



# AN ASSESSMENT OF ROAD TRANSPORT SAFETY STANDARDIZATION SCHEME INFLUENCE ON FREIGHT TRANSPORT CRASHES IN LAGOS METROPOLIS, NIGERIA

<sup>1</sup>H.O. Adebayo, <sup>1</sup>C.O. Akanni, <sup>2</sup>M.O. Solanke, <sup>2</sup>B.A. Raji. and <sup>2</sup>K. Olaleye

<sup>1</sup>Department of Geography, Faculty of Social Sciences, Olabisi Onabanjo University, Ago-Iwoye, Ogun State.

<sup>2</sup>Department of Transport Management, Faculty of Administration and Management Sciences, Olabisi Onabanjo University, Ago-Iwoye, Ogun State.

Email: [adebayo.oluwasegun@oouagoiwoye.edu.ng](mailto:adebayo.oluwasegun@oouagoiwoye.edu.ng)

## Abstract

This study seeks to assess the influence of road transport safety standardization scheme (RTSSS) on freight transport crashes in Lagos Metropolis of Nigeria. The data used for this work was acquired through primary and secondary sources. The primary source was through administration of one hundred and forty (140) questionnaires to freight transport operators, drivers and Federal Road Safety Commission (FRSC) staff. The study makes use of the Stratified Sampling technique method. Data from the Federal road safety publications on accidents (1960 -2013), the Federal Office of Statistics publication, the Lagos State Motor Vehicle Administration Agency, Lagos Bureau of Statistics (MEPB) and the Lagos State Traffic Management Authority (LASTMA) formed the secondary data used for the study. The data was processed and analyzed using both descriptive and inferential statistical techniques. The study revealed there is a significant awareness of the scheme among the operators and drivers of freight transport in the study area with a low level of patronage and compliance. It further shows that freight transport accident is still on the increase even after the introduction of the scheme. It is recommended that there should be more awareness and wide publicity of the scheme in Lagos and Nigeria at large. All agencies that are set-up for the implementation of the scheme should be more determine and committed to the realization of the objectives of the scheme.

**Keywords:** Freight transportation, Operators, Drivers, Road Safety Scheme, Lagos State

## Introduction

Road freight vehicle movements clearly play an important role in the functioning of towns and cities, distributing goods to numerous locations that are vital to urban life. As noted by Agyemang et al., (2016), not only does freight vehicle facilitate the smooth transportation of goods and services from source(s) to respective destination(s), but also serve as a huge source of employment which is a critical economic indicator to development. The trucking industry serves the Nigerian economy by transporting large quantities of raw materials, works in process, and finished goods over land—typically from manufacturing plants to retail distribution centers. Trucks in Nigeria are responsible for the majority of freight movement over land, and are tools in the manufacturing, transportation, and

warehousing industries. As observed by Badejo, (1997), the road-based freight vehicles have monopolized the movement of cargo over space in Nigeria, because no other mode of transport offers strong competitions with the road transport, and especially in terms of swift delivery of cargo and provision of door to door services. In delivering these services, heavy- goods vehicles are used in the movement of cargos which include the general cargo, the containerized and the wet cargos. Heavy-goods vehicle are Motor Vehicles (Articulated or Non-Articulated) other than cars including tippers, tractors-trailers, tankers, Lorries, luxury buses, etc. FRSC (RTSSC), (2010). There is a significant growth in heavy vehicle transportation across the road network not only in high-income countries but also in many developing and newly industrialized countries as a consequence of the rapid, export oriented

