CHAPTER 1

INTRODUCTION

BACKGROUND TO THE STUDY

1. The invention of the motor vehicle in the late 18th Century was a momentous leap in man's evolutionary history. By nature, man had always needed to move about for food, water shelter and his general well being. He fulfilled this need initially by the use of his legs, beasts of burden like donkeys, camels and horses. Such movement was however restrictive as it limited him to his immediate surroundings or short distances. It was also unsafe and time consuming. Advances in science and technology over time led to the invention of the motorised vehicle and road networks which made man's mobility, safer, easier and enabled him cover vast distances at relatively shorter periods of time, giving him access to better opportunities that enhanced commerce and economic development.

2. As human settlements grew in size and activities, there emerged the corresponding need to move people and products from locations of production to markets in a safer, easier, more accessible and more efficient way in larger numbers. Such movement of people and goods by using the motorised vehicle on the road necessitated the need for safer and reliable

roads-essentially, road safety, became paramount. The interactions of the motorised vehicle and human beings on the roads however threw up its own challenges, like road collisions, poor road structures and systems, and insecurity on the roads, all occasioning to loss of lives and property. It thus became necessary for communities to build proper roads, to draw up rules, regulations and emplace various other measures to guide such interactions and reduce the negative effects. The promotion of safe interaction of people, goods and services, and vehicles within the road environment is referred to as Road Safety (RS).

3. Efforts to ensure the well being of members of a community lead to engagement in diverse activities that generate income through which members improve their standard of living. The activities range from basic food production as in farming, fishing and animal husbandry to utilising locally available material resources to fabricate new ones which are then sold to those interested for money, both locally and beyond the immediate community. Such products may go to waste unless markets could be found for them. The reasonable combination of those income generating activities and efforts at making their interdependence sustainable and accessible is described as the Economic Development (ED) of that society.

4. Road transportation is a wealth creating industry on its own as well as the life-line of an economy. Road transportation accounts for over 70 per cent of the movement of people and goods globally. This mode of transportation opens up new areas of economic activities, enhances agricultural production, revitalises trading activities and impacts positively on urbanization process. Although, there are other means of transportation such as air, rail and water, these means of transportation would have been greatly incapacitated but for the complementary role played by road transport in the economy

5. However, the importance of RS to ED soon become apparent when it was observed that with increase in road transportation for economic activities emerged a corresponding increase in the rates of Road Traffic Crashes (RTC) and the attendant loss of lives and property. The paradox of road transportation as militating against economic development for communities was unacceptable and thus required deliberately planned and emplaced strategies to have mobility and development existing simultaneously without one impinging on the other. Since economic development implies the sustainable concerted actions by communities to improve their standard of living and economic health, it was therefore

incumbent on the authorities to promote road safety for enhanced economic development.

6. Governments across the world started to devise and emplace measures, methods and regulations to ensure the safety of road users in acknowledgement of the important role road transportation plays in both societal and economic development. These regulations affected all aspects of road usage including the road design, driver training and testing, vehicle design and testing, public education and advocacy on safe use of the roads. However, the efforts seemed inadequate to address the road safety problem as casualties from road usage kept increasing.

7. In a study conducted by the World Health Organisation (WHO) on road traffic incidences, it was established that 1.3 million people die on the world's roads with 50 million others injured annually. The report further stated that if nothing was done to stem the tide, by 2020, road traffic incidences would be the third highest killer after malaria and tuberculosis.[1] This study prompted the United Nations General Assembly (UNGA) in March, 2010 to declare a Decade of Action (2011 – 2020) for Road Safety to reduce by 50 per cent fatalities due to Road Traffic Crashes by 2020. The goal of the declaration, as adopted by 100 countries including Nigeria; is to make roads safe and to stabilise and reduce the forecast level of road traffic

deaths around the world.[2] It is estimated that about 5 million lives would be saved on the world's roads through those actions during the decade.

8. Promoting RS would imply taking actions and measures that will simultaneously address those factors responsible for lack of safety. Those factors are the road users who constitute the human factor, the vehicular factor and the road environment factor. Road users comprise pedestrians, cyclists, motorcyclists, truck-pushers, motorists and commuters. The vehicular factor consists of all categories of vehicles including their design and condition, two-wheeled vehicles like bicycles and motorcycles, tricycles, cars, buses, tankers trailers and tractors. The road environment includes the road condition, design, surface, furniture and the prevailing weather condition. Taking cognisance of the multifaceted and multidimensional nature of road safety therefore implies that only comprehensively planned intervention strategies that can cover the multiple dimensions will work.

9. In the light of the foregoing, the UNGA encouraged countries to implement activities according to what it identified as "five pillars of road safety" in the course of its declared "Decade of Action on Road Safety 2011-2020" in order to achieve the objectives of the declaration. The five pillars are :

a. Road Safety Management

b. Safer Road Design

c. Safer Vehicle Design

d. Safer Road Users

e. Post Crash Care

The recommendation however leaves the implementation of those activities at the discretion of and within the legal constructs of the various national governments.[3] Three years after the declaration, the Global Status Report on Road Safety 2013 indicates that the total number of Road Traffic Deaths remains unacceptably high. This implies that more ingenious efforts are required to promote RS to enhance ED.

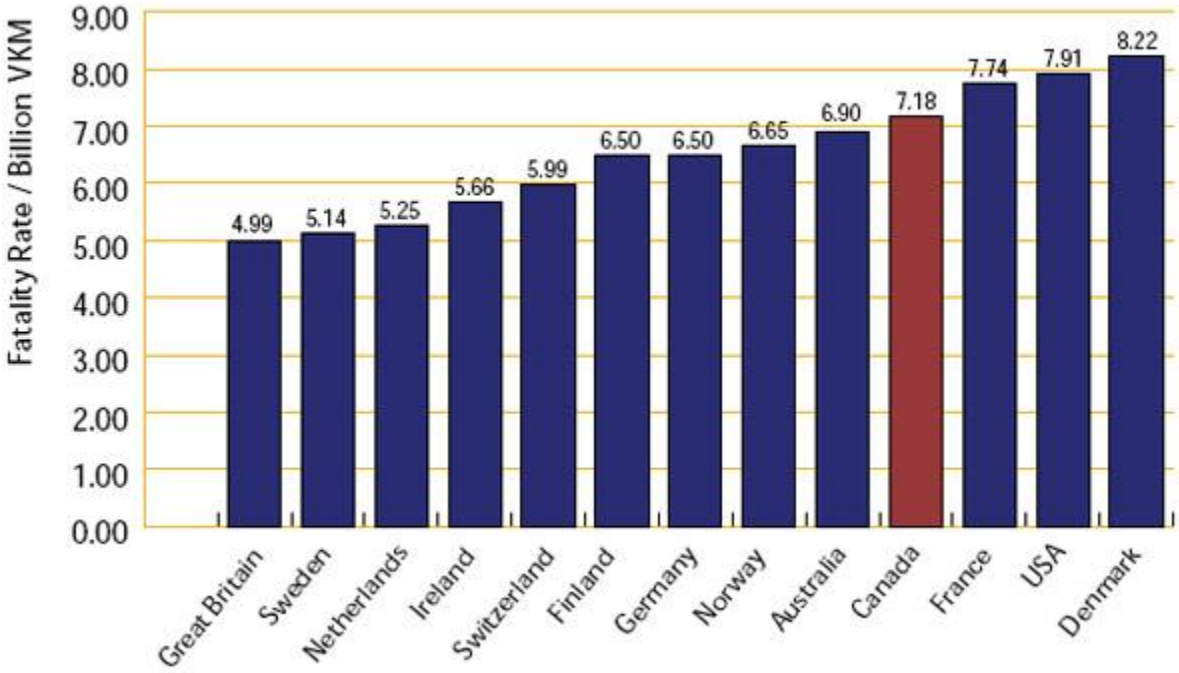
10. In 1997, Sweden with a population of 9.6 million, adopted the 'Vision Zero' Road Traffic Safety Policy as a result of their government's discontent with the country's RTCs fatality statistics of about 2,953 deaths between 1990 and 1996.[4] The aim of the 'Vision Zero' Policy was to achieve a highway system with no fatalities or serious injuries in road traffic by the year 2020.This was by ensuring the promotion of safer vehicles and safer road users such that no death or serious injuries would be recorded even in the event of collisions, The commitment from the government and people of the country towards the full implementation of this policy has drastically

reduced the rate of RTCs in the country by 39 per cent and the resultant fatality from 541 deaths in 1997 to 314 in 2011 and 211 in 2013.[5] The effort impacted positively on Sweden's economy as an increase of 1.2 per cent in its GDP was recorded and has made the country a model in road safety practices.

11. The Canadian government declared 2011 as the Canadian Year of Road Safety with public education and advocacy activities held to raise awareness about road safety in Canada. It adopted this approach given that traffic collisions were a major cause of death for those aged 5 to 34 and injuries sustained in collisions by Canadians are a major burden on the country's health care system in terms of emergency treatment, chronic care and rehabilitation and ultimately its economic resources.[6] It also launched its Road Safety Strategies 2015, the third in the series of national road safety programmes with the first being Road Safety Vision 2001, followed by Road Safety Vision 2010. All the programmes are aimed at reductions in the number of fatalities and serious injuries resulting from road collisions in Canada to make the country's roads the safest in the world.[7] As at 2008, Canada was ranked tenth in terms of fatalities recorded per billion vehicle kilometres travelled among member countries of the Organisation for

Economic Cooperation and Development (OECD) as depicted in the Figure 1below.

Figure 1: Canada's 2008 Road Safety Ranking Among OECD Member Countries



Source: *Road Safety in Canada - Transport*

It is therefore appreciable why the country is devoting serious attention to its road safety requirements.

12. In Africa, road safety practice is not yet entrenched. Prior to the launch of the 'Arrive Alive Road Safety Campaign' by the South African Department of Transport in 1997, the rate of RTCs in the country was 71 deaths per 100,000 population between 1991 -1996.[8] This casualty figures secured South Africa a top spot on World Health Organization's (WHO) list

of the countries with unsafe roads. Consequent upon the dedication of the country's government and other stakeholders to the full implementation of the campaign, an appreciable reduction was recorded. The 2013 statistics by WHO puts the country's fatality rate at 32 per 100,000. This rate, when compared to around 11.4 people per 100, 000 in the United States and 5.4 per 100,000 in the UK, is still high. Economically, the report has it that the country loses about R306bn (£18.5bn) per year as a result of unsafe roads and RTCs.[9] which is inimical to its ED.

13. In the case of Nigeria, the road linking Ibadan and Oyo constructed in 1906 was recorded to be the first motorable road ever constructed. In 1960 at independence, the total length of government maintained roads was put at 9,453 km. In the 1970s, the country experienced an oil boom with massive income from crude oil sales which resulted in massive road construction and an increase in motorisation. This was however without commensurate development in the safety mechanism thus leading to high rate of RTC. By the year 2011 however, Nigeria ranked as the country with the second largest road network in Africa with over 195,000km of road network servicing about 170 million people.[10] Notably, the development witnessed in road network in Nigeria was quickly greeted by corresponding rise in the number of vehicles on Nigerian roads. Statistically, in 1946 there were a

total of 6, 822 registered vehicles in Nigeria which steadily increased over the years to 13,644 by 1973, about 2 million in 2000 and in 2013 about 7.64 million vehicles.[11] The statistics of road network and vehicular population which ordinarily should be indicative of economic development is however undermined by perennial reports of RTC, revenue losses occasioned by road congestion, lost opportunities due to vehicle breakdown, stranded commuters due to inadequate public transportation and frequent robbery attacks on road users by criminal elements and insurgents.

14. Nigeria's poor road safety practices have physical, social, emotional and economic implications. According to Kapila, RTCs cost approximately 1 to 3 percent of a country's annual Gross National Product (GNP).[12] Furthermore, the global economic consequences of RTC are estimated at over $500 billion per year with $100 billion of that occurring in poor, developing countries.[13] When the costs of goods wasted on congested roads, business opportunities lost due to vehicle malfunctions, late arrival of raw materials or finished goods and cost of Medicare for RTC victims and disease-causing pollution are factored in, the losses due to unsafe road use situation is very huge indeed. These are resources that no country can afford to lose, especially those with developing economies like Nigeria.

