GOVERNMENT POLICY AND TRANSPORT WORKERS' INVOLVEMENT IN HEAVY VEHICLES' CRASH REDUCTION IN LAGOS STATE

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Abstract

This study focused on the relevance of government policy and transport workers' occupational attitudes in reducing the rate of heavy goods vehicle crashes in Lagos, Nigeria. Descriptive research design was used, where the researcher developed survey instruments to collect data from 68 respondents drawn from different locations and bases in Lagos using purposive sampling technique. Statistical mean and standard deviation were used for the three research questions raised for this study. Analysis in the research questions revealed that there were policy inconsistencies on the part of the custodians of formulation, enforcement and management, operators' indifference to safety issues and inadequacy of transport infrastructure provision. Based on these revelations, it was recommended among others that government should make the enabling policy that could lead to a solid part of National Transport Policy, and domesticated in the various parts of the country as necessary, training and enlightenment of drivers and transport-related workers should be made compulsory, constant and relevant for operational and socio-economic safety, while necessary facilities should be provided to give potent drive to the National policy so made.

Introduction

In Nigeria, road traffic accident situation over the last three decades has been particularly disturbing. In 1976, there were 53,897 road traffic accidents resulting in 7,717 deaths. Although in 1981, the magnitude reduced to 5,114 accidents, but the fatality increased to 10,236 which means that there was an average of 96 accidents and 28 deaths for everyday of that year (Ogunsanya; 1991, NBS; 2020). The situation in subsequent years has not been any better. The number of people killed in road accidents between 1990 and 2005 rose from 28,253, and the fatality rate remains consistently high (Atubi, 2009c). International comparison indicates that the chance of a vehicle killing someone in Nigeria is 47 times higher than in Britain.

The proportion of fatalities to injuries reported is also very high. For example, while Czech Republic has only one death in 175 accidents, France, one death in 175, South Africa, one death in 47 accidents, Nigeria has one death in 2.65 accidents (Atubi, 2010c). Road accidents appear to occur regularly at some flash points such as where there are sharp bends, pot-holes and at bad sections of the highways. At such points over speeding drivers usually find it difficult to control their vehicles especially heavy vehicles, which then result to fatal traffic accidents, especially at night (Atubi, 2009b). Cases of fatal road traffic accidents are reported almost daily on the major highways in Lagos State. Motor vehicle crashes are the leading cause of death in adolescents and young adults (Mohan & Romer 1991; Smith & Barss, 1991; Atubi & Onokala, 2009) and of the estimated 856,000 road deaths occurring annually worldwide, 74% are in developing countries (World Bank, 1990).

Traffic crashes also impact on the economy of developing countries at an estimated cost of 1-2% of a country's GNP per annum, as a result of morbidity, mortality and property – related costs (Fouracre & Jacobs, 1976; Jacbos & Sayer, 1983; WHO, 1989; Jabaan, 1989a & 1990; Downing, 1991). Causes of motor vehicle crashes are multi-factorial and involve the interaction of a number of pre-crash factors that include people (transport workers), vehicles and the road environment (Ajao; 2023, Hyundai; 2012, Haddon, 1980; Robertson, 1992). Human error is estimated to account for between 64 and 95% of all causes of traffic crashes in developing countries (TRL, 1990; Atubi; 2009c, LASTMA; 2018). A high prevalence of unlatched or wrongly latched containers, overloaded petroleum product vehicles, old vehicles that often carry many more people than they are designed to carry, lack of safety belt and helmet use, drunk-driving, extortionist tendencies by enforcement agencies that often lead to driving distraction, poor road design and maintenance, lack of required electro-mechanical maintenance leading to sudden breakdown and obsolescence of vehicle parts, too long hours of driving that leads to fatigue, tiredness/stress and the traffic mix on roads among other factors that contribute to the high rate of crashes in less developed countries (FRSC; 2018, Lagarde; 2014, Ogunsanya; 2003,Ogwude; 2012 & Ukoji; 2014).