economic growth. China for example, is observing an annual increase of 466,000 heavy vehicles on their roads (Stevenson et al, 2010). In Nigeria, the economy is import oriented and the contributions of the freight transport vehicles to the national economy in distributing the imported goods is huge, the FRSC reported that Nigeria has an average of approximately 5,000 tankers involved in wet cargo haulage, moving about 150 million litres of fuel, and 2,500 trailers in dry cargo plying Nigeria's roads daily (Olagunju, 2010). Agyemang *et al.*, (2016) observed that the transport sector has been plagued with quite a number of traffic crashes; already the contribution of Freight (heavy) vehicle crashes to road-related deaths is substantial. In Australia for example, heavy vehicle crashes are responsible for as much as 20% of the total road-related deaths, whilst in the United States, approximately 15% of road related fatal crashes involve heavy vehicles. In Nigeria, between 2007 and June 2010, a total of 4,017 tanker/trailer crashes were recorded on Nigerian roads, with a yearly average of 1,148 crashes, monthly average of 96 crashes, and a total of 4,076 persons killed and 12,994 persons were injured in such crashes involving tankers and trailers (Olagunju, 2010). The situation as it concerns freight transport vehicle crashes is not encouraging in Nigeria especially in the Lagos metropolis where the busiest port is located. The menace of falling freight containers causing injuries, deaths and gridlocks to road users is becoming rampant, and the spate increase in these forms of road traffic accidents has therefore become a worrying and growing concern to most residents of the metropolis in recent times. In view of this, the Federal Government mandated the Federal Road Safety Commission (FRSC) to establish Minimum Safety Requirements for heavy good vehicles, which is aimed at abating potential risks on the highway and this lead to the creation of Road Transport Safety Standardization Scheme (RTSSS) by law in the National Road Traffic Regulations (NRTR) (2004) Section 115 made pursuant to Sections 5 and 10 (10) of the FRSC (Establishment) Act 2007 for the establishment of safety units by all transport operators so as to bring professionalism into the industry, promote and develop rapid safe, efficient and convenient fleet transportation system in the country. To this end, the aim of this research paper is to examine the relationship between the road transport safety standardization scheme (RTSSS) and freight transport crashes before and after the introduction of the scheme using Lagos Metropolis as an example. Among the specific objectives of this

study are to: 1) determine the rate of freight vehicle crashes before and after the introduction of the scheme, 2) examine the rate of compliance to the scheme by the freight transport operators, 3) assess the effectiveness of the enforcement method used for the scheme. The study further recommends solutions to the identified problems inhibiting the effectiveness of the policy in Lagos State and Nigeria at large.

## Review of Literature

Despite the vital services freight vehicles provide, they are perceived as menaces on the road by many. Steady increases in highway traffic have exacerbated long standing freight vehicle safety problems. (Office of Technology Assessment (OTA), 1987). Government and safety experts have long sought ways to achieve a responsible balance between ensuring road traffic safety of the freight vehicles and facilitating the flow of commerce, to this end, The federal road safety corps has the mandate of entrenching safety standards in the Operational activities of Fleet Operators in Nigeria with a view to sanitizing the Nigerian roads which has been characterized by uncoordinated and unprofessional practitioners. The driving engine room for this program is the Road Transport Safety Standardization Scheme (RTSSS) activities as provided in the FRSC (Establishment) Act 2007, pursuant to Section 198 captured in the new National Road Traffic Regulations (NRTR) (2012). The Scheme was formally launched on 11/09/07 and the office was established in 2009 with set up strategies of achieving the task through collaborative Stakeholders' forum in the effective supervision of Drivers' Safety Standards, Vehicle Safety Standards and Operator's Safety. The transport industry is regulated to help minimise the adverse impact of heavy vehicles on road safety, the environment and road infrastructure. An additional objective is to ensure fair competition across the industry and, through enforcement and monitoring activities, prevent less scrupulous operators from gaining a competitive advantage through non-compliance. To achieve these objectives regulation and enforcement in road transport has focused on vehicle registration, driver licensing, speed, driver behaviour, fatigue, drug and alcohol use, vehicle roadworthiness, vehicle standards and operational characteristics. (Baas and Taramoeroa, 2008). According to Wegman, (2016), the most common measure used to define road safety is the number of road crashes and/or the number of casualties and the associated negative