15. In response to the dismal RS situation, the Federal Government of Nigeria (FGN) took a major step towards better and more efficient RS management by establishing the Federal Road Safety Corps (FRSC) in 1988. The Corps' mandate include among others ensuring a reduction to the barest minimal level the rates of Road Traffics Crashes in the country, educating road users generally on the safe ways of using the road, conducting research into causes of RTC and prevention methods as well as collaborating with other bodies, agencies and organisations involved in the promotion of safe road usage.[14] In addition, governments at various levels invested in the construction of new roads and the expansion and rehabilitation of old ones. Other agencies that have roles to play in enhancing safe road usage were either empowered or created.

16. Despite the investments and efforts at improving RS in Nigeria however, its impact on the country's ED is yet to fully manifest. This view is corroborated by the high rate of RTC still recorded in Nigeria and other socioeconomic losses arising from interactions on the roads. For instance, within the first 3 years of the Decade of Action on Road Safety 2011-2020, records show that 40,041 RTCs occasioning about 18,690 deaths were recorded on Nigeria's roads between 2011 and 2013.[15] This carnage on Nigeria's roads has adverse effects on the nation's economic development

through the decimation of its productive manpower, dissuasion of foreign investment and diversion of funds that could be utilized for other developmental projects into caring for RTC victims. Consequently, a more dynamic approach towards effective and efficient RS management is required to make our roads safe and thus enhance the nation's economic development. The purpose of this paper therefore, is to evaluate the impact of RS on the ED of Nigeria. The researcher is motivated to undertake this study as his contribution towards minimizing the effects of unsafe road use in human lives and on Nigeria's economy by proposing useful recommendations and strategies for safer roads and more efficient road transportation for national economic development

STATEMENT OF THE RESEARCH PROBLEM

17. The FGN has evolved measures to ensure RS in Nigeria and thereby accelerate the country's ED. Most notable of these measures is the creation of the FRSC as the lead agency in road traffic administration and safety management in the country. Along with the state governments, it also invests heavily annually in road construction and rehabilitation. Several measures are also emplaced to regulate the operations of the road transport industry in the country with a view to promoting the safety of road users.

Notwithstanding these efforts, loss of lives, valuable properties and

transit time, none or late arrival of raw materials and finished goods, hence loss of revenue are regularly experienced in Nigeria. Other experiences include temporal or permanent human capital loss arising from injuries sustained during crashes and robberies, increased air pollution due to road congestion leading to diseases. All of these impact negatively on the ED of the nation.

18. It is against this background that this study examines the circumstances that make road safety lacking in Nigeria despite the measures emplaced. Accordingly, this study seeks to proffer answers to the following research questions:

a. What is the relationship between RS and ED?

b. What are the issues of RS and ED in Nigeria?

c. What are the contributions of RS to the ED of Nigeria?

d. What are the challenges militating against effective RS for enhanced ED in Nigeria?

e. What are the prospects of RS for enhanced ED in Nigeria?

f. What are the strategies for effective RS in Nigeria?

OBJECTIVES OF THE STUDY

19. The objective of this study is to evaluate the effects of road safety on economic development of Nigeria. The specific objectives are to:

a. Establish the relationship between RS and ED.

b. Discuss the issues involved in RS and ED in Nigeria.

c. Examine the contributions of RS to the ED of Nigeria.

d. Identify the challenges militating against effective RS for enhanced ED in Nigeria.

e. Identify the prospects of effective RS practices for enhanced ED in Nigeria.

f. Proffer strategies for RS management that would enhance ED in Nigeria.

SIGNIFICANCE OF THE STUDY

20. The outcome of the study, based on the proffered strategies, would be valuable to the Federal Government, Federal Ministries of Transport and Works, Federal Road Safety Corps, all states and Local Government Councils of the Federation in policy formulation and decision making on matters relating to road safety practices and management. Additionally, the study would be beneficial to potential researchers who will find the data and information provided useful and thus serve as reference material for further research. Finally, the study will add to the body of knowledge and existing literature on RS and ED in Nigeria.

SCOPE OF THE STUDY

21. The scope of the study is discussed under 3 headings. These are time, space and content boundaries.

22. **Time Boundary**. The study covers the period 2004 to 2013 (one decade) being the period the FRSC witnessed steady administration and support from governments and other stakeholders. It also marks the period when the World Bank and the United Nations increased their participation in RS matters in the country through funding, collaboration and capacity development.

23. **Space Boundary**. The study covers and concerns the Nigerian nation space only. References shall however be made to other nations where necessary.

24. **Content Boundary**. The study is limited to an evaluation of the relationship between RS and ED in Nigeria.

METHODOLOGY OF THE STUDY

26. This is discussed under the following headings: Type of research, sources of data, method of data collection and method of data analysis and presentation.

27. **Type of Research.** The study is descriptive research and adopted the field survey method. This involved the use of questionnaires to obtain information from samples that were representative of the target population which were RS stakeholders and government agencies in Nigeria.

28. **Sources of Data**. Data were sourced from both primary and secondary sources.

a. **Primary Data.** Primary data were gathered through questionnaires and unstructured interviews with relevant government officials and stakeholders such as Heads of Departments, Permanent Secretaries, Directors and Deputy Directors of relevant Ministries, Departments and Agencies (MDAs), Federal Ministries of Transport, Works, Health and Environment. Others are the Federal Road Safety Corps (FRSC), Vehicle Inspection Office (VIO), Federal Road Maintenance Agency (FERMA), National Union of Road Transport Workers (NURTW), Fleet Operators, Road Transport Employers Association of Nigeria (RTEAN), Actuaries, Motorists, Commuters and Commercial drivers.

b. **Secondary Sources.** Secondary data were obtained from the libraries of various institutions in Abuja, Lagos and Jos. These libraries include those of the National Defence College (NDC), Abuja, Federal Road Safety Corps, Federal Ministries of Works, Transport and Finance, National Bureau of

Statistics (NBS), National Planning Commission, Abuja. Other sources include published and unpublished materials such as books, journals, magazines, and papers delivered in seminars and workshops. The Internet was also used as an additional source of secondary materials for the research.

29. **Methods of Data Collection.**

a. **Field Method.** Field survey method was used to obtain data through the administration of open-ended questionnaires, telephone discussions and unstructured interviews with members of the FRSC, officials and members of various road transport unions, road transport fleet operators, actuaries and officials of relevant government agencies.

b. **Document Analysis**. Document analysis was used to collect data from secondary sources. Data was collected from books, journals, newspapers, unpublished materials and the internet amongst others, using the archival library search method of document analysis.

30. **Sampling Technique and Population** The study adopted the probabilistic sampling technique to ensure conformity with scientific research. The stratified random sampling technique was adopted in choosing a valid subset of the population. The population of interest were road users in Nigeria but samples were taken from one state per geo-political zone and

the Federal Capital Territory to have a fair spread. The chosen states were however those with the highest population in each zone.

31. **Method of Data Presentation.** Data were analysed both qualitatively and quantitatively. Responses to the questionnaires were analysed using simple percentages and presented in tabular forms using graphs and charts. The analysed data are presented in a descriptive form. Tables, charts, figures and map were used for illustration where applicable.

LIMITATIONS OF THE STUDY

32. The study was limited by access to important personalities who had been earlier earmarked for unstructured interviews. In addition, the researcher encountered challenges such as lack of access to some official data. However, this did not adversely affect the quality of the study as secondary data were collected, analysed and compared with available data received to validate the outcome of the research.

NOTES

1. Make Roads Safe : **"A New Priority for Sustainable Development, a Publication of Commission for Global Road Safety"** 60 Trafalgar Square, London, wc 2N 5Ds, UK, 2006,p2

2. Road- Traffic-Safety <http://en.wikipedia.org/wiki >accessed 4 Nov,2014

3. KK Kapila, **"Decade of Action for Road Safety: Imperatives for Developing Economies"** FRSC 2nd Annual Lecture Series 2010, p27.

4. Road- Traffic Safety Op.Cit.

5. **Ibid**.

6. Road Safety in Canada

7. **Ibid**.

8. South Africa's Road Death Crisis <http://www.theguardian.com/global-development-professional-network/2013/nov/22

9. Ibid

10. Sumaila Abdulganiyu Femi (2013) **"Road Crashes, Trends and Safety Management in Nigeria"** Journal of Geography and Regional Planning retrieved from <http://www.academicjournal.org/JGRP> accessed 3 Nov, 2014.

11. Osita Chidoka **" Road Safety and Challenges of National Socioeconomic Development "** Paper presented to the Business Hallmark Public Policy Forum on 13 September, 2011 at the Nigerian Institute for International Affairs, Lagos

12. KK Kapila, Op Cit

13. **Ibid**

14. FRSC (Establishment) Act, 2007

15. FRSC Annual Report 2013, p86.

CHAPTER 2

LITERATURE REVIEW

33. This chapter conceptualises the key variables in the study, which are Road Safety (RS) and Economic Development (ED). Thereafter, it establishes the relationship between them. It further reviews existing literature related to the variables and discusses the theoretical framework for the study. Lastly, it examines examples from other countries with a view to drawing lessons for Nigeria.

CONCEPTUAL DISCOURSE

34. The 2 key variables in this study are RS as the independent variable and ED as the dependent variable. They are conceptualised and the relationship between them established.

ROAD SAFETY

35. The European Transport Safety Council (ETSC) describes RS as systematic work to engender safety on the roads and to promote good motoring practices, prevent crashes and to mitigate the consequences.[1] This definition does not capture the whole gamut of RS, which includes the public

space, the roads and advocacy. It sees RS as only being concerned with the drivers, vehicles and prevention of crashes. It is therefore not suitable for this study.

36. Mulhrad defines RS as a government area geared at reducing the number of road crashes and victims on the territory and in the population governed.[2] This definition views RS only in terms of reduction of road crashes by government through measures or action programmes on the road. It does not take cognisance of the other activities involved in RS or other people who by omission or commission contribute to presence or lack of road safety. Thus the definition is not appropriate for this study.

37. Bliss on the other hand views RS as efforts at having effective and efficient road network system with institutional management functions which produces interventions, which in turn produces results.[3] The system, he further explains, has functions that are delivered primarily by the government agencies related to road management, often in conjunction or partnerships with civil society and business entities to achieve the desired focus on results.[4] This definition, which is generic, can be applied in any country for its RS and is therefore adopted.

ECONOMIC DEVELOPMENT

38. McKinnon views economic development as "a process of fundamental and sustainable economic changes in a society".[5] The definition describes economic development in its simplest sense and meaning. Although, it indicates a process of economic change, nonetheless, factors that initiate the change are not highlighted. Furthermore, the definition does not indicate how economic change would be sustained. In addition, it does not consider resources that would be used to bring about the economic change. Therefore, the definition does not suit this paper.

39. On the other hand, Todaro and Smith view economic development as "the process in which national production or per capita income increases over a period of time".[6] The definition views economic development as a change in per capita income. It anchors the change on a period of time but it is not specific on the length of this period. Though the definition indicates what will undergo a process of change, it does not include agents of change. The definition also does not indicate how the process of change would be initiated. Thus, Todaro and Smith's definition is insufficient for this study.

40. For their part, Gerald and Rauch define economic development as a process of applying a nation's resources to stimulate the growth of economic indices and improve the methods of production in order to increase per

capita income and enhance living conditions of people in different geographical locations in a country over a stipulated period of time.[7]

41. The definition views economic development from 2 perspectives which are the growth of economic indices and methods of production. These economic indices are statistics showing the level of growth experienced in certain socio-economic sectors such as agriculture, commerce, communication, education, health and environment. The definition also highlights the application of available resources to stimulate growth. It further implies that improved road infrastructure would increase total revenue a nation generates and the living standards of the people. This means that safe roads, for example, would generate income for nations and be a catalyst for business growth and facilitate public and private interactions in any geographical location. Gerald and Rauch's definition of economic development is apt for this study because it encompasses the processes, ingredients and catalyst for ED which this study requires and it is therefore adopted.