A sound policy is a reflection of good governance and effective leadership. In its political application, leadership suggests the ability to influence people towards the achievement of their desired goals (Robbins & Judge; 2007, Ogunsanya; 2003, Chen; 2020). It seems to illustrate a leader's ability to match his objectives with the situation in his environment. Governance is broadly referred to as the exercise of power through a country's economic, social, and political institutions in which institutions represent the organizational rules and routines, formal laws, and informal norms that together shape the incentives of public policy-makers, overseers, and providers of public services (Nwabueze, 2005). Transport policy is an attempt by government to address transport issues by instituting laws, regulations, decisions, or actions that are pertinent to transport problems. As issues arising in different sectors are being addressed resolved in a country's policy so also must transport

issues be addressed and resolved in transport policy. According to Sumaila (2013), transport Policy is the framework for transport regulation and control implying a rule-setting on the part of the government with a view to providing a rational, efficient, comfortable, safe and cost-effective transport system.

Table 1: vehicle crash trends in Nigeria

State	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL
Abia	---	28	12	3	1	5	57	42	5	153
Adamawa	---	---	54	10	39	13	30	12	2	160
Akwa Ibom	3	17	---	3	5	8	26	2	7	91
Anambra	36	22	30	78	98	35	69	96	28	492
Bauchi	23	17	69	24	65	124	88	76	19	505
Bayelsa	1	30	19	4	-	3	3	34	10	104
Benue	19	51	12	66	18	68	40	48	4	326
Borno	---	21	13	45	17	12	18	18	11	155
Cross River	34	21	54	10	10	10	6	26	18	189
Delta	44	82	181	39	184	44	62	112	50	798
Ebonyi	2	3	5	4	5	1	3	21	7	51
Edo	47	88	164	196	11	208	85	210	120	1,129
Ekiti	---	20	11	4	8	8	24	21	11	107
Enugu	---	5	2	40	61	44	27	35	30	244
FCT	48	80	159	120	198	134	87	162	58	1,046
Gombe	20	15	19	24	40	27	5	23	---	173
Imo	26	21	71	33	17	14	20	30	7	239
Jigawa	1	24	23	14	6	10	13	32	37	160
Kaduna	43	186	24	32	28	17	48	50	18	446
Kano	36	16	31	102	49	48	13	50	28	373
Katsina	36	80	8	64	52	121	50	83	10	504
Kebbi	11	---	1	10	36	38		43		149
Kogi	33	70	58	208	172	89	86	64	56	836
Kwara	39	29	34	50	34	21	47	43	22	319
Lagos	*212	*260	*306	*148	*236	*156	*68	*119	*74	*1,579
Nasarawa	4	64	12	29	2	7	10	19	**20**	167
Niger	21	18	40	37	94	70	13	51	48	392
Ogun	82	95	87	105	92	86	227	182	28	984
Ondo	67	81	59	34	148	106	53	20	15	583
Osun	13	88	75	14	9	27	29	28	27	310
Oyo	177	23	41	77	59	114	67	107	5	718
Plateau	4	9	31	33	18	32	10	40	---	177
Rivers	43	97	51	11	5	15	174	30	---	476
Sokoto	8	44	38	12	46	8	28	19	32	235
Taraba	5	9	20	11	5	1	5	6	6	68
Yobe	6	36	38	13	62	88	40	50	78	411
Zamfara	17	52	25	22	24	27	18	37	18	240
TOTAL	1,161	1,802	1,877	1,729	2,004	1,839	1,652	2,061	964	15,090

*Lagos State alone accounted for more than 10.46% of total among 36 States and the FCT.