consequences resulting from such crashes. Balogun (2006), describe Safety as being used widely in the context of protection from personal harm. It can be described as an experience of personal security, freedom from danger and situations that can cause harm, injury or health-related problems it is a protection against injury and traumatic issues. Regha (2010) observed that safety is a conscious precaution which is taken against any danger that has been pre-determined to occur. The precaution is deliberately done and not an accidental precaution against danger. Dammen (2010) observed that motor carrier safety starts with the firm. While government safety regulations attempt to ensure a minimum level of highway safety in the form of highway laws and enforcement, provision of infrastructure and motor carrier safety inspections—ultimately, most trucking safety investment decisions are made at the firm level. Government safety regulations attempt to discourage or promote certain firm behavior. Lave (1968) focused on the role of government in providing transportation safety. Asserting, “We cannot be too safe,” he goes on to make the case that safety is a scarce resource (p. 512). He indirectly questions whether there was too much safety provided in the regulated transportation industries, because train, bus, and air passenger-fatality rates were all significantly lower than private automobile passenger-fatality rates. According to (Starrs and Moore 2003), in Australia, accreditation is a formal means of recognizing operators who have good safety and other (e.g. mass) management systems in place. Those systems need to be properly documented and audited by third parties to verify that the systems have been implemented and are used on a routine basis. (Wegman, 2013), observed that risks in road traffic are considerably higher than in other transport modes, and the amount of injuries in road traffic is far higher than the numbers in trains, planes or ferries. Although crashes in these other modes attract a lot of public and media attention, road crashes kill far more people, but in a diluted way, resulting in only limited media coverage and relatively limited attention from the public and politicians. While trucks experience fewer crashes per mile than passenger cars, the majority of all fatally injured persons involved in truck-related crashes were occupants of passenger cars (Scheinberg 1999). According to Fructus, 1987, accidents usually result from a chain of events, often initiated by a single occurrence, and complicated by a number of interacting factors. The potential for an accident is partially a function of the characteristics

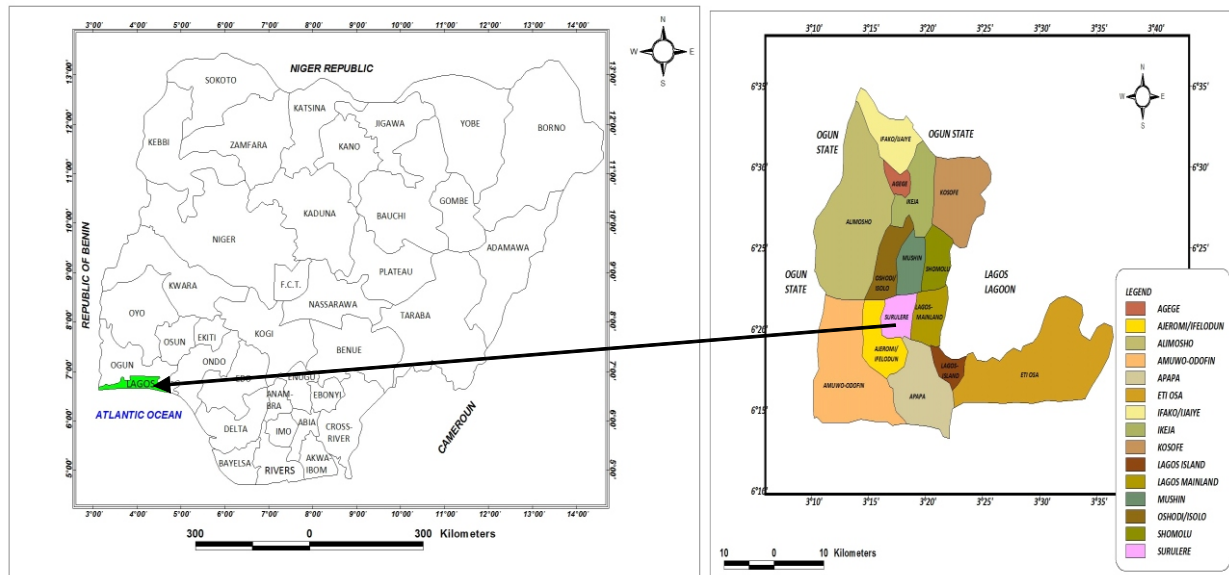
of the driver, including experience, training, age, attitude, physical condition (fatigue, intoxication, other debilitations), and psychological state. Other factors include the condition of the vehicle, highway design, and roadway characteristics; regulatory oversight, such as licensing and traffic enforcement; and the type of management supervision exercised by the carrier. Raftery, *et al.*, (2011), in their studies found that the most common factors involved in Freight vehicle crashes are speed, the mechanical condition of the vehicle (particularly brakes), and the characteristics of the load being carried (including overloading). Khattak *et al.*, (2003) used the highway safety information system data from North Carolina USA for the years (1996–1998) to examine the injury severity of single trucks crashes, the authors found that dangerous driving behaviors such as drugs and alcohol use, speeding and not wearing seatbelts increases the injury severity. Most safety studies come to the conclusion that vehicle operator or driver factors (or human error) are the main cause of accidents as observed by Agbonkhese, *et al.*, (2013).