RELATIONSHIP BETWEEN ROAD SAFETY AND ECONOMIC DEVELOPMENT IN NIGERIA

42. RS is effective and efficient road network system with institutional management functions which produces interventions, which in turn produces

results. The functions that are delivered primarily by the government agencies related to road management, often in conjunction or partnerships with civil society and business entities to achieve the desired focus on results. ED on the other hand is a process of applying a nation's resources to stimulate the growth of economic indices and improve the methods of production in order to increase per capita income and enhance living conditions of people in different geographical locations in a country over a stipulated period of time.

43. RS encompasses the requisite road infrastructure and efforts at ensuring right road support facilities that are designed to enhance its socio-economic benefits. It also includes the utilization of acquired knowledge and engineering skills to extend the frontiers of road networks. ED is involved in a nation's resources to stimulate the growth of economic indices and improve the methods of production in order to increase per capita income.

44. A nation with safe and adequate road networks would derive economic dividends from these roads. This would manifest as increased national income which would have ripple effect on its Gross Domestic Product (GDP). This means that if there is a good road network there would be smooth running of businesses and easy movement of goods and services

from one place to another which would have better outcome on the country. Therefore, there is a direct relationship between RS and ED.

REVIEW OF EXISTING LITERATURE

45. Muhlrad et-al in their study of Road Safety Management Investigation Models looked at the evolution of Road Safety Management in the last 2 decades, the role of strong government institutions to plan interventions with cooperation from government, partners, stakeholders, related community and business partnerships, to achieve desired focused results[9]. The study was concerned with Road Safety Management that was focussed on interventions geared towards the reduction of RTCs. Though the research also took cognisance of the components of Road Safety Management (RSM), it did not evaluate RS as it affects economy of nations.

46. Oyeyemi deals with the role of productivity in road traffic administration. The book deals with productivity as it relates to the quality of training and knowledge of the human resource involved in traffic administration in Nigeria.[10] road traffic administration being a subset of RSM. He further states that training is crucial to improve the productivity of the officers and men involved in road traffic management.[11] He however, does not relate this training to the economic dividends of RS in Nigeria.

47. Balogun traces the history of Road Safety Management in Nigeria and the causes of RTCs. He discusses the cost of RTCs globally and in Nigeria, and proposes the need for publicising road safety activities through the media.[12] He also further discusses the penalties for traffic offences.[13] Although he discusses the different segments of RSM, Balogun fails to highlight the linkages between good road safety management and economic growth.

48. Olagunju looks at the safe way to use the road. He deals with the various impediments to safe driving and how to avoid collisions. He examines such issues as driving at night, over-speeding, sharing the road and first aid handling at the scene of an accident.[14] Though Olagunju gives information on how to manage the road space, he is silent on the practice of RS and how it affects the economy in Nigeria.

49. The above works have contributed significantly to the study of road safety management. They did not however consider the contributions of RS to ED in Nigeria; it is this gap that this study seeks to fill.

THEORETICAL FRAMEWORK

50. This study is predicated on a sub-set of the Modernization theory or School, called the 'Trickle-down theory of Transport Infrastructure and Development' to better explain the phenomenon of RS and ED. This theory,

postulated by an American economist Hirschman in1958 postulates that economic growth is supposed to trickle down from the core to the periphery to ensure a balanced development without an area being worse-off, either rural or urban.

51. In his submission, he posits that "growth does not appear everywhere at the same time; it manifests itself in points or poles of growth with variable intensities; it spreads by different channels and with variable terminal effects for the economy as a whole".[15] Hence, he recognized economic growth pole to be a point to which centripetal forces are attracted and from which (in time) centrifugal forces emanate throughout the field of influence of the set of activities constituting the pole. This economic growth pole concept has been applied by many regional planning scholars in regional economic development issues because the concept has a fundamental importance to contemporary regional economic planning and constitutes a significant percentage of regional economic planning activities. According to Okafor, one of the main advantages of this theory is its effectiveness as a tool of spatial analysis and economic planning.[16] Essentially, for this theory, the provision of good and safe road infrastructure is an approach to economic development, and is one of the methods used by countries of the world, to further their economic growth trajectory.

52. There were other proponents of this theory like Forkenbrock, Baum, Sadoulet and Janvry. They recognized the important role of safe and efficient road transport infrastructure for social and economic development of a country. For them, as the nature of road transport improves; the production cost falls which may result in increased production. Similarly when travel time is saved as a result of safe and efficient road transport system, more labour is available for production, which is the same as an increase in labour supply, resulting in increased production. So the overall activities expand with the provision of safe and efficient road transport services. Investment in safe and efficient road transportation sector can improve access to economic opportunities by reducing transport costs and travel time.[17] If markets are reasonably competitive, this can result in lower prices for freight and passenger services. This in turn often leads to lower prices for product and consumer goods, a spatial extension of the market for production and consumption goods, higher personal mobility, and a general higher level of socio-economic activities.[18]

53. They also argued that the economic growth poles (growth points) aimed at forcing economic activity on particular point within a region which has a latent potential for exceptional growth can be stimulated by the introduction of better and safer road transportation systems. This would

release the latent economic growth potential and produce beneficial multiplier effect throughout the region. Many rural areas are bridge areas between states or metropolitan centres. Good and safe road transportation is essential not only for connecting people to jobs, health care and family in the ways that enhances their quality of life, but also for contributing to regional economic growth and development by connecting business to customers, goods to markets and tourists to destinations. Commodities including timber, fuel and agricultural produce must be moved from the areas where they are produced to areas where they are processed, consumed, or sent out of the state or country.[19] Efficient and safe road network has significant effect on the distribution of facilities in these areas and has the potential of reducing poverty.

54. In essence, for them, good and safe road transportation is essential connection to the nation and the world. They view it as that part of economic activity concerned with increasing human satisfaction by changing the geographical position of goods or people. In other words, safe road transport creates time and place utilities. They also observed that the need for safe road transportation arises in any economy that is distributed over space particularly so in the context of community development where safe road transportation is considered as the engine of growth of such economy.[20]

Therefore, in their summation, safe road transportation as one of the tools of economic development is important and without it, the inherent potentialities of an area may not be realized.

55. Other schools of thought that have followed suit in this argument include the Keynesian School, the Neo-Classical School and the Modernization theory. All these Schools agree that improved and safe road infrastructure constitute a catalyst for economic development. For the Modernization School in particular, they consider good road infrastructure as a necessary determinant of economic growth in the least developed countries of the World.[21]

CRITICISMS OF THE THEORY

56. The trickle-down theory of road transport infrastructure and development argues that economic growth can be enhanced by the availability of safe and efficient road infrastructure, which would allow for people to easily access goods and services. According to the theory, consumers will then benefit from a greater supply of goods and services at lower prices; furthermore, the investment and expansion of businesses will increase the demand for employees.

57. Critics acknowledge that good and safe road infrastructure is quintessential mode of economic development. In fact, they count it among

the biggest infrastructure investments in many countries, and have often been used as symbols of national pride. This type of infrastructure in their view has made important and significant contributions to human development, and the benefits derived from them have been considerable. However, for them, in too many cases, an unacceptable and often unnecessary price has been paid to secure those benefits of safe and efficient road infrastructure, especially in social and environmental terms, by people displaced, by taxpayers and by the natural environment. Lack of equity in the distribution of safe and efficient road networks and infrastructure benefits has called into question the value of many roads in meeting economic development needs.[22]

58. For them, the "Trickle-down" strategies may have worked in countries with a strong state such as Brazil, China and South Korea. They have generally not worked in Africa and other poor regions of the world. The World Bank's road infrastructure strategy admits: "Overall, the business has been biased towards road infrastructure investments that promote growth, with expected 'trickle-down effects'. In reality, the results of any trickles have been slow".[23] The lessons from this experience are not reflected in the road infrastructure strategies of the MDG's.

RELEVANCE OF THE THEORY TO THE STUDY

59. In spite of these criticisms, it has been recognized that in Nigeria, the transport sector contributed about 2.4 percent to real GDP in 2004; with good, safe road transport alone accounting for nearly 86 percent of the transport sector output.[24] Nigeria's transport system consists of some 195,000 km of road network comprising a combination of Federal, State and Local Government roads. The Federal trunk roads are the principal vectors of the system and have a total length of 32,100 km (16 percent) of which the majority is paved, to enhance their safety. State roads account for 30,900 km (16 percent) while the Local Government road system comprises approximately 132,000 km (68 percent).[25] Out of the 195,000km roads, about 60,000 km are paved, while there are 3,775 km of railways, 3 international and 78 domestic airports as well as 13 sea and river ports. Roads are the country's dominant mode of transport carrying more than 90% of cargo and passenger traffic.[27] Thus, with its important roles in the mobility needs of the country providing linkage between markets and products, people with services and tourists to destinations, the argument of the trickle-down theory of transport infrastructure and development provides an ample platform in the study of road safety and economic development in Nigeria.

EXAMPLES FROM OTHER COUNTRIES

60. India and China are countries that have achieved much in improving their road transport system and by implication, road safety and economic development. Both countries have well defined and relatively safe road transport system that has enhanced their economic development. This study therefore, considered the road safety mechanisms in India and China to draw lessons for Nigeria.

ROAD SAFETY AND ECONOMIC DEVELOPMENT IN INDIA

61. India is one of the fastest growing and largest emerging market economies in the world.[28] It has a very large population of over a billion people. Lately, India has been among the countries that have contributed significantly to the growth of the world's GDP. It is expected that by 2020, it will be in the top 10 largest economies in the world.[29] This rapid economic growth in India, has been connected to a large extent, to its rapid expansion of road transportation, and for this reason, the country has gone to great lengths to ensure that its road networks are safe and reliable.

62. Key governmental agencies in charge of road safety regulations covering the management of traffic in India are issued by the Ministry of Road Transport and Highways, Government of India and are codified in the Motor Vehicle Act of India. The Act was later amended with numerous new

regulations that deal with several factors that are known to increase risk of crashes, such as exceeding speed limits, failing to use seat belts, improper seating of a child in vehicle, use of a mobile phone while driving, and failing to wear a helmet while driving or riding a motorcycle.[30] Motor-vehicle-safety standards are set by the CMVR Technical Standard Committee established by the Ministry. These standards are based on corresponding international best practices regulations, or other relevant international references. Car and motorcycle standards are in conformity with most of the international best practices regulations (except crash-impact regulations). However, most new models manufactured in India already conform to these standards as well.

63. The current state of Indian road-safety management includes no single road-safety agency, and there are no specific targets for the reduction of fatalities or other safety indicators. However, there is in place a Committee on Road Safety and Traffic Management set up in 2007 that enacted the India National Road Safety and Traffic Management Board.The Committee's recommendation led to the establishment of a national road safety agency in India, through a specific enabling legislation on road safety. This agency is responsible for road-related measures, vehicle-related measures, road-safety research, traffic laws, operations, and management.

Other responsibilities are capacity building, road-user behaviour strategies, public awareness and education and medical care and rehabilitation (guidelines for establishing and upgrading trauma care systems).[31]

64. Furthermore, the Government of India, acknowledging the importance of the nature of vehicles to safe roads, for economic development, set up the Automotive Research Association of India (ARAI). This Association provides technical expertise in R&D, testing, certification, homologation, and framing of vehicle regulations. ARAI is a cooperative industrial research association established by the automotive industry and the Ministry of Industries. In addition to ARAI, the Government of India created the Vehicle Research and Development establishment (VRDE). The mission of VRDE is to carry out roadworthiness, fuel-efficiency, and pollution tests on vehicles, and type testing of automotive engines on behalf of governmental, semi-governmental, and other agencies, and to issue certificates of compliance. The testing and evaluation of vehicles and their systems is performed for design validation, performance evaluation, and homologation.