Source: Yearly breakdown of violent road accident deaths in Nigeria (June 2006–May 2014; Adopted from Ajao, 2023)

Nigeria operates a mono-economy, it derives the greater part of its income from production and sales of crude oil and its various derivatives. Production and distribution of these crude oil derivatives are largely dependent on the use of products' haulage vehicles, except if and when the pipeline and rail modes are made to function as expected. Also, Nigeria is import dependent for the various household and industrial needs. Aside from pre-loading activities within the countries of origin of these household and industrial needs for which the use of heavy goods vehicles is inevitable because of bulky nature of the materials, the received goods at the sea or airports are loaded into heavy goods vehicles to their various destinations for delivery to the warehouses, stores, end users; whether for household, commercial or industrial purposes. As reported by Daily Trend News Report of 26th of June, 2021, the Federal Road Safety Commission (FRSC) impounded 835 articulated vehicles within Lagos State under its operation code-named "Operation Scorpion 1, 2 &3". These vehicles were booked for various offences, ranging from lack of properly latched containers, worn tyres and other mechanical errors. It was similarly reported that in 2018, as much as #39m was lost to articulated vehicle crashes with 650 trucks and tankers being involved in various road crashes in Nigeria in 2018, 90% of which were already used for more than 30 years in road haulaging. On June 18th, 2018, a plywood-laden container fell off a truck while ascending the Ojuelegba bridge in Surulere, Lagos. Three commercial vehicles were crushed and a car

belonging to a government institution. Three people were confirmed dead while three others were seriously injured.

Statement of the Problem

Ownership and operation of any transport system is meant to help ease human activities, but not to be seen as death trap and environmental poison for the same people and their environmental habitats. Unfortunately, the rate of vehicular crashes resulting from heavy goods vehicles in Nigeria, Lagos State specifically, has become so endemic that should not be taken with levity. Therefore, the government and people of Nigeria are deeply concerned about the continuing high rate of road accidents and the unnecessary consequential waste of lives and properties. What is worrisome is the fact that road traffic crashes and mortality rates are still high despite various remedial measures taken in recent years to combat the problem. This clearly suggests there are things that we are yet to get right; government policy, infrastructural provision/management and vehicle operators' occupational attitude. This forms the basis to provide a critical review of current road infrastructure, safety management approaches and operators' training, education and constant enlightenment in Nigeria with a view to identifying their defects, deficiencies, and limitations in tackling the road traffic accident problems in the country. On the basis of this, the work focused on investigating how relevant would the government policy and transport workers involvement affect the heavy vehicle crashes in Lagos State? However, due

only a few study in this direction, the objective of this study includes to determining:

1. The relationship between the government policy and heavy vehicles' road crashes in Lagos State.
2. The nature of roads that relate with heavy goods vehicles' road crashes in Lagos State.
3. How the driver/vehicle behaviours would relate with heavy goods vehicles' crashes in Lagos State.

Review of Literature

The review of literature for this study was adapted from the conceptual work of Dart and McKenzie (1982) titled "Epidemiological Model of Road Accidents", which was influenced by the earlier work of Hobbs (1979) who studied and arrived at "Accident Causation Model" according to Badejo (2011). This model is mainly centered on a correlational diagrammatic relationship of agent/vehicle, accident, environmental/physical factors, host/person factor as shown in Figure 1:
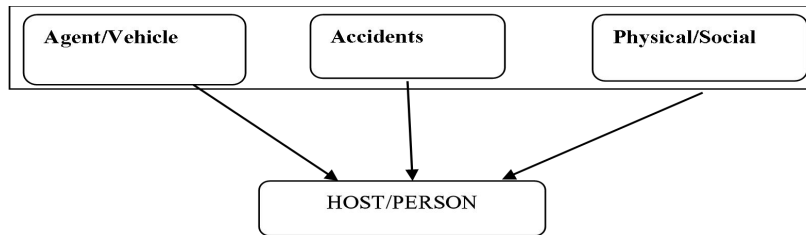
Figure One: Epidemiological Accident Model:
Source: Adapted from Badejo (2011)

This model suggests that traffic crash has multiple causal factors. Aside from nature of roads that are available for use, the defensive tactics of driving and awareness of possibility of mostly, human and machine errors, unannounced occurrence of natural phenomenon and the need to think towards the effective ways and techniques to minimize road crashes, road accidents are as diverse in causal factors that can largely be controlled just as their consequences are unpredictable. *Lagos State alone accounted for more than 10.46% of total among 36 States and the FCT.