## Materials and Methods

### Study Area

Lagos State is in the Western part of Nigeria and lies approximately on longitude 3° 24' E and latitude 6° 27' N. It covers an area of 3,577 Sq. km (Figure. 1) with coastal deposits of tertiary beds from the Benin Formation stretch from Calabar in the Far East through the state to the borders of Benin Republic in the west. Topographically, Lagos state lies entirely within the coastal plain which is characterized by sand bars, lagoons and creeks. In the Köppen climate classification system, Lagos has a tropical wet and dry climate (Aw) that borders on a tropical monsoon climate (Am) and experiences two rainy seasons, with the heaviest fall between April and July. There is a brief relatively dry spell in August and September and a longer dry season from December to March. Two main vegetation types are identifiable in Lagos State: Swamp Forest of the coastal belt and dry lowland rain forest. Lagos has one of the largest and most extensive road networks in West Africa. It also has suburban trains and some ferry services. The metropolitan Lagos extends over sixteen (16) of the twenty (20) Local Government Areas of Lagos State and contains 88% of the population of Lagos State. The actual population was disputed between the official Nigerian Census of 2006 of about 8 million and a much higher figure at approximately 16 million claimed by the Lagos State Government.





**Figure 1: Maps showing the Study Area**  
*Source: Lagos State Ministry of Lands and Survey, 2016.*

As at 2015, estimated unofficial figures put the population of Lagos and its surrounding metro area, extending as far as into Ogun State, at approximately 21 million [Lagos State government, 2011]

### Data Collection

The data used for this work was collected through primary and secondary sources. The primary data was sourced through questionnaire and personal interview. Three set of questionnaires and interview guide were employed. The questionnaires contained combination of closed and open-ended questions. The open-ended questions permitted respondents to give detailed answers in cases where their experiences could not be articulated into few options. The close-ended questions contain dichotomous questions for the freight transport drivers, since they are not well educated while the others contain the agree-disagree questions for both the operators and road safety personnel. Questionnaires addressed to the operators consisted of questions that covered the tenets of the road transport safety standardization scheme and to examine how well they have complied and if the scheme has achieved the stated objectives. The freight transport vehicle driver questionnaires were designed to reveal what the operators are actually doing as compared to what they revealed. The road safety commission questionnaires were designed to obtain information as to the effectiveness of the road transport safety standardization scheme

in the study area. The population for this study comprises of freight operators, freight transport drivers, and the officials of the Federal road safety commission (FRSC). The total population of freight transport companies in the study area was drawn from the Haulage and Logistics magazine issue 45. of 2016, with a population of 140 freight transport companies, using Cochran (1977) sample size calculator at 5% error margin, and at 95% confidence level, the required respondent was 104, at 80% estimated response rate, 140 respondents were invited from the data pool in order to achieve the required sample size. The sample size of one hundred and four(104) freight transport companies was divided into two groups of operators and drivers and a sampling fraction of  $\frac{1}{2}$  (52 each ) was used in order to randomly sample fifty-two (52) operators and fifty-two (52) drivers while the remaining thirty-six (36) were administered among the Federal Road Safety Personnel. The study makes use of the Stratified Sampling technique to ensure that different groups of this population are adequately represented in the sample. The secondary data were acquired from the Federal road safety publications from 2006 - 2015, the Federal ministry of statistics publication, the Lagos state Motor Vehicle Administration Agency , Lagos Bureau of Statistics (MEPB) and data from the Lagos State Traffic Management Authority (LASTMA). Accident data as regards freight transport vehicles prior to and after the launching of the road transport safety standardization

scheme, the number of freight transport companies that have registered for the scheme was sourced from the Federal road safety commission.(FRSC).