65. The Government of India, a number of state governments, and the Indian automotive industry are also in the process of creating a state-of-the-art testing, validation, and R&D infrastructure in the country. This will be done through the auspices of the National Automotive Testing and R&D

Infrastructure Project (NATRIP), which aims at creating core global competencies in the automotive sector in India and facilitating seamless integration of the Indian automotive industry with the world. As part of NATRIP, several test centres were authorized, including testing of passive safety, vehicle dynamics, inspection, and maintenance.[32] All the centres have commenced operations, and their efforts have greatly improved the safety on Indian Roads and thereby promoting commerce, which has enhanced economic development in India.

ROAD SAFETY AND ECONOMIC DEVELOPMENT IN CHINA

66. Just like India, China has a bustling economy, largely due to its huge workforce, which is based on its population. China has the largest population in the world, which is estimated to be around 1.4 billion people.[33] The Chinese government, mindful of its large size, saw the seamless mobility of people, goods and services, as the catalyst to enhance the productivity of such a huge population. For this reason, China's road transportation policies have always focused on improving its road network and making them safer. Due to its bustling cities, the government has worked out several strategies to ensure that its roads are safe and reliable.

67. For instance, the Chinese government established several agencies not only to engender road safety, but to ensure proper maintenance of its roads,

and to also ensure sanity on its roads. In this regard, it established a Traffic Administrative Bureau and Ministry of Public Security. Additionally, under the Chinese central government, each province and county has a corresponding branch department. These departments are responsible for traffic enforcement and driver licensing. The Ministry of Transportation is responsible for road building and driver training.

68. It is worthy to note that, each level of local government in China has a road transportation administration committee to make long-term policies to plan road transportation systems. However, the committees usually do not get involved in the management of specific aspects of road safety. The State Administration of Work Safety (SAWS) and its local branches are responsible for monitoring road transportation safety, with particular emphasis on major crashes involving several fatalities.[34]

69. Furthermore, in China, there is also an ongoing national program called National Road Transportation Safety Science & Technology Action Program or National Road Safety Action Plan. The program was launched in 2008 and it is sponsored by the Ministry of Science and Technology, Ministry of Public Security, and Ministry of Transport. The goal is to develop key supporting technologies and promote typical applications for road transportation safety, and to generate a series of scientific and technical

outcomes that are practical and widely applicable. Emphasis is on technology as an aid in preventing crashes, minimizing the consequences of crashes, and providing emergency assistance in serious crashes. The program focuses on arterial highways, expressways, and rural low volume roads; urban roads and streets are not included. The goals of this plan are to achieve continuous decreases in fatalities, to reduce serious crashes and to attain fatality rates per vehicle that would be comparable to moderately developed countries. Specific targets of Phase I (2009-2011) include fatality rate reduction for demonstration road sections, improvement of emergency rescue efficiency, and a high inspection rate of commercial vehicles[35]. Specific topics of interest include transportation-user intervention, vehicle safety, road infrastructure safety, and supporting resources for road-transportation management and safety. The major institutions involved are ministry-affiliated research institutions, such as the Research Institute of Highway Ministry of Transport and Traffic Management Research Institute of the Ministry of Public Security. In addition, some universities are involved in these activities. All these efforts have helped improve road safety in China and enhanced its economic development.

LESSONS FOR THE STUDY

70. Some lessons could be learnt from road safety in India and China. The lessons are the need for effective road safety policies, investment in R&D and the use of local administration. These are discussed in subsequent paragraphs.

The Need for Effective Road Safety Policies.

71. India and China considered effective policies as essential to their road safety efforts. For instance in India, the government decided to codify the Motor Vehicle Act of India. This Act was later amended with numerous new regulations that dealt with several factors that are known to increase risk of crashes, such as exceeding speed limits, failing to use seat belts, improper seating of a child in vehicle, use of a mobile phone while driving, and failing to wear a helmet while driving or riding a motorcycle. This would help improve road safety and ultimately contribute enhancing economic development in Nigeria.

Investment in Research and Development.

72. The Indian and Chinese Governments realized the importance of R&D to improving road safety and thus, adequately funded road transportation research institutions in their countries. For instance, the Automotive Research Association of India (ARAI) has been able to provide technical expertise in R&D, testing, certification, homologation, and framing of vehicle regulations. In addition, the Government of India created the Vehicle Research and Development Establishment (VRDE). Thus far, the VRDE has been carrying out roadworthiness, fuel-efficiency, and pollution tests on vehicles, and type testing of automotive engines on behalf of governmental, semi-governmental, and other agencies, and also issuing certificates of compliance. In the case of China, the government there set up the Research Institute of Highway Ministry of Transport and Traffic Management Research, and Institute of the Ministry of Public Security. These Institutes have so far helped in improving vehicle safety, road infrastructure safety, and supporting resources for road-transportation management and safety. This would invariably increase road safety for economic development. Nigeria could learn from this by revitalizing her research and development institutions in this sector, some of which have been moribund for years. The Funding to these institutions could also be

increased to propel R&D for greater efficiency towards improving road safety and enhancing economic development in Nigeria.

Use of Local Administration.

73. India and China have also recognized the need to fully involve their local administration in the implementation of good and safe road mechanisms. In China for instance, the local governments in the Provinces have road transportation administration committees to make long-term policies to plan road transportation systems. The State Administration of Work Safety and its local branches are therefore responsible for monitoring road transportation safety, with particular emphasis on major crashes involving several fatalities. This would definitely boost road safety towards economic development. The Federal Government of Nigeria (FGN) could leverage on the Local Governments, through increased supervision and budgetary allocation to them to help maintain the local road networks for enhanced economic development in Nigeria.

NOTES

1. N Muhlrad, V Gitelman, I Buttler (Ed), Road Safety Management **Investigation Model and Questionnaire,** (Deliverable 1.2 of the EC FP7 Project DaCoTA and European Commission Directorate for Mobility and Transport, 2011), p.7.

2. **Ibid**, p.18.

3. T Bliss and J Breen, **Country Guidelines for Conduct of Road Safety Capacity Reviews and the Specification of Lead Agency Reforms investment Strategies Safe System Project** (World Bank Global Road Safety Facility Publication, 2009), p.9.

4. **Ibid**.

5. RI McKinnon, **The Order of Economic Liberalization: Financial Control in the Transition to a Market Economy** The Johns Hopkins Studies in Development, 2007, p. 29.

6. MP Todaro and SC Smith, **Economic Development,** Massachusetts: Addison- Wesley Publishing, 2005, p. 14.

7. MM Gerald and JE Rauch, **Leading Issues in Economic Development.** United Kingdom: Oxford University Press, 2004, p. 77.

8. World Health Organization (WHO) 2011, Global Plan for the Decade of Action for Road Safety 2011-2020, Geneva: WHO.

9. N Muhlrad, V Gitelman, I Buttler (Ed), Op Cit

10. BO Oyeyemi, **Productivity and Road Traffic Administration in Nigeria: Issues Impediments and Strategies,** Ibadan: Clemeve Media Konsult, 2003, P83.

11. **Ibid**.

12. SA Balogun, **Road Safety Practice in Nigeria,** BOAAS Resources Nigeria Limited, 2006, p3.

13. **Ibid**.

14. K Olagunju, **Road Sense** Veragap Nigeria Limited, First Edition, 2011, p3.

15. Janvry, A. and E. Sadoulet. 1992. "Structural Adjustment Under Transaction Costs." Paper Presented at 29th European Association of Agricultural Economists Meeting on Food and Agricultural Policies under Structural Adjustment. Stuttgart: University of Hohenheim.

16. Okafor, F.C and Onokerhoraye, A.G. (1986) *Rural systems and planning*, The Geography and Planning Series of Study Notes. Benin, Eguavoen Printers. Nigeria

17. Forkenbrock, D.J. 1990. "Putting Transportation and Economic Development into Perspective." *Transportation Research Record*. Washington D.C.: Transportation Research Board.

18. Gannon, C., K. Gwilliam, Z. Liu and C. Malmberg Calvo. 2000. *Transport: Infrastructure and Services.* Poverty Reduction Strategy Paper A Sourcebook. Washington, D.C.:

19. Hine, John and Mike Cundill. 1994. "Economic Assessment of Road Projects: Do Our Current Procedures Tell us What We Want to Know?" Paper presented in International Workshop on Impact Evaluation and Analysis of Transportation Projects in Developing Countries, Bombay, December.

20. **Ibid.**

21. Brown, D.M. 1999. *Highway Investment and Rural Economic Development: An Annotated Bibliography.* Bibliographies and Literature of Agriculture No. 133. Washington D.C.: US Department of Agriculture.

22. **Ibid.**

23. Jansson, Jan Owen. 2000. "Transport infrastructure: the investment problem" in Jacob B. Polack and Arnold Heertje (eds). *Analytical Transport Economics: An International Perspective*. UK: Edward Elgar Publishing Ltd. pp. 41-171.

24. **Ibid**.

25. Olayiwola,L.M and Adeleye, O.A. (2005) Rural infrastructural development in Nigeria between 1960-1990- Problems and Challenges. *Journal of Social Science*, 11 (2): 91-96.

26. **Ibid.**

27. **Ibid.**

28. The Committee on Road Safety and Traffic Management (2007) *Report of the Committee on Road Safety and Traffic Management*. Retrieved on November 18,2011from:<http://morth.nic.in/writereaddata/sublinkimages/Road_Safety_sundar_report4006852610.pdf>, accessed 13 Jan 15.

29. Government of India, Ministry of Road Transport and Highways (2011) *Road accidents in India 2009*.Retrieved on November15, 2011 from: <http://morth.nic.in/writereaddata/mainlinkFile/File419.pdf.> accessed 2 Jan 15.

30. **Ibid.**

31. National Bureau of Statistics of China. (2011). *BRICS Joint Statistical Publication 2011*.Retrieved on November 11, 2011 from: http://www.stats.gov.cn/english/statisticaldata/otherdata/brics2011/, accessed Dec 14.

32. Traffic Administration Bureau, Ministry of Public Security of PRC, (annual 2012) *China Road Traffic Accidents Statistics*. Beijing: Author.

33. Wang, Y. (2011). *National Road Safety Action Plan in China*. Paper presented at the Sixth SHRP 2 Safety Research Symposium. Washington, D.C.: Transportation Research Board. Retrieved on November 15, 2011 from: <http://onlinepubs.trb.org/onlinepubs/shrp2/2011SafetySymposiumWang.pdf.>. accessed 15 Feb 2015.

CHAPTER 3

EVALUATION OF ROAD SAFETY AND ECONOMIC DEVELOPMENT IN NIGERIA

76. This chapter discusses an overview of RS and ED in Nigeria and then evaluates the issues involved in RS and ED in Nigeria. It highlights the contributions of RS on Nigeria's ED and identifies the challenges militating against RS for ED in Nigeria. Thereafter, prospects for improving RS for ED in Nigeria are highlighted.

OVERVIEW OF ROAD SAFETY AND ECONOMIC DEVELOPMENT IN NIGERIA

77. This overview will be considered under various eras in the history of the country. These are the colonial era, the immediate post-colonial era, the oil boom era and the post- oil-boom years. Nigeria's RS and ED are intricately tied to these periods, hence a deeper examination of the implications of the periods on Nigeria's RS and ED.

Colonial Era

78. Regulations on Road safety in Nigeria can be traced to the colonial period between 1900 and 1960. Specifically, the first effort to promote road safety was the promulgation of the Road Traffic Ordinance of Lagos Colony and the Southern Protectorate in 1913. By 1916, the National Motor Traffic

Ordinance was promulgated following the amalgamation of the Northern and Southern protectorates in 1914. The ordinance was reviewed in 1940 and 1945 sequel to the English Road Traffic Act of 1930 and applicable to the operation of all motor vehicles until 1951 when the country was demarcated into regions.[1]

Thereafter, each region was empowered to promulgate its own regulations.

Post Colonial Era

79. Between independence in 1960 and 1988 when the FRSC was established, other measures taken to promote RS and ED in Nigeria include the creation of a Traffic Police Unit in 1960 and an annual one-week long RS campaign conducted by the Nigerian Army. In 1972, a Highway Code was published to guide the training of drivers while the federal government declared 1974 as National Road Safety year to draw attention to the need to curb increasing rates of RTC in the country. It also established the National Road Safety Commission (NRSC) same year under the Federal Ministry of Works and Transport but in advisory capacity only as the commission had no enforcement powers.