From the Model, agent/vehicle refer to the makers of the vehicle, the dealership and the eventual users.

Makes of vehicles from design to build-up do not necessarily know the behavioural attitude of the eventual vehicle drivers, neither are they concerned about the type of environments where the vehicles will be driven. Dealers who are in between the makers and the users may relatively be known on business ground, but seldom on deep behavioural standpoints. Agent represents the vehicle, "object of the accident". Environment on the other hand represents the totality of physical and social realities that influence the occurrence of road crashes in their various ways. Therefore, the Epidemiological Model of Accidents should a useful tool when seeking an approach towards identifying factors that

are responsible for road crashes through the investigation of its various frameworks, isolating each causal factor initially as a stand-alone entity, bringing up the summation of each causal factor in identifying role played and arriving at the effects of interaction of those identified factors to the degree and extent of road crashes, with a view to understanding and being aware of the best remedial approach to reduce road crashes to the barest minimum Badejo (2011).

Figure 2: A Scene of HGV/Car Accident: Source: Adopted from Ajao (2023)

Methodology

This study employed the descriptive survey research design. According to Uzoagulu (2011), survey research used to collect, organize and analyze data, describing them as they are in their natural setting with focus on people, their opinions, attitudes, motivation and behaviour. The choice of this design was to allow for collection of requisite data for the study from transport workers and policy makers. The transport workers used in this study included operators of both privately owned and public utility mini-buses, medium-sized buses/mini trucks, heavy goods vehicles; which included high-capacity buses, trucks, petroleum tankers. These workers included the drivers, the union leaders, managers of operation and administration of transport and haulage trailers as respondents. Further, policy makers included civil servants in related agencies, enforcement agencies and members of professional associations in transport and logistics in Lagos State. For this study, 23 question items on "relevance of government policy and transport workers involvement in heavy vehicles' crash reduction in Lagos State" were developed in a structured form. A, B and C. Section A contained a letter of introductions to the respondents, section B contained personal data of respondents while section C comprised items on (1) policy issues, (2) infrastructural issues and (3) operational behaviours. The question items were structured and each item of question was assigned a five – point Likert's scale of strongly agreed, (5) agreed (4),

indifferent (3), disagreed (2) and strongly disagreed (1). A target sample of 69 was taken from the 683 available respondents through the Yaro – Yamane formula. Reliability test of the instruments using SPSS gave 0,78, making this figure suitable for use in this study. The validation of the instrument was carried out by academic experts in transport, logistics and related subjects. All the copies of the questionnaire delivered to the respondents, 69 copies by two research assistants were retrieved, giving a 100% return rate. Data for this study were collated, analyzed and presented with the use of mean statistics and standard deviation to answer the research questions. Items that rated from 3.0 and above were taken as minimum acceptance for positive responses figure, while any item that rated below 3.0 were rejected.

Result and Discussion

Questions One: Is there any relationship between government policy and heavy vehicles' road crashes in Lagos State?

Table 2: the relationship between the government policy and heavy vehicles' road crashes in Lagos State