### Data Analysis

Generally, the data for this study was processed and analyzed using both inferential and descriptive statistical techniques, which involved the use of simple percentage distribution and tables.

### Results and Discussion

#### Rate of Freight Vehicle Crashes before and after the Introduction of Road Transport Safety Standardization Scheme in 2007

Table 1 shows rate of freight vehicle crashes before and after the launching of road transport safety standardization scheme (RTSSS) in the study area. The table shows that freight transport crashes in the study area are still on the high side both prior and after the establishment of the scheme in the study area. A very high (412) freight transport accidents was recorded in year 2012, the very year the scheme was established. The least incidence of freight transport was found to be in year 2006 (175) and year 2015 (149) respectively. This shows that the scheme is

yet to record a positive impact on the freight transport prior to and after its introduction in the study.

#### Rate of Compliance to the Scheme by the Freight Transport Operators and Drivers in the study area.

##### (a) Freight Transport Drivers

Table 2 present the freight transport drivers' view about road transport standardization scheme compliance in the study area. Almost, (40.4%) of the drivers in the study area are aware of the scheme while (59.6%) are not aware. A good number of companies (48.1%) had registered for the scheme while (51.9%) have not. Majority of the company (75%) are into dry cargo haulage and (25%) indicated wet cargo haulage. Many of the drivers (65.4%) sampled, are of the opinion that the road transport safety standardization scheme is good enough to reduce trailer accidents while (34.6%) said the scheme is not good enough to reduce trailer accident but a large number of drivers (66.1%) agreed that if the drivers obey the rules highlighted in the scheme, road freight will reduce significantly. The analysis above shows that there is strong awareness of scheme among the freight transport drivers in the study area.

**Table 1.** Freight Vehicle Crashes before 2007 and from 2007 to 2015

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2006	0	0	0	0	0	0	22	32	17	29	43	32	175
2007	0	0	0	0	27	20	31	27	27	34	41	13	220
2008	23	25	22	23	20	26	28	33	30	15	46	22	313
2009	28	18	14	28	33	41	34	34	33	28	23	46	360
2010	29	24	31	33	33	26	41	28	31	32	20	39	367
2011	19	17	22	41	27	26	44	33	36	33	28	25	351
2012	18	29	37	33	42	33	45	38	39	31	45	22	412
2013	24	33	30	21	28	43	35	34	21	24	25	26	344
2014	33	41	36	25	27	30	27	30	62	18	25	20	374
2015	18	19	22	24	24	26	16	0	0	0	0	0	149

Source: Documents obtained from FRSC/NPF (2017)

**Table 2** Opinion of the drivers about road transport safety standardization scheme compliance

Opinion of the driver	Frequency	Percentage
Have you heard about road transport safety standardization scheme		
Yes	21	40.4
No	31	59.6
Has your company registered for the scheme		
Yes	25	48.1
No	27	51.9
What type of cargo do you haul		
Dry	39	75
Wet	13	25
Have you ever been involved in an accident		
Yes	28	53.8
No	24	46.2
Have you ever been involved in a n accident before 2010		
Yes	19	36.5
No	33	63.5
Have you involved in an accident after 2010		
Yes	32	61.5
No	20	38.5
Has your company sent you to driving refresher course		
Yes	17	32.7
No	35	67.3
Road safety scheme is good enough to reduce trailer accident		
Yes	34	65.4
No	18	34.6
Accident of trailer have reduced because of road safety standardization scheme		
Yes	22	42.3
No	30	57.7

Source: Authors Field Work, 2017

### (b) Freight Transport Operators

Tables 3a&b shows the road freight operators opinion on road transport safety standardization scheme compliance in the study area. Almost all the operators of freight transport 67.3% sampled in the study area are aware of the scheme while 32.7% are not aware. About 53.8% of the operators are registered with RTSSS while 46.2% are yet to register. Going by the FRSCN classification of haulage companies, few of the companies 57.7% in the study area are categorized under group C (i.e. less than 25 vehicles) while others 42.3% are under group B (between 25 and 99 vehicles). More than half of the operators 56.9% usually carry out maintenance services on vehicles. Many of the operators 71.2% operate the safety standardization scheme policy in

their company while others account for 28.8%. Majority of the operators 59.6% use to organize drivers' training courses regularly in curbing freight transport accidents in the study area.. A significant number of operators sampled in the study area 94.2% strongly agreed that the main objective of the road safety standardization scheme is to curb road transport accident. More so, 76.9% of the operators strongly agreed that the rate of freight transport accidents prior to the launch of the scheme was very high with 19.2% of them agreed that the scheme has drastically reduced the rate of freight transport accident while 2.0% strongly disagreed. In summary, there is a strong awareness of the scheme among the freight transport operators in the study area.