80. During Nigeria's second republic between 1979 and 1983, several state governments followed the example of Oyo state which earlier

established the Oyo State Road Safety Corps via Edict 18 of 1977. The corps' activities to curb the rates of RTC in Oyo State were deemed highly successful and other states like Lagos, Ogun and Kano quickly established similar outfits.[1] However, due to reasons widely believed to be political, the operations of the corps on federal roads were banned in 1982/83. Nigeria currently consists of 36 states and a Federal Capital Territory of Abuja. There have been a plethora of legislations at the federal and state levels aimed at regulating the operations of motor vehicles and thereby promote road safety in Nigeria. Some provisions of the various legislations are contradictory and counterproductive to their primary objective as the multiplicity of legislations makes compliance and enforcement cumbersome. A list of Road Traffic Laws in Nigeria is at Appendix 1 to this paper.

81. Road development in Nigeria during the colonial era also received attention of the colonial government, although tilted towards somewhat selfish objectives. According to the Draft National Transport Policy 2010,"the networks of rail, water and road developed then were geared essentially to meet the exportation of cash crops such as groundnuts, cocoa, cotton and palm products and to the importation of cheap, mass produced consumption goods" .[2] It is also the view of the Policy that "these early transport systems were planned in the most economic way possible as

typified in sub-standard road and rail alignments and a sub-base, which later proved inadequate to accommodate heavy vehicles".[3] It is reasonable to deduce therefore that RS for ED was not factored into the efforts of the colonial government of the period.

82. Post independence, road development was given priority attention by the various tiers of government using the platforms of the National Development Plans (NDP). According to Ighodaro, citing a report by the Central Bank of Nigeria (CBN), whereas the total length of roads in Nigeria was 44,147 km as at 1951, only 1,782 km was surfaced, single-lane and lacking safety infrastructure. This was however increased to 28,632 km of tarred (surfaced) roads and 86,136 km of earth/gravel roads in 1980.[4] Table below reflects the structure of road ownership in Nigeria.

Figure 2: Structure of Road Ownership in Nigeria

	Federal	**State roads**	**Local govt. Roads**	**Total**	**Percentage**
Paved main roads	26,500	10,400		36,900	19%
Unpaved main roads	5,600	20,100		25,700	13%
Urban roads			21,900	21,900	11%
Main rural roads			72,800	72,800	38%
Village access roads			35,900	35,900	19%
Total	32,100	30,500	130,600	193,200	100%
Percent	17%	16%	67%	100%	

Source: Central Bank of Nigeria (2003)

83. In the fourth NDP 1981-1985, the sum of ₦7, 417 million was allocated to road development by all tiers of government out of the total sum of ₦10,706 million allocated to the transportation development sector of the economy. This implies that over 70 percent of funds were devoted to the road sub-sector alone while the other sub-sectors water, rail and air shared the balance. Despite the effort, the total contribution of the road transport sector to the economy was calculated at ₦6,718 million representing only 3.27percent. The amount fell to ₦4,852 million in 1991 which was about 1.83percent contribution to the GDP. An increase to ₦6,667 million in 2001 still meant a meagre 2.03 percent contribution to GDP.[5] In another survey conducted by the CBN in 2002 on roads condition along the six geo-political zones in the country covering the period February1997 to December 2001, out of 96 contracts awarded for the rehabilitation, reconstruction and expansion of roads by the FMW at a total cost of ₦186.9 billion, only 23 representing just 23.06 percent had been completed.

84. The delay in completion of these contracts has negative implications for RS and thus ED of the country which reportedly lost an estimated sum of ₦450 billion annually due to the poor state of roads.[6] Estimated amount lost would even address road maintenance needs for an appreciable period.

85. Road user education in Nigeria has suffered a near total neglect over the years. On record, it was the publication in 1972 of the Highway Code that first gave attention to the need to educate road users on the proper and safe ways of using the roads. Even the 1972 Highway Code was only meant for the training of potential drivers/motorists on the meaning, interpretation and implications of road signs, signals and markings. Other road users like pedestrians, cyclists and truck pushers were simply left to utilise the roads as they deemed fit. To compound matters, the 1972 version of the Highway Code soon became obsolete as Nigeria changed over to the right-hand system of traffic in the same year by virtue of Decree/ Right Hand Change over Act of 1972. Despite huge increases in human and vehicular population over the years, the Highway Code was only revised by the FRSC in 1990, eighteen years after the first publication. Although the revised edition was comprehensive enough to detail instructions for all categories of road users towards enhancing RS, there was no formal platform for educating road users on the contents.

86. It is instructive to observe that in spite of the realisation that RS is a function of the deliberate management of those factors within the road traffic environment, the most important, (the human) is given negligible attention when deciding which interventions will yield the best results. The

negligence of the need to create a formal forum for the education of road users therefore leaves a gap that ultimately made other efforts to promote RS seem ineffective.

87. In all recorded attempts at promoting RS for enhancing ED in Nigeria, it was only at the setting up of the FRSC in 1988 that funds were directly provided for the effort. Throughout the preceding periods, RS was so subsumed under other activities that it was only mentioned in passing while considering other issues. Early legislations were targeted at laying down rules and regulations for road use without specifying the ways and means of enforcing compliance through funding of enforcement measures. The annual Road Safety Campaign week organised by the Nigerian Army could not be sustained due to lack of funds. The NRSC created under the auspices of the FMW in 1974 was handicapped to provide informed advice as it lacked funds necessary to conduct research. When funds were provided, such proved so insignificant when placed against the objective.

88. Promoting RS for ED is a multi-faceted problem that requires a multi-pronged approach to have appreciable chances of success. Designing and implementing interventions thus demand simultaneous and synchronised efforts to ensure progressive improvements and the avoidance of systemic failure due to inattention to a component part. Thus, options to be considered

are often social, engineering, technological, environmental and economic at the same time. For this reason, enormous financial resources are required but not forthcoming. For instance, advocacy to get public buy-in for RS programmes require huge amounts of funds for publicity. Media outfits' charges remain sources of controversies when budgeting for RS as other needs like conducting research, procurement of equipment, affecting road repairs, etc also demand urgent attention. For instance, according to Jatto, the pioneer Head of Accounts in FRSC, a fully kitted patrol car was put at ₦3.5 million each which translates to about ₦129.5million to procure 1 kitted patrol car for each state of the federation and the FCT.[7] Since funds are always limited, simultaneous intervention on all fronts cannot be achieved. Funding is therefore a big problem in promoting RS for ED in Nigeria.

89. Another point worth noting is that Nigeria does not produce or manufacture motor vehicles, thus vehicles are imported into the country for use by owners as they wish. Attempts were made in the late 1970s and early 1980s to establish vehicle assembly plants in the country. This was with a view to enabling Nigerians acquire the technology of vehicle manufacture through hands-on training in the assembly plants and utilise the knowledge so acquired to develop the capacity and capability to manufacture a fully

Nigerian car. The plants did not last long however as the downward economic trend of the era, especially from 1986, severely affected the country. The introduction by government of a Structural Adjustment Programme (SAP) in 1986 which entailed a devaluation of the naira made the cost of assembled vehicles skyrocket overnight and it was no longer economically viable to assemble vehicles in Nigeria, This led to a return to importation of vehicles, especially those called "second-hand, fairly used vehicles". Imported new vehicles became so costly that only a few people and government could afford them.

90. The importation of fairly used, second hand vehicles became a big business overnight as anyone who could raise the funds imported all kinds of vehicles for sale to prospective buyers. Vehicles that did not meet the required minimum safety standards in various European countries found their way to Nigeria where a ready, unrestricted market was waiting for them. According to Mohammed, government also failed to control the influx as businessmen brought in decrepit vehicles without hindrance. Efforts by government to regulate the influx by banning the importation of vehicles older than 10 years from date of manufacture were largely unsuccessful due to unimpressive enforcement by the agencies concerned and outright sabotage by the importers who resorted to smuggling disqualified vehicles

through the borders.[8] Most vehicles so brought into Nigeria were no longer in production as the manufacturers had long phased them out, thus spare parts for needed repairs and maintenance were either unavailable or too costly. Vehicle owners kept cutting corners to keep the vehicles on the roads leading to frequent break-downs and malfunctioning, thereby endangering other road users' lives.

91. The efforts to promote RS for ED in Nigeria have been improved and sustained over the last few years. However the overview above has raised some issues involved in RS and ED in Nigeria which are examined in the following paragraphs.

ISSUES INVOLVED IN ROAD SAFETY AND ECONOMIC DEVELOPMENT IN NIGERIA

92. The issues involved in RS and ED in Nigeria include legal and institutional frameworks, road infrastructure and funding. Others are road user education and vehicle safety standards. These will be discussed subsequently.

Legal and Institutional Framework of Road Safety

93. Legal framework refers to laws, rules and regulations set out for the purpose of giving effect to the means towards the achievement of a

predetermined objective. Institutions refer to the agencies or organisations created to give effect to the provisions of the legal instruments. There are many legal instruments made towards the promotion of RS in Nigeria. At the federal level, there is the Federal Road Safety Commission (Establishment) Act 2007 which is the revised edition of Decree 45 of 1988 that set up the corps. The act mandates the corps to "discharge functions relating generally to making the highways safe for motorists and other road users".[9] Other instruments include the National Road Traffic Regulations 2012 which spell out regulations for the operations of motor vehicles in Nigeria

94. In a democracy as practised in Nigeria, the constitution is the basis upon which all government actions, activities and policies are based. The Constitution of the Federal Republic of Nigeria (CFRN) 1999 stipulates that "the security and welfare of the people shall be the primary purpose of government".[10] The same document shares that responsibility among the three tiers of government. Thus we have items under the exclusive legislative list meaning legislation over such matters is the exclusive responsibility of one tier of government.[11] Other items are placed under the concurrent list giving both states and federal tiers of government power to legislate upon them.

95. This means that the states are constitutionally empowered to legislate upon them. The situation however creates a conflict of interest as the same constitution shares responsibilities for planning, funding, construction and maintenance of roads among the 3 tiers of government. In addition, Charles opined that the ownership share of roads in Nigeria is 17 percent, 16 percent and 67 percent to the federal, state and local government respectively.[11] The tier with the highest length of roads has the least means for their planning, funding, construction and maintenance.

96. The situation has led to the multiplication of legislations and creation of institutions with responsibilities for RS. Thus at the federal level, we have the FRSC with the mandate to promote RS, the FMW and FERMA to oversee road construction and maintenance. At the states level, legislations have been passed to create Traffic Management Agencies (TMAs) with mandates similar to those of FRSC. As at 2014, twelve out the thirty six states, representing 33.3 percent have established TMAs. The states also have their Boards of Internal Revenue with mandate to collect revenues due from road traffic matters. Their ministries of works and transport are mandated to oversee road construction and maintenance while the vehicle inspection units oversee driver testing, vehicle inspection and maintenance of vehicle safety standards.

97. The multiplicity of legislation and institutions is therefore an issue in RS and ED in Nigeria as the provisions, activities and responsibilities are often overlapping, disharmonious and conflicting, thereby lacking the synergy required to achieve the objective of promoting RS for ED.

Road Infrastructure

98. Despite the near total dependence of transportation needs in Nigeria on the road network, the poor condition of roads in the country is mostly attributable to poor maintenance culture. This view is corroborated by the Draft National Policy on Transport 2010 which admits that "In 1985, about 23 percent of national roads were in a bad state. This rose to 30 percent in1991 and 50 percent in 2001 respectively".[12] The Policy goes further to give reasons for such situation as "misuse, particularly as a result of overloading causing damages to roads, neglect of periodic and routine maintenance, an absence of emergency maintenance and inadequate design and construction".[13] Ighodaro shared similar views as he posited "the state of roads in Nigeria is poor for a number of reasons which include: faulty design, lack of drainage, very thin coatings that are easily washed away...excessive use of the roads given the underdeveloped nature of railways and waterways as alternative means of transportation, absence of an

articulated road programme and inadequate funding for road maintenance".[14] Finally, a cross section of road users share the view that poor road infrastructure is an impediment for RS when they submitted that "given the poor state of roads and the attendant traffic congestion it causes, it is not out of place to see hoodlums taking advantage of the situation to dispossess people of their belongings... once it is dark, young men go around dispossessing people of their belongings. They rob, maim and sometime kill their victims".[15]

99. Poor road infrastructure is therefore a big issue in the promotion of RS for ED in Nigeria as it leads to RTCs, insecurity of lives and property, loss of goods and travel time or opportunities due to traffic congestion, health hazards due to long exposure to air pollution and higher cost of transportation.

