
Accidents	28
Others	8
Total	180

$\overline{X} = \frac{180}{4} = 45$

Therefore, E = 45

O	E	O – E	$(O – E)^2$	$(O – E)^2/E$	Cal. Value	D.F	Critical Value
76	45	31	961	21.36			
68	45	23	529	11.76			
28	45	-17	289	6.42			
8	45	-37	1369	30.42			
180				69.96	69.96	4	7.82

Calculated value X^2

$X^2 = 21.36 + 11.76 + 6.42 + 30.42$

Therefore, $X^2 = 69.96$

From the Chi-square test analysis on table 7 above, the calculated value is 69.96 at 95% significance level. Base on the standard decision rule, we reject the null hypothesis which states that there is no significant difference between abandoned broken down vehicles and movement of road users since the critical value is smaller than the calculated value. In other words, tackling the impacts of abandoned broken down vehicle will boost movement and will benefits the residents of Port Harcourt Metropolis. Hence the need to evacuate vehicles on sight cannot be over emphasized.

3.6. Implications for Efficient Transportation Planning

The findings of this study are worrisome and therefore calls to question the current state of urban transportation planning in Nigerian cities. Urban transportation planning is very essential in every city and should therefore be an integral part of the landuse planning and master plans of every Nigerian city. It is the responsibility of urban planners to develop plans and programs for the use of land for towns, cities, and regions, while taking into account environmental, zoning and legal issues. They meet with decision makers and the public to determine needs and limitations; gather and analyze census data, environmental studies and economic reports; and review site plans created by developers and architects. For efficiency and order in the cities, the urban planner is expected to conduct field investigations, identify project feasibility and any plan changes, and recommend whether proposals should be approved or denied. They often present reports to government officials and the public about land-use projects.

In Rivers state, the Road Traffic Law No. 6 of 2009 established the Rivers State Road Traffic Management Authority (TIMA-RIV) to handle matters relating to road safety, traffic management and transportation in the state. The setting up of TIMA-RIV which had an affiliation with the state ministry of Transport was a step in the right direction to clear the highways and streets of obstructions caused by abandoned vehicles amongst other functions. According to Chukwu (2012), "the menace caused by abandoned vehicles in Port Harcourt metropolis was drastically tackled by TIMA-RIV". Enforcement of Road Traffic Laws and Policies by this Agency was noticeable in the city which was indeed remarkable.

Regulation of land use and development by the urban planner is achieved via the drafting and adoption of planning instruments designed to influence the land use and built form goals of the jurisdiction. The planning instruments take the form of legislation and policy, and have a wide variety of terms across jurisdictions including acts and regulations, rules, codes, schemes, plans, policies, and manuals; and often a combination of some of these. The planning instruments often spatially zone land or reserve the land for certain purposes, presented in the form of a zoning map or a plan. The urban planner is tasked with preparing planning instruments and zoning plans. Further, given that urban development is rarely static and the goals of urban planning change from time to time, the urban planner is expected to continuously maintain planning instruments and zoning plans to ensure they are kept up-to-date.

The situation in most urban areas in Nigeria is indeed pathetic especially with regards to urban transportation planning. A critical observation of most cities in Nigeria clearly reveals chaotic situation as abandoned vehicles are littered all over the urban landscape. The findings of this present study tend to lay credence to the negative impact of such vehicle abandonment in metropolitan cities. Lawan (2012) in his study of crime hotspots in Adamawa, concluded that abandoned vehicles in the streets of Yola served as criminal hideouts. Similar study by Okwelle (2014) in Afikpo clearly

showed that criminals and drug addicts use abandoned vehicles as base from where they engage in various forms of criminality. More so, the design and construction of road infrastructures in Nigerian urban areas without provision for pedestrians and layby for vehicles to pull off the road and stop without affecting traffic flow is indeed anomalous. Thus, for efficient urban transportation planning, consultation with the community and other stakeholders should generally be desired by urban planners when planning instruments are prepared and updated.

In Nigeria, while concerned with future development, the urban planner should occasionally be held responsible for investigating development or land use which had been undertaken without authorization. In many jurisdictions urban planners can require that unauthorized land use cease and unauthorized development is returned to its predevelopment condition; or alternatively retrospectively approve the unauthorized development or land use. Certainly, as urban areas in Nigeria continue to decline, the urban planners need to be tasked with preparing a plan for the redevelopment of an urban area. In doing this, critical road infrastructure needs to be adequately accommodated in the urban plans. The situation where abandoned vehicles litter urban areas without relevant Agencies evacuating such vehicles should be of paramount concern to urban planners. Tinubu (2017) raised the issue of residents adhering strictly to the urban traffic regulations of Osogbo town. He further observed that urban plans are not limited to an individual development site, but rather encompass a locality or district over which an urban renewal (or redevelopment) plan is prepared. Tinubu (2017) recommended urban renewal programme as solution to the menace caused by abandoned vehicles in urban areas.

Urban renewal in this context often relies on obtaining funding from government sources to assist in the regeneration of an area; the funding may be used for a variety of purposes such as improvement of public roads, parks and other public spaces, development of infrastructure, and acquisition of land. The urban planner will be responsible for costing an urban renewal plan and obtaining funding for infrastructure works necessary to implement the urban renewal plan. For efficiency however, urban planner for an urban renewal project will need to liaise closely with stakeholders during the preparation and implementation of the plan, including government agencies, landowners and community groups.

Planners use a variety of tools and technology in their work, including geographic information systems (GIS) tools to analyze and manipulate data. GIS should be used to integrate the data with electronic maps. For example, it is expected that Nigerian urban planners should use GIS to overlay a land map with population density indicators. The work of Daniel (2006) is consistent in the area of using GIS and remote sensing techniques to monitor broken down vehicles in Boston. Finally, restoring the transportation infrastructure in Nigerian urban areas is a task that must be done for the desired outcome especially in the area of having a serene, safe, chaotic-free, aesthetic and standard cities. The Port Harcourt metropolitan city situation, is a wakeup call for Nigerian urban planners to live up to the expectations of all stakeholders in the country.

4. CONCLUSION

The towing of abandoned broken down vehicles is a feasible strategy to ensure easy movements on roads. It is not however a panacea and can only be one part of the practical solution to the menace. A concerted targeted educative effort is essential to the eradication of abandoned broken down vehicles on roads to ease the traffic situation in the metropolis. Success cannot be achieved without support and cooperation of the vehicle operators and the FRSC. The impetus from the FRSC will be lost unless the residents are regarded ab initio as partners.

To this end, the study recommends that the FRSC and the Ministry of Transport should be awake to their tasks both at ensuring good conditions of vehicles and creating an awareness of the need of clear the roads, the Road Safety Acts should be strictly implemented to ensure that broken down vehicles does not exceed 24 hours, vehicles should be junked if it exceeds the recommended duration of the Road Safety Act, 2007 and the National Road Traffic Regulations, 2014, private business enterprises should be encouraged to also invest in towing of abandoned vehicles, the use of GIS and remote sensing techniques in monitoring abandoned broken down vehicles and awareness campaign on agencies in charge of towing vehicles should be intensified to eradicate the gross ignorance observed

in the course of this study. Finally, resuscitating the moribund transport Agency (TIMA-RIV) in the state is highly recommended.

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