**Table .3a** Opinions of the road freight transport operators about freight transport safety standardization scheme

Opinion of the road freight transport operators	Frequency	Percentage%
Type of cargo		
Wet	20	38.5
Dry	32	61.5
Have you heard about Road Transport safety standardization scheme		
Yes	35	67.3
No	17	32.7
Have you been registered for the scheme		
Yes	28	53.8
No	24	46.2
How many vehicle do you have in your fleet		
1-5	3	5.8
11-20	27	51.9
21-30	22	42.3
Do you have maintenance record on vehicle, driver and road traffic accident in your company		
Yes	31	59.6
No	21	40.4
Do you have safety policy in your organization		
Yes	37	71.2
No	15	28.8
Do you organize driving course for the driver		
Yes	31	59.6
No	21	40.4
Do you forward records on drivers, vehicle and accident to agencies		
Yes	15	28.8
No	37	71.2

Source: Authors Field Work, 2017

#### Effectiveness of the enforcement method used for the scheme in the study area

The table 4 shows the view of Federal Road Safety Commission officers in the study area on the effectiveness of road transport standardization scheme. Majority of the officers sampled (75%) strongly agreed that the scheme is the best policy that can mitigate the rate of freight transport accidents in the study area with 72.2% confirming that the scheme has reduced the rate of freight transport accidents in the study area. The table further revealed that a large number of freight transport operators in the study area are already captured (86.1%) in the FRSC data base and 80.6% of the officers agreed that fractional part of the operators in the study area registered for the scheme with an appreciable number

of operators 35.9% being monitored by the commission. More than half of the officers interviewed (56.4%) agreed that freight transport operators do comply with the scheme rules and regulations through enforcement (97.2 %) and this method is of International standard (72.2%). Almost all the officers sampled (100%) agreed that the commission has made enough awareness of the scheme to all freight transport operators in the study area. About 47.2% of the officers interviewed are of the view that no freight transport operator's certificate has been revoked since the inception of the scheme in the study area. This shows that there is a significant level of compliance to and effectiveness of the method of enforcement of the scheme in the study area.

**Table. 3b.** The impact of the scheme (RTSSS) on curbing freight transport crashes

Road transport safety standardization scheme is to curb transport accident	Frequency	Percentage
Strongly agreed	49	94.2
Agreed	3	5.8
The rate of freight transport accident prior to the launch of the scheme was high		
Strongly agreed	40	76.9
Agreed	3	5.8
Disagreed	5	9.6
Strongly disagreed	4	7.7
The scheme has reduced the rate of freight transport accident		
Strongly agreed	31	59.6
Agreed	10	19.2
Disagreed	10	19.2
Strongly disagreed	1	2.0
Rate of freight transport accident remain the same after the launch of the scheme		
Disagreed	22	42.3
Strongly disagreed	30	57.7
Majority of the freight transport operators in lagos state have registered for the scheme		
Strongly agreed	7	13.4
Agreed	1	2.0
Disagreed	16	30.8
Strongly disagreed	28	53.8
The registered operator are complying with the tenet of the scheme		
Agreed	9	17.3
Disagreed	27	51.9
Strongly disagreed	16	30.8
Registration for the scheme is just to get certified by the commission		
Strongly agreed	12	23.1
Agreed	17	32.7
Disagreed	11	21.2
Strongly disagreed	12	23.0
The scheme has positive impact on the freight transport accident		
Strongly agreed	2	3.8
Agreed	13	25.0
Disagreed	12	23.1
Strongly disagreed	25	48.1
The scheme has negative impact on the freight business		
Strongly agreed	18	34.6
Agreed	17	32.7
Disagreed	13	25.0
Strongly disagreed	4	7.7
Method employed to enforce the scheme is adequate for accident reduction		
Agreed	45	86.5
Disagreed	6	11.5
Strongly disagreed	1	2.0
Fine is the best method to correct the non-conformist operator		
Strongly agreed	21	40.4
Agreed	13	25.0
Disagreed	9	17.3
Strongly disagreed	9	17.3
The method of enforcement does not meet up with international practice		
Strongly agreed	14	27.0
Agreed	32	61.5
Disagreed	6	11.5
The standard checklist in the scheme is strong enough to mitigate the cause of accident		
Strongly agreed	25	48.1
Agreed	15	28.8
Disagreed	12	23.1
The content of the scheme is not strong enough to impacted positively on freight accident causation and reduction		
Strongly agreed	28	53.8
Agreed	24	46.2