Funding

100. Funding RS activities, programmes and projects is a major problem in Nigeria. The multifaceted nature of RS makes it a highly capital intensive venture as provisions have to be made for remuneration of staff, procurement of vehicles and equipment, capacity building of staff, recovery

equipment, conduct of researches and advocacy. Governments at various levels had previously lumped RS matters together with or subsumed under other issues of seemingly higher importance or priority. For example, RS matters were formerly regarded as part of programmes under the federal and states' ministries of works and transport without specifying what size of allocated funds should be for promoting RS. Thus the ministries were at liberty to expend funds as they deemed fit, often relegating RS matters to the background.

101. With the establishment of the FRSC and similar agencies in the states to tackle RS matters, both the federal and state governments resorted to allocating funds that are considered negligible or grossly inadequate to them for the execution of RS programmes, especially when viewed against proposed expenditure. For example, the pioneer Head of Accounts for the FRSC confirmed in an interview that from the inception of FRSC in 1988 up to its initial 5 years, budgetary allocation from the federal government never rose above ₦20 million per year for both capital and recurrent expenditure.[16] Actual releases often fell below ₦15 million, making it extremely difficult for the corps to carry out its responsibilities creditably well. It also took the intervention of some volunteers and the goodwill of a few corporate organisations like Shell Petroleum Development Company (SPDC) to

sponsor advocacy programmes with the support of some media organisations.

102. Many programmes and projects proposed by the corps had been shelved due to lack of funds. For instance, according to the Deputy Corps Public Education Officer, a weekly Public Enlightenment programme aired on National Television between 2006 and 2009 was shelved as the corps could not afford the cost of production and airtime which was about ₦850,000 per thirty minute episode.[17] Corporate sponsors were also not forthcoming. Acquisition of modern patrol equipment, capacity building programmes for staff and conduct of research have also either suffered similar fate or drastically scaled down for the same reason. Funding is thus a very important issue in RS for ED in Nigeria.

Road User Education.

103. The high rates of RTC and the resultant fatalities and injuries speak volumes about the problem of road user education in Nigeria. Virtually all categories of road users manifest gross ignorance of even the most basic safety precautions. There is also a fatalistic tendency among road users to erroneously view themselves as being immune from involvement in RTC. Called "Road Accident Immunity Delusion Syndrome" (RAIDS), it

manifests in diverse ways like pedestrians preferring to dash across a six-lane highway to cross rather than utilise the pedestrian bridges provided for the purpose. Abu submit that "we also have motorists who rather than ensure proper and timely maintenance of their vehicles and comply with safety regulations, would procure and install fetish objects in their vehicles, believing such would ward off RTCs from them regardless of their engagement in unsafe acts like excessive speeding, overloading, and dangerous overtaking."[18]

104. In a survey conducted by this researcher, the enormity of road user ignorance in Nigeria became glaring as it was established that:

a. About 67 percent of road users sampled had never come across any copy of the Nigerian Highway Code;

b. Only 27 percent of motorists learnt the meaning, interpretation and implications of road signs and markings through the contents of the Highway Code in the course of their learning to drive;

c. Only 18 percent of motorists have personal copies of the Highway Code to which they can refer as the need arises;

d. About 88 percent of road users believe RTCs are natural events that happen to people regardless of any actions only to prevent them;

e. Only 32 percent of road users feel road user education can enhance RS in Nigeria and positively impact the country's ED.

105. This view was corroborated by an analysis of the data of motorists apprehended by FRSC over a 5-year period for offences related to ignorance of road signs and markings as shown in Fig. 3-7.(Appendix 2)

Vehicle Safety Standards

106. The performance of any mechanical device is dependent on its proper care, maintenance and handling. Motor vehicles are such delicate, sensitive instruments that tend to react to the situation surrounding them. When properly taken care of, enjoy timely, adequate maintenance and handled with care, they perform creditable well as to be expected from their manufactured capacity. However, Nigeria as a net importer of vehicles harbours all kinds of vehicles, including those meant for temperate climates. The indiscriminate importation of vehicles has resulted in a glut of motorised vehicles many of which perform well below expectation, spending more time in the repairers' workshops than on the roads.

107. When vehicle importers bring in vehicles considered unsuitable for our climate, they deliberately sell at prices much lower than normal market price in order to attract the unwary buyer. Greed also pushes the unwary to

buy such without deeply considering the larger implications. Such vehicles end up giving one problem after another, with frequent malfunctions causing delays leading to losses in time and income. The issue is compounded by the inability of automobile technicians to determine the root causes of the problems as the vehicles configurations are different than what they are familiar with. The owners too are hardly interested in proper care, maintenance and handling of the vehicle, but to recover their investment. In a survey conducted by the FRSC to check trends of vehicle maintenance in Nigeria, Olawoyin confirmed that only drivers of government owned vehicles confirmed an appreciable rate of compliance with manufacturers' maintenance schedules. [19] Vehicle condition is therefore an issue in RS and ED as unfit vehicles which fall short of minimum safety standards often malfunction causing delays, congestions and RTC thereby stunting Nigeria's economic development.

108. The issues discussed above have serious implications for RS and ED in Nigeria. They have therefore brought up the need to appraise the contributions, if any, of RS to ED in Nigeria. These are discussed subsequently.

CONTRIBUTIONS OF ROAD SAFETY TO NIGERIA'S ECONOMIC DEVELOPMENT

109. This section covers the contributions of RS to ED in Nigeria. They are discussed under road traffic management, regulation of road transport fleet operations and improving drivers licensing and vehicle licensing operations.

Road Traffic Management

110. Sustaining free flow of vehicular traffic nationwide through Road Traffic

Management and clearance of obstructions remains a vital tool of productivity of any nation. As established from researches, road traffic gridlocks contribute greatly to loss of man-hours, fatigue and stress. They also often result in RTC, loss of products and damaged raw materials. These conditions create room for wanton criminality, hinder service delivery and ultimately distort productive environment and capacities.

111. According to Oyeyemi, Road Safety administration in Nigeria utilises the traffic control mechanisms to tackle congestions and obstacles on the high ways and major roads through the use of personnel and tow trucks.[20] The current RS institutions in the country are performing creditably well in this regard to alleviate the losses traffic gridlocks cause and ensure free, safe movement of goods and people thereby boosting the country's ED.

Regulation of Road Transport Fleet Operations

112. In 2007, the FRSC introduced a new scheme tagged Road Transport Safety Standardization Scheme (RTSSS). It is a regulatory policy designed to ensure the maintenance of standards among fleet operators in Nigeria as mandated by the NRTR 2012 and includes Operators' Standards. Drivers' Standards and Vehicles Standards, According to Moore, the scheme has achieved tremendous success both on the part of the Corps and the Fleet Operators resulting in improved profit and better organized fleet operations in the country.[21] Pointers to this claim are as highlighted bellow;

a. The regulation of fleet operators in the country via the RTSSS policy has contributed in ensuring sanity, professionalism, enhanced productivity, reduced losses due to frequent breakdown, spoilage, haulage theft, vehicle theft, etc.

b. The Scheme has reduced operational cost, restored confidence in the fleet operators, provided reliable database for decision making, real time transportation business as activities under the Scheme are mostly conducted on-line, encouraging global patronage as fleet operators' information and details are up-loaded regularly on the RTSSS portal in line with world best practices.

c. Reduction in crash rate and loss of properties translate to higher business returns for the owners. The transportation subsector of the economy's key role in the overall attainment of Vision 20:2020 is huge and expectations from the road transport sector are similarly enormous. Setting out minimum requirements and standards has succeeded in entrenching safety consciousness on fleet operators thereby enhancing their profits generally.

d. The use of information technology in the operations of the fleet operators which came through the regulation has made it possible for easy monitoring and control of worker (drivers) and vehicles alike. Thus it is easier to ascertain location, position, route, fuel consumption and drivers' activities while in transit or carrying cargoes.

e. The scheme has instilled the culture of regular or periodic maintenance of vehicles on the fleet operators thereby reducing cost of repairs as a result of breakdown or damage. Therefore cost of running business is reduced while profit is on the increase.

Improvements in Drivers' Licensing Processes

113. The introduction of the Driving School Standardization Programme

(DSSP) by FRSC in 2009, all applicants for first issuance of driver's licenses must present evidence of training at an approved Driving School before the license is processed in any FRSC Driver's License Centre (DLC).

114. By this programme, FRSC regulates, inspects and certifies registered Driving Schools (Private and Government-owned) to operate in conformity to established standards provided in Section 33:3 of NRTR 2012. Through this way, Driving Schools now record larger number of trainees as the programme has raised the profile of their business. The increased patronage has improved their income hugely as compared with the old system. The proprietors in turn pay taxes to the state governments, thereby increasing the states' internally generated revenue.

115. The national chairman, Association of Driving School Proprietors of Nigeria, who is also the proprietor ASO Driving School, Abuja confirmed this much in an interview. According to him, members of his association have recorded an increase of up to 400 percent in patronage and income since the introduction of the programme. Citing himself as an example, he claimed to have increased his fleet of vehicles used for training from 4 in 2009 to 60 in 2014, while he now operates from 16 locations compared to only 2 in 2009. The DSSP has thus contributed to boosting incomes for both governments and individual proprietors.

Improved Driver's License and Vehicle Identification Scheme

116. The National Driver's License Scheme was introduced in February 1990 as the first in the series of schemes intended towards harmonizing drivers' and vehicle licensing procedure in Nigeria. The scheme has achieved through computerization a modernized driver's license and an effective record keeping system in the country while providing a reliable national database on issuance of driver's licenses. Theophilus confirmed in an interview that it has also contributed immensely to the enhancement of traffic laws and harnessing of revenue accruable to the Government from driver's licenses and vehicle number plates.[22] The database is also useful for security agencies.

117. The States Boards of Internal Revenue (SBIR) are key players as it relates to revenue generation in the States. Along with the FRSC and the VIOs, they form part of the tripartite arrangement of the Joint Tax Board (JTB) in the production and distribution of NDL and NVIS. The SBIR or Motor Licensing Authorities (MLAs) carry out the licensing of vehicles and operators in their various States.

118. The components of NVIS include Proof of Ownership Certificate (POC), Road Worthiness Certificate (RWC), Road Worthiness Validity Tag (RWVT), Vehicle License (VL) and Vehicle Identification Tag (VIT). All

these products must accompany the registration of a vehicle which when adhered to, ensure that revenues due accrue to the states. Table of NDL produced per state from 2009 to 2013 is at Appendix 3 and Table of vehicle registration per state is at Appendix 4.

119. In addition, with the upgrade of NVIS by FRSC, it became compulsory that all motorists must purchase at least Third Party Insurance from any recognised Insurance Company that underwrites motor insurance business before the vehicle owner can be issued a POC. This has greatly enhanced the income generated by insurance companies on which they pay taxes to government.

120. Transport investment, congestion and traffic related crashes affect economic growth of towns, cities or nations and Nigeria is not an exception. As government strives to provide physical stock of road infrastructure which positively contribute to economic growth, automobile density and traffic crashes contribute negatively. Road Safety administration in Nigeria has impacted positively towards ensuring reduction in economic disruption resulting from congestion and crashes, among others. This implies that through Road Safety management, economic development is promoted in Nigeria as it enhances access to the development processes, goods, services and income leading to an improvement in the well-being of the people.