S/N	Relationship between government policy and heavy vehicles' road crashes in Lagos	Policy Makers		Transport Workers	
		Mean	SD	Mean	SD
1.	There is consistent transport Policy to guide its practice	1.80	0.96	2.34	1.25
2.	Motoring routes in Nigeria enjoy good road network	2.25	1.13	2.71	1.37
3.	Process of acquiring driver's license is strict and ethical	2.75	1.34	3.76	1.62
4.	Rate of professional practice in transport in Nigeria is encouraging	2.53	1.23	3.56	1.86
5.	Transport infrastructure in Nigeria is over-used and ill-maintained	3.65	1.85	4.18	0.62
6.	Direct government's financing of transport business is sustainable	2.35	1.15	3.54	1.89
7.	Professionals are scarcely engaged in transport policy decisions	4.24	0.67	2.78	1.32
8.	A concerted national policy practice enhances safety and efficiency	3.87	0.82	3.46	0.85
9.	Enforcement of traffic rules is not fully professionalized	3.78	1.71	3.43	1.74
10.	There is need for modern traffic management strategies	4.56	0.96	3.26	1.87
	Grand Total	**3.18**	**1.13**	**3.30**	**1.44**

Source: Researchers Fieldwork (2024)

Table 2 above revealed that at the mean score rating above 3.00, the policy makers agreed to the items 5, 7, 8, 9 and 10 while the transport workers agreed to the item statement of 3, 4, 5, 6, 8, 9 and 10. However, at the mean score rating below 3.00, it was revealed that the policy makers disagreed with the item statement 2, 3, 4 and 6 while the transport workers disagreed with item statement 1, 2 and 7. Additionally, the policy makers have the grand mean score of 3.18 with the corresponding transporter workers having 3.30 above the cut- off mean value 3.00 and the

standard deviation of 1.13 and 1.44 respectively.

The implication of this revelation is that there are unresolved policy issues as far as road crashes of HGVs are concerned in Lagos State

Question Two: To what extent will nature of roads relate with heavy goods vehicles' road crashes in Lagos State?

Table 3: the extent to which the nature of roads relate with heavy goods vehicles' road crashes in Lagos State

S/N	Extent of the nature of roads relating with heavy goods vehicles' road crashes in Lagos	Policy Makers		Transport Workers	
		Mean	SD	Mean	SD
1.	The width of a road enhances safety	4.18	0.81	3.56	1.67
2.	Quality of material used and workmanship effect road safety	4.34	0.65	3.89	1.72
3.	Heavy goods vehicles require purpose-built roads	3.79	1.34	4.21	0.67
4.	Frequency and quality of road maintenance reduce road crashes	4.54	0.53	4.23	0.54
5.	Overloading of HGVs puts damaging pressure on roads	3.93	1.32	2.34	1.45
6.	Road construction should consider type and number of vehicles plying it	3.68	1.21	3.05	1.54
	Grand Total	**4.08**	**0.98**	**3.55**	**1.27**

Source: Researchers Fieldwork (2024)

Table 3 at the mean score rating above 3.00 revealed that the policy makers agreed to all the item statements 1 to 6 while the transport workers only agreed with the item statement 1, 2, 3, 4 and 6 but the transport workers only disagreed with the item statement 5. However, the grand mean score for the policy makers was 4.08 and for transport workers was 3.55 above the cut off mean of 3.00 with the standard deviation of 0.98 and 1.27 respectively. This revelation implies that appropriateness of both quality and quantity of transport infrastructure cannot be compromised only and when it is agreed that crash rates are astronomically too high, and needs to be brought down by providing the right infrastructure. It also revealed in item (5) the attitude of an average transport operator to loading and overloading.

Question Three: How much will driver/vehicle behaviours relate with heavy goods vehicles' crashes in Lagos State?

Table 4: how much the driver/vehicle behaviours relate with heavy goods vehicles' crashes in Lagos State

S/N	Driver/ vehicle behaviours relate with heavy goods vehicles' crashes in Lagos	Policy Makers		Transport Workers	
		Mean	SD	Mean	SD
1.	Driver's competence improves defensive driving	3.82	1.44	3.43	1.23
2.	Drinking alcohol during driving can activate road crash	3.56	1.54	2.65	1.85
3.	Long hours of continuous driving without rest is unethical	4.54	0.43	3.43	1.20
4.	Drivers require up to date medical Checkup	4.21	0.48	4.12	0.53
5.	Feeding well at the right time is important for	3.87	1.57	3.95	1.34

	career drivers				
6.	Career drivers need constant safety enlightenment and training	4.13	0.51	3.73	1.62
7.	Vehicle maintenance reduces road crash and running cost	4.21	0.49	4.54	0.43
	Grand Total	**4.05**	**0.92**	**3.69**	**1.17**