Source: Authors Field Work, 2017.



**Table 4.** Federal Road Safety Commission view on the effectiveness of road transport standardization scheme in the study area.

Items	Frequency	Percentage
Road transport safety standardization scheme is the best policy		
Strongly agreed	27	75
Agreed	9	25
Scheme is not popular in Lagos since it seek to interpret the existing road traffic rules		
Disagreed	21	58.3
Strongly disagreed	15	41.7
Rate of freight transport accident in Lagos is high before the introduction of the safety standardization scheme		
Strongly agreed	4	11.1
Agreed	31	86.1
Disagreed	1	2.8
Accident has drastically reduced through emergence of the scheme		
Strongly agreed	26	72.2
Agreed	10	27.8
FRSC Captured all freight operator in Lagos in the data base		
Agreed	31	86.1
Strongly disagreed	5	13.9
All freight operators have registered for the scheme		
Agreed	5	13.9
Strongly agreed	23	63.9
strongly disagreed	8	22.2
Fractional part of operator registered for the scheme		
strongly agreed	7	19.4
Agreed	29	80.6
All registered operators are monitored by the commission		
Strongly agreed	14	38.9
Agreed	12	33.3
Disagreed	10	27.8
Safety audit are conducted on certified operator		
Strongly agreed	15	41.7
Agreed	20	55.6
Strongly disagreed	1	2.7
All the registered operators are complying with the tenets of the scheme		
Agreed	22	61.1
Disagreed	12	33.3
strongly disagreed	2	5.6
despite the scheme the rate of freight transport accident remained the same		
Disagreed	12	33.3
Strongly disagreed	24	66.7
Commission has method to coerce the operator to register		
Strongly agreed	1	2.8
Agreed	35	97.2
The commission has publicized the scheme known to all freight transport operator		
Strongly agreed	15	41.7
Agreed	21	58.3
The method of enforcement of the scheme meet international standard		
Strongly agreed	10	27.8
Agreed	26	72.2

Source: Authors Field Work, 2017.

Items	Frequency	Percentage
Method of enforcement of the scheme is not adequate enough to make policy effective in Lagos		
Agreed	3	8.3
Disagreed	14	38.9
Strongly disagreed	19	52.8
No mechanism for the feedback on the performance of the scheme		
Agreed	23	59.0
Disagreed	13	33.3
Provision is strong enough to mitigate the cause of accident		
Strongly agreed	20	55.6
Agreed	9	25.0
Disagreed	7	19.4
No operator certificate has been revoked		
Agreed	17	47.2
Disagreed	19	52.8

In 2007, Road Transport Safety Standardization Scheme was created by law in the National Road Traffic Regulations (NRTR) (2004) Section 115 made pursuant to sections 5 and 10 (10) of the FRSC (Establishment) Act 2007, to entrench a culture of safety consciousness in organizations and companies with fleet of vehicles, ensure safe and standardized fleet operations for all and check the excesses of transport operators which often lead to loss of lives and property.. Between 2007 and 2015, eight (8) years after the introduction of road transport safety standardization scheme (RTSSS), a total number of 2,890 freight transport crashes were recorded with the highest (412) in 2012, five (5) years after its introduction. It shows that in terms of road safety, the scheme had performed below expectation in the study area. On the positive side, there is strong awareness but low of compliance to the tenets of the scheme (RTSSS) among the freight operators and drivers with nearly half of the freight operator companies fully registered for the scheme. The type of cargo haulage in the study area is dry. A yearly refresher course for drivers to enhance their competency needs to be enforced. Even though the method of enforcing the tenets of the scheme is of international standard yet it is not strong enough to

mitigate the cause of freight transport crashes in the study area.