These contributions notwithstanding, there are a number of challenges militating against improved RS for ED in Nigeria which will be discussed after taking a look at the summary of findings.

SUMMARY OF RESEARCH FINDINGS

121. The main objective of the study was to evaluate the relationship between RS and ED in Nigeria. The findings are summarised below:

a. Multiplicity of legal instruments and institutions responsible for promoting RS lead to conflicts and detracts from promoting ED in the country.

b. Poor road infrastructures also militate against the promotion of RS thereby impinging on ED.

c. Poor funding for the promotion of RS is inimical for ED

d. Most road users in Nigeria lack RS consciousness and therefore engage in unsafe practices which impinge on the country's ED.

e. Lack of vehicle safety standards is also inimical to the promotion of RS for ED.

122. The "trickle- down effect" theory of RS on ED in Nigeria is borne out from the contributions identified; although they are too little to be appreciated in the face of the daunting challenges.

123. From the foregoing, the study concluded that despite the contributions of RS to ED, there are still challenges militating against RS for ED in Nigeria. These challenges will be discussed in the next section.

CHALLENGES MILITATING AGAINST ROAD SAFETY FOR ECONOMIC DEVELOPMENT IN NIGERIA

124. Several challenges militate against Road Safety for Economic Development in Nigeria. They include multiplicity of agencies and institutions, poor road infrastructure and lack of road user education. Others are inadequate funding and poor vehicle maintenance culture. These challenges are discussed subsequently.

MULTIPLICITY OF LAWS AND INSTITUTIONS

125. The legal instruments mandating multiple government agencies and creating such institutions pose a serious challenge to the promotion of RS for ED. The resultant lack of harmony and collaboration among the agencies implementing the laws makes it impossible to measure performances. In many instances, conflicts have arisen between and among the agencies over the question of jurisdiction and areas of overlapping functions. The production and issuance of drivers' licences and vehicle number plates is

another cause of conflict among federal and state institutions especially as the prevailing situation has revenue generation implications

126. According to Theophilus, Deputy Corps Marshal in charge of Motor Vehicle Administration in FRSC, the legal instruments occasioning multiplicity of institutions with responsibility for same objective draws down the efforts of those agencies rather than aid its achievement. In his view, the agencies tend to compete instead of collaboration to realise the synergy expected of such a symbiotic relationship. Thus, multiplicity of laws and institutions is a challenge for Road Safety and Economic Development in Nigeria.

POOR ROAD INFRASTRUCTURE

127. Nigeria has an impressive record of road network. With about 195,000 kilometres of road network, it has the largest road network in Africa. This is ordinarily expected to boost the country's economic development efforts as a good road network is a prerequisite for an efficient road transport system. According to Oyesiku, road transport is responsible for about 90% of all inter and intra city movement in Nigeria."It is a key element for the economic growth and development of the country.... It should be understood that efficient road network influences both economic growth and cohesion."[14]. He also avers that "road transport has opened vast areas in the

country that has resulted into economic growth. Tracing the history of road development in the country through colonial period to the present, he acknowledged the efforts of the various tiers of government for road development through the platform of National Development Plans. He however concludes that the lopsidedness in sharing road development and maintenance among the 3 tiers of government has negative consequences, a situation whereby the agencies which are least able to construct and maintain roads in terms of funds and personnel have the largest responsibility. The anomaly reflects in the generally poor standard of road constructions at the local level without adequate maintenance system in place.

128. The poor road infrastructure in Nigeria is thus a serious challenge to RS and ED in Nigeria as the movement of goods and people between locations is critical to maintaining a strong economic base. Majority of roads in the hinterland easily get washed away during the raining season due to poor construction standard. This leaves people stranded; evacuation of farm produce and manufactured goods becomes impossible leading to waste and loss of revenue. In addition, bad road condition aids the perpetration of criminal activities on the roads as motorists are forced to move slowly through bad patches which allows criminals commit their crimes, robbing

commuters, sexually assaulting the women and generally making the roads unsafe for the road users and thereby impinging on economic development.

LACK OF ROAD USER EDUCATION

129. The lack of safety awareness and consciousness is very pervasive in Nigeria. There is the fatalistic tendency for road users to view RTCs as natural events nothing could be done to prevent, thereby engage in unsafe acts when using the roads. The lack of road furniture along many roads also contributes to the problem as users who can even interpret the signs have no frame of reference to guide their use. Road planners, engineers and development experts tend to disregard safety components in their execution of construction and maintenance contracts.

130. The lack of safety consciousness among road users is one of the greatest challenges the FRSC is facing in its efforts to promote RS in Nigeria, according to Etuk, the Corps' Public Education Officer. He confirmed that in the course of interviewing motorists apprehended for various traffic offences, majority of them are ignorant of the possible life threatening implications of committing traffic violations like overloading their vehicles, dangerous or wrongful overtaking and excessive speeding. Town planners seem ignorant of locating markets along routes heavily

travelled by vehicles without making provisions for parking space for users. A survey conducted among road users in some states of the federation confirmed this observation as 88% of respondents don't believe they can be involved in RTC. It is logical to surmise therefore that lack of road user education is a challenge for RS and ED in Nigeria.

INADEQUATE FUNDING

131. The promotion of RS for ED is a capital intensive venture as the activities involved and measures to be emplaced require large amounts of funds. For instance, purchase of patrol vehicles for enforcement activities, recovery vehicles for clearing obstructions and sundry other equipment implies expenditures running into billions of naira. Such equipment also have to be replaced often as their constant use lead to reduced life span. Funds are also required for advocacy to get public buy-in for programmes and conduct research.

132. However, funding for RS is only through governments' budgetary allocations which have proved grossly inadequate. Governments have often complained of insufficient resources to provide all the needs of its agencies, advising them to seek alternative sources of funding. Corporate organisations that could be of assistance also claim inability to do so because

of the downturn in the economy. Thus RS organisations have had to suspend, cancel or scale down on projects slated for execution in the pursuit of their mandates. Therefore inadequate budgetary allocation is a serious challenge for RS and ED in Nigeria.

POOR VEHICLE SAFETY STANDARDS

133. The functionality and dependability of a motor vehicle has to do with regular care in compliance with the manufacturers specifications. However, a preponderance of vehicle owners in Nigeria pays scant attention to routine or periodic maintenance of their vehicles. Commercial vehicle owners are worse in this regard as they are mostly interested in the revenues the vehicles can generate for them. In addition, they often engage operators that are also ignorant of the need for regular maintenance and proper handling of the vehicles, being improperly trained.

134. The situation results in frequent breakdown of the vehicles which in turn lead to losses by commuters, inability to evacuate farm produce to markets, damage or theft of goods in transit due to disruption in transportation because of badly maintained vehicles and RTC. Poor vehicle maintenance culture is thus a challenge for RS and ED in Nigeria. These

challenges notwithstanding, there are prospects that RS could improve ED in Nigeria. These prospects are discussed subsequently.

PROSPECTS FOR ROAD SAFETY AND ECONOMIC DEVELOPMENT IN NIGERIA

135. There are prospects for RS and ED in Nigeria. The prospects include the proposed Nigeria Road Safety Strategy (NRSS), the draft National Transport Policy and the introduction of Road Safety Education into the curricula of primary and junior secondary schools. Other prospects are the draft FMW/FERMA template on road maintenance and the approved National Automotive Policy. These are discussed subsequently.

NIGERIA ROAD SAFETY STRATEGY

136. In 2012, the FRSC in collaboration with other major stakeholders produced a document tagged Nigeria Road Safety Strategy 2012-2016. The document spelt out the current RS situation in Nigeria and articulated the desired RS situation. It also enunciated the vision, goals, objectives, targets and initiatives to harmonise various RS efforts towards developing a 5-year plan of action for the achievement of established targets. The document highlighted the global, economic, behavioural political and psychological imperatives that bring up the need for such a document at such a time the

government was making strenuous efforts at developing an inter-modal, integrated and sustainable transportation system for the country.

137. After giving an overview of global Road Safety Management efforts in comparison to Nigeria with particular attention to the targets proposed in the Accra Declaration and the Global Decade of Action (2011-2020) Declaration, the document advocates the adoption of the "Safe System" approach in Nigeria like done in some countries that are already reaping the benefits. It then enumerates the major intervention activities as carried out by notable participants in Road Safety Management currently identifying various challenges they face either as individual participant or as a group.

138. The document then draws out a 5-year perspective plan, using a matrix to describe the proposed Road Safety Vision and goals with specific objectives modelled after the 5 pillars of the UN Decade of Action. The strategic objectives are to engender an improvement in RSM, to promote safer roads and mobility and to ensure availability of safer vehicles. Others are to develop safer road users by instilling a culture of personal responsibility for safe road use and to promote prompt and effective response to victims of RTC.

139. The Nigeria Road Safety Strategy concludes with a proposed implementation plan which lists out step by step actions and those to take

them in realisation of the specified objectives. It also indicates dates and performance indicators for measuring success. An extract of the NRSS is at Enclosure 1. The approval for implementation of the NRSS is therefore a prospect for RS and ED in Nigeria.

DRAFT NATIONAL TRANSPORT POLICY 2010

140. The Draft National Transport Policy 2010 acknowledged the dilapidated condition of road infrastructure in the country, blaming past neglect on inadequate resources. It set out government's policy objectives to include raising new sources of revenue to close the resource gaps, measuring efficient road maintenance and rehabilitation and protecting the roads from premature deterioration. The policy then breaks down the detailed actions to be taken towards the realisation of each objective.

141. For funding, the policy proposes to raise funds through government allocations, road user charges and private sector investment. Other sources are introduction of toll roads and maintenance of a road fund to be administered by a National Road Commission. On the objective of ensuring efficient road maintenance and rehabilitation, the policy proposes a reassignment of responsibilities by which the sharing of the road network will be at the ratio of 50-30-20 among the federal, state and local

governments respectively. It is the belief of the policy that since an essential principle of sound governance is that responsibilities should be focused at the level that has the knowledge and understanding of the problem and the capability to address them. In that regard, the federal and state governments have higher capabilities to ensure timely and adequate road maintenance. It is also proposed that government will intervene to promote stronger private sector involvement to evolve a government-private sector partnership in road transportation business to enhance productivity. The intervention is to be by grouping small vehicle owners into cooperatives to enable them operate bigger vehicles, have access to loans and credit facilities. Lastly, the policy highlights government's readiness to revive rail transportation as a means of reducing the pressure on roads. The approval and implementation of the draft National Policy on Transportation 2010 therefore holds bright prospects for RS and ED in Nigeria.

INTRODUCTION OF ROAD SAFETY EDUCATION

142. The FRSC in collaboration with the Nigerian Educational Research and Development Council (NERDC) succeeded in infusing Road Safety Education into the curricula of primary and junior secondary schools in Nigeria in 2011. The National Council for Education gave approval for the

utilisation of the curricula the same year. The aim of the infusion is to have children learn basic road safety consciousness at tender ages such that as they grow up, it would be second nature to them and they would evolve to become safer adult road users.

143. By the time of their final examinations in 2015, pupils in final year primary school and those concluding their junior secondary education would be examined in Road Safety Education. However, not all the states commenced the implementation simultaneously as expected and as such may have the realisation of the objective delayed. Notwithstanding that situation, the introduction of RSE into schools' curricula holds a good prospect for RS in Nigeria. These prospects, if supported by the appropriate strategies would improve RS for ED in Nigeria.

NOTES

1. K Nwaegbe, "Management of RTC Victims: Challenges and Prospects" A presented to the National Institute for Policy and Strategic Studies in partial fulfillment of requirements for the Award of Membership of the Institute, (Unpublished) 2009.
2. Federal Government of Nigeria, Draft National Transport Policy 2010 < http//www.kyg.nigeriagovernance.org.>, accessed 22 Apr 15.
3. **Ibid.**
4. Ighodaro CAU, "Transport Infrastructure and Economic Growth in Nigeria" in Journal of Research in National Development vol. 7, No. 2 Dec, 2009. Retrieved 20/May,2015
5. **Ibid.**
6. **Ibid.**
7. O Jatto, Former Head of Finance and Account, Abuja "Federal Road Safety Corps interviewed on Road Safety and Economic Development: An Evaluation" Via phone, 18 Jan 15.
8. AZ Mohammed, Manager Research, Documentation and Corporate Services Abuja, Nigeria Association of Road Transport Owners (NARTO) interviewed on "Road Safety and Economic Development: An Evaluation" Via Phone , 6 Feb 15.
9. Federal Government of Nigeria, 1999 Constitution of the Federal Republic of Nigeria, Op Cit.
10. **Ibid**.
11. C Theophilus , Deputy Corps Marshal, interviewed on "Road Safety and Economic Development: An Evaluation" Federal Road Safety Corp Abuja, 16 Feb 15.