Source: Researchers Fieldwork (2024)

Table 4 at the mean score rating above 3.00 revealed that the policy makers agreed to all the item statement 1 to 7 while the transporter workers only agreed with the item statement 1, 3, 4, 5, 6 and 7, but the transporter workers only disagreed with the item statement 2. However, the grand mean score for the policy makers was 4.05 and for transporter worker was 3.69 above the cut off mean of 3.00 with the standard deviation of 0.92 and 1.17 respectively. Again, transport operators showed in item (2) that the campaign against drunk-driving has been in a right direction, but the main culprits may not feel the link and necessity between vehicle crashes and drunk-driving.

Discussion of the Findings

The result of the findings revealed that there was inconsistent transport policy to guide its practice in Nigeria; motoring routes in Nigeria did not enjoy good road network and process of acquiring driver's license is strict and less ethical (Ogunsanya; 2003, Ukoji; 2014). Rate of professional practice in transport in Nigeria is partly encouraging; transport infrastructure in Nigeria is over-used and ill-maintained and direct government's financing of transport business is sustainable {Badejo; 2011, Chen; 2020). Professionals are scarcely engaged in transport policy decisions in Nigeria; a concerted national policy will enhance practice towards safety and efficiency; enforcement of traffic rules is not fully professionalized in Nigeria and there is need for modern traffic management strategies (Ajao; 2023, Ogwude; 2012, FRSC; 2018).

Additionally, the width of a road enhances safety; quality of material used and Workmanship reflect on road safety; heavy goods vehicles require purpose-built roads; frequency and quality of road maintenance reduce road crashes. Overloading of heavy goods vehicles (HGV) puts damaging pressure on roads and road construction should consider type and population of vehicles to ply it (NBS; 2020, LASTMA; 2018, Sumaila; 2013). Conclusively, driver's competence improves defensive driving; drinking alcohol during driving can activate road crash; long hours of continuous driving without needed rest is unethical and drivers require up to date medical Checkup (FRSC; 2020, Ajao; 2023, Ukoji; 2014, World Bank; 1990). Feeding well with right food and at the right time is important for career drivers; career drivers need constant safety enlightenment and training and vehicle maintenance compliance reduces road crash and running cost.

Conclusion and Recommendations

This study has concluded having found out some of the recurrent issues resulting in HGVs road crashes in Lagos State as follows:

i. There is policy deficit that makes safety-conformed road use by HGV drivers a scarce practice, making the for a concerted Nation Policy on Transport inevitable.
ii. Issues relating to provision of transport infrastructure provision, maintenance and traffic management need to be taken more seriously, while abuses are also eradicated for safe road use
iii. Behaviours of HGVs operators need to be checked before and during driving, loading limits conformed with and proper latching of attachments are properly done.

Based on the findings of the study, the following recommendations were made for safe road use and socio-economic development through the use and practice of transportation in road and other modal systems as well:

1. Every government in power should make it a must to produce and allow to function, a robust and articulate National Policy on Transport that will guide the practice in transportation in all its ramifications
2. There is the need to massively invest in transport infrastructure, rejig management and enforcement aspects as well as paying attention to operators occupational training, enlightenment and behavioural accuracy before and during driving.
3. Government should de-emphasize its business investment in acquisition of vehicles and fully concentrate on its regulatory, management and enforcement functions to avoid mixed-up interests.
4. Institutions responsible for transport education should be well funded, equipped and professionally staffed.

Transport education should be made compulsory from secondary school level in Nigeria to create early road safety awareness.

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