### Conclusion and Recommendation

The study examined the performance of road transport safety standardization scheme since its introduction in 2007 particularly freight transport using Lagos Metropolis, Nigeria as a case study. Freight transport crashes is still on the high side despite the introduction of road transport safety standardization scheme (RTSSS). It was observed that there is a significant awareness of the scheme among the operators and drivers of freight transport in the study area with a low level of patronage and compliance. The study also shows that freight transport crashes are still on the increase even after the introduction of the scheme. It is recommended that there should be more awareness and wide publicity of the scheme in Lagos and Nigeria at large. All agencies that are set-up for the implementation of the scheme should be more determine and committed to the realization of the objectives of the scheme. Finally, it is recommended that periodic appraisal of the scheme should be carried out in line with emerging contemporary issues in Road Safety Management.

### References

- Agbonkhese, O, Yisa, G.L, Agbonkhese, E.G, Akanbi, D.O, Aka,E.O, Mondigha, E.B (2013), Road Traffic Accidents in Nigeria:Causes and Preventive Measures. *Civil and Environmental Research*, 3, (13). ISSN 2224-5790 (Paper) ISSN 2225-0514(Online).
- Agyemang,B.,Abledu,K,G.,Kwofie,S.,Gbang,J.K.,Gyi mah,S.A.,Mbima,D.(2016): Comparative Model Analysis of Road Traffic Accident in Ghana. *International Journal of Statistics and Applications*. 6(3):105-112.
- Baas, P. and Taramoeroa, N. (2008). Analysis of the safety benefits of heavy vehicle accreditation schemes. ISBN 978-1-921329-54-8.AP-R319/08.P62

- Badejo, D., (1997): Crisis on Overland Freight Transportation in Nigeria. No 9 (Quarterly Magazine of the JCIT in Nigeria).
- Balogun, S.A. (2006): Road safety practice in Nigeria. Abuja: Lothan Publishers.
- Dammen, S.J. (2010): The effect of safety practices, technology adaptation, and firm characteristics on motor carrier safety. *Journal of Transport Research Forum*. 44 [1]; 103-120
- Federal Road Safety Commission: Road Transport Safety Standardization Scheme Policy Document (2010).
- Khattak, A. J., Pawlovich, M. D., Souleyrette, R. R. and Hallmark, S. L., (2003). Factors related to more severe older driver traffic crash injuries. *Journal of Transportation Engineering* 128(3): 243-249.
- Lagos state government, (2011).
- Lave, L. (1968): "Safety in Transportation: The Role of Government. Law and Contemporary Problems, 33: 512-535.
- Olagunju, K. (2010): Road Traffic Crashes (RTC) Involving Tankers and Trailers on Nigerian Roads (2007-June 2010) A report. frsc.gov.ng/rtc2011.pdf.
- Raftery, S, J., Grigo, J., and Woolley, J.E., (2011). Heavy vehicle road safety: Research scan. Centre for automotive Safety Research.[ CASR]Report Series 100.P110.ISBN.978192164537 2.
- Starrs, M. and B. Moore (2003).Internal paper for NTC on Accreditation. Melbourne, NTC.
- Stevenson, M., Sharwood, N.L., Wong, K., Elkington, J., Meuleners, L., Ivers, Q.R., Grunstein, R.R, Williamson, A., Haworth, N., Norton, R.(2010): The Heavy Vehicle Study: a case-control study Investigating risk factors for crash in long distance heavy vehicle drivers in Australia .BMC Public Health201010:162|DOI: 10.1186/1471-2458-10-162|
- Wegman, F. (2002). Review of Ireland's Road Safety Strategy. Leidschendam, The Netherlands: SWOW. (Publication R-2002-27).
- Wegman, F., (2013): (Traffic Safety) The Transport System and Transport Policy: An Introduction. <https://books.google.com.ng/books?isbn=0857936905>.
- Wegman, F. (2016): The future of road safety: A worldwide perspective – Science Direct. 40 [2]:66-71