12. OF Olawoyin, Corps Commander, Department of PRS, FRSC Abuja, interviewed on" Road Safety and Economic Development: An Evaluation", 16 February 20 15.

13. **Ibid**.

14. CAU Ighodaro, Op Cit

15. A Odutola "Why Nigeria Roads Are Famished" in Tell Magazine issue No.2 Jan 12, 2015 p.26.

16. O Jatto, Op.Cit

17. AG Kazeem, Corps Commander, Department of Training, Standards and Certification, FRSC Abuja, interviewed on "Road Safety and Economic Development in Nigeria: An Evaluation" on 16 Feb 15

18. AA Abu, Deputy Corps Marshal, Department of Operations, FRSC Abuja, interviewed on" Road Safety and Economic Development in Nigeria: An Evaluation" on 16 February, 2015

19. O Olawoyin, Op. Cit.

20. BO Oyeyemi, Corps Marshal and Chief Executive, FRSC interviewed on "Road Safety and Economic Development in Nigeria: An Evaluation" on 26 April, 2015.

21. A Moore, Corps Commander, Transport Standardization Officer, FRSC, Abuja interviewed on "Road Safety and Economic Development in Nigeria: An Evaluation" 26 Apr 15.

22. C Theophilus, Op.Cit.

CHAPTER 4

STRATEGIES TO MITIGATE THE CHALLENGIES OF ROAD SAFETY ON ECONOMIC DEVELOPMENT IN NIGERIA

144 This chapter discusses the strategies to overcome the challenges of RS on ED in Nigeria. The strategies include the establishment of a NRSMC, the approval and implementation of the draft National Transport Policy 2010 and the implementation of the FRSC initiative on Road Safety Education. Others are the provision of adequate funding for Road Safety and the implementation of the NRSS proposal on safer vehicles. Lastly the chapter highlights the action plan for the effective implementation of the strategies.

ESTABLISHMENT OF A NATIONAL ROAD SAFETY MANAGEMENT COUNCIL

145. The establishment of a NRSMC as proposed in the NRSS could overcome the challenge of multiplicity of legislation and institution for Rs matters in the country. As the body would be the highest decision making body on Road Safety in the country with membership drawn from all stakeholder groups, the body would be able to harmonise the various legislations on road safety in Nigeria with a view to resolving the conflict areas. The proposed reviews would consequently align roles and responsibilities to the respective tier of government specifying limitations of

jurisdictions. Such harmonisation will eliminate overlaps, friction among agencies and achieve synergy of efforts to promote RS for ED.

146. The Federal Government of Nigeria could constitute a committee of the stakeholders to review the NRSS and bring it up to date to reflect developments since 2012. Subsequently, the reviewed and updated NRSS would be forwarded to the NASS for approval by First Quarter 2016. The document would then be the adopted Road Safety Strategy for implementation nationwide.

DRAFT NATIONAL TRANSPORT POLICY 2010

147. The strategy of implementation of the Draft National Transport Policy could mitigate the challenge of poor road infrastructure in Nigeria. The policy provides for various interventions for road construction of the ratio of the responsibility to reflect the realities of capability over the largest proportion of the roads. It also proposes to bring in private sector participation through concessions and raise funds through the introduction of toll roads; road user charges, vehicle registration fees, fuel taxes and vehicles import taxes. The policy also aims to resuscitate the Nigerian Railway system by rehabilitating the existing railway infrastructure, moderate and expand the rail network to link all sea ports, air ports and

major industrial and economic centres. This is with a view to transforming the Nigerian railway system to a dynamic, more functional transportation system and encouraging the use of the rail as an alternative mode of transport to complement the roads. See extract of NTP 2010 at Enclosure 2.

148. The Federal Government of Nigeria could activate the implementation by setting up a committee towards reviewing the draft policy to 2015 situation and of the various plans by forwarding the necessary bills to the NASS for the necessary enactments to create the proposed National Roads Commission and readjustment of road ownership. This could be done by first quarter 2016.

FRSC INITIATIVE ON ROAD SAFETY EDUCATION

149. The challenge of road user education could be mitigated by the implementation of the FRSC initiative of introducing Road Safety Education into the curricula of primary and junior secondary schools. Already identified as a strategy for behaviour modification among vehicle operators in the National Transport Policy 2010, the intervention provides for the teaching of basic road safety consciousness to youths as a means of inculcating into them a road safety culture. However the FGN could monitor strict implementation of the initiative by causing the FRSC in collaboration

with the Federal Ministry of Education follow-up on the implementation through periodic inspection and evaluation assessments. This could commence by 4th quarter 2015 to coincide with the school calendar.

PROVISION OF FUNDING FOR ROAD SAFETY

150. The strategy to set up a National Road Commission to which revenues from toll roads, fuel and vehicles importation tax, vehicles registration fees, concessions etc would accrue could mitigate the challenge of inadequate budgetary allocation for RS programmes. The funds accruing to the commission through the listed sources would be distributed to the various road safety related organisations for road maintenance, procurement of needed equipment advocacy and research programmes etc in accordance with pre-determined guidelines. The FGN could constitute a committee to work out modalities for the composition of the NRC by fourth quarter, 2015 such that the provisions can be factored into the 2016 Appropriation Bill for commencement.

IMPROVED VEHICLE SAFETY STANDARD

151. The challenge of poor vehicle maintenance culture could be mitigated by implementation of the strategies proposed in both the NRSS and the

National Transport Policy 2010. The proposed strategies include a review of all existing standards for all vehicle types and the enforcement of compliance with all vehicle standards. Also the Draft NTP 2010 proposed to examine, restructure, empower and equip the existing institutional bodies for traffic safety delivery (FRSC , the Nigeria Police and VIOs) to enforce road safety regulations. It also aims to prepare and introduce a strict vehicle inspection regime.

152. The FGN could initiate implementation by constituting a committee of stakeholders including FRSC, VIOs, and Nigerian Customs Service etc to conduct a comprehensive review of all existing vehicle inspection procedures with a view to overhauling them to bring them up to the realities of 2015. The committee should then draw up modalities towards realisation of the stated objectives. These could be achieved by Fourth Quarter 2015 with a view to commencing full implementation by First Quarter 2016.

IMPLEMENTATION PLAN FOR THE STRATEGIES

153. The strategies proposed for the promotion of RS for ED in Nigeria require a synchronised action plan in order to achieve effective implementation. Accordingly, a 3-phase implementation plan is hereby proposed as outlined below.

154. **Phase One (0 – 12 Months)** Phase one is the preparatory stage and includes actions that would kick start the process of implementation. The phase will entail the setting up of committees simultaneously as detailed below.

a. FGN to set up a committee comprising major stake holders in RS including FRSC, Chairman Governors Forum, Ministers for Works, Transport, Finance, IGP, Chairman Joint Tax Board, President Nigeria Society of Engineers, Representatives of Road Transport trade unions- NURTW, NARTO, LUBAN and the Attorney-General of the Federation to review and update the proposed NRSS to bring it up to 2015 situation by First Quarter of 2015.

b. The committee would submit its report to the FGN after 3 months for observations, vetting and approval by First Quarter 2015.

c. The FGN would forward an executive bill to the NASS for the necessary legislation towards the establishment of the various bodies and the constitutional amendments to back the implementation of the approved NRSS. The process could take about 9 months by First Quarter 2015.

155. **Phase Two (13 – 36 Months)** This is the implementation stage of the strategy.

a. The major stakeholders like the FGN and its agencies, state governments and their agencies engage in aggressive publicity and advocacy to get public support and buy-in for the strategy. Other stakeholders like road construction companies and other private sector investors could be invited to play expected roles like road concession, toll road management, and rail infrastructure management. Participatory bids could be processed during the period to factor in funding sources for the implementation of the strategy by Second Quarter of 2017.

b. The FGN would constitute a committee to comprise Representatives of the FRSC, NCS, and Federal Ministries of Works, Transport, Finance, Health, Environment, Road Transport Unions, State Governments and Automobile Engineering experts to draw up new modalities for vehicle inspection in the country. The committee would review all vehicle inspection procedures and certification currently obtainable nationwide with a view to overhauling them towards ensuring all vehicles plying the roads meet minimum safety standards.

151. **Phase 3: (36- Months above).** This will constitute the activation stage.

a. The FGN activates the approved NRSS by constituting the proposed National Road Safety Management Council with the Vice President as chairman. The various committees of the council could also be inaugurated to act upon the proposed interventions.

b. The road transport aspect of the NTP is activated by constituting the proposed National Roads Commission to implement the proposals on the introduction of toll roads, road user charges and road concessions.

c. The activation phase could commence by First Quarter 2017 as the preparatory and implementation stage would have provided the necessary foundation for effective activation of the strategies. More so, the financial implications of the various activities could be factored into the 2017 national and state budget proposals.

CHAPTER 5

CONCLUSION AND RECOMMENDATIONS

152. This chapter entails the conclusion and a set of recommendations. The conclusion segment sums up this study and thereafter, the recommendations are outlined.

CONCLUSION

153. The study evaluated the contributions of RS to ED in Nigeria. It found that for a long time Nigeria had a bad record as the worst country in the world in terms of RTC, second only to Ethiopia. It was also established that the chances of someone dying from involvement in RTC on Nigeria's road was 47 times higher than that of Britain. The situation had negative effects on the country's ED as it occasioned loss of revenue through damaged goods in transit, wasted raw materials or farm produce that could not be evacuated to markets; commuters open to criminal attacks due to congestion caused by bad road condition. Several efforts over the years by various governments to address the problem do not seem to yield much fruit.

154. The study also found that there were major issues arising from RS and ED in Nigeria. These included multiple legal instruments and institutions for

RS, road infrastructure and funding for RS. Others were road user education and vehicle condition. The study highlighted that the multiple legislation and institutions handling RS matters gave rise to conflicts, unwarranted competition and overlaps which hinder the promotion of RS for ED. It also found that several factors causing lack of RS need simultaneous intervention if ED is to be enhanced.

155. The study identified some contributions RS is making to ED which include road traffic management by which congestions and traffic gridlocks causing obstructions are cleared and improved drivers' licensing and vehicle identification schemes through which state governments have raised their IGR.

156. Despite the contributions, the study revealed that there are challenges militating against RS for ED in Nigeria. The challenges include the multiplicity of laws and institutions for RS, poor road infrastructure and lack of road user education. Others include inadequate budgetary allocation for RS programmes and poor vehicle maintenance culture. The challenges have made the promotion of RS for ED and seemingly unrealisable. These challenges are predicated upon the multiple laws and institutions arising from constitutional provisions, bad road infrastructure due to long neglect of

maintenance requirements and inability to carry out RS activities due to inadequate budgetary provisions.

RECOMENDATIONS

157. It is recommended that the Federal Government of Nigeria should:

a. Commission a review of the FRSC proposed Nigerian Road Safety Strategy (NRSS) 2012-2016 with a view to bringing it up to current realities by Fourth Quarter 2015 to First Quarter 2016.

b. Cause a review of the Draft National Transport Policy 2010 to update it to current realities of 2015.

c. Mandate the National Council on Education to evaluate the level of implementation of Road Safety Education in primary and Junior Secondary schools in the country.

d. Constitute a committee to overhaul procedures for vehicle inspection and certification in the country with a view to ensuring the maintenance of minimum vehicle safety standards.

e. Initiate the amendment of relevant sections of the constitution to accommodate the implementation of the provisions of the NRSS.