

ORIGINAL RESEARCH ARTICLE

THE NIGERIA'S ROAD NETWORK: THE HORROR-HIGHWAY OF DEATH

ABSTRACT

Road accident is the most reoccurring event in the Nigeria's highways but the most neglected field of study by researchers in the academia. The reoccurring accidents that happens in the Nigeria's Trunk A, Trunk B and Trunk C roads on a daily bases are very alarming, with huge loss of lives loss, due to the poor conditions of roads and inadequate maintenance by it citizenry and governments at all level. It is with this concern in mind that this paper draws it objectives, which are to: understand the importance of road transport network to lives and the socio-economic development of the Nigeria; examine closely the poor state of road transport network in the country; and evaluate the cases of road accidents and deaths in Nigeria. Findings of this research show that Nigeria roads are characterized by potholes, gallops, slippery, bumps, untied roads, bushes, mud, poor bridges, stones and gravels, which causes road accidents in the country amongst other factors. Research finding also shows that Nigeria roads network is nothing but highways leading to death. The methodology of this paper is qualitative, using secondary source materials and participant observation. The conclusion of this paper draw strong recommendation on adequate road maintenance at all level of governments and the Nigeria citizens.

KEYWORDS: Road network, transport, accident, lives and death

INTRODUCTION

Road transportation is of paramount importance to every society and country. It dictates the pace of socio-economic development in any country. No economy in the world can thrive where there is no good road. Roads play an important role to the increase of any country's gross domestic product (GDP). There is a positive correlation that exists between a country's economic growth and the standard of its road network. A country's roads network should be designed and constructed in a systematic manner that the intended social cultural

and the economic benefits can be maximized.¹ Building of transport infrastructure is one of the key factors on which a country's growth depends. The transport system is seen as the controller of the country's economy and offers a vital link between production and consumption. The amount of traffic moving on the roads of the country can demonstrate its development and progress.²

Paradoxically speaking, in a country where there is no functional railway system, roads are the only means of transport movement for people and goods from one geographical location to the other. Unfortunately, Nigerian roads are in very deplorable conditions going by complaints across the nation.³ It is of importance to highlight that Nigeria roads have often being characterized with long cracks, potholes and other pavement defects. This has posed a serious challenge and disaster, such that in Nigeria one can hardly travel a kilometre without coming across a long cracks and potholes. This has resulted to a spike in the number of road accidents and a plunge on the nation's economic development. Every single road built are often known to have a stipulated design life; but roads often times fail long before the planned expected date; some fail after construction, some after flooding while others last to its entire life expectancy with appropriate maintenance.⁴ The resultant effect of these bad or poor conditions of roads is thus the loss of lives and properties; poor economic growth, problem in the supply chain, breakdown in motorists; poor agricultural supplies and worse! Highway robbers have taken advantage of the condition of roads in Nigeria to perpetrate evil. Amongst all the factors listed, the more disturbing is the loss of able lives on Nigeria's roads. Sumaila noted that this situation in Nigeria has been exacerbated by the near absence

¹ C. A Ighodalo, "Transport Infrastructure and Economic Growth in Nigeria", *Revised Paper Submitted for Presentation at the First International Conference on Transport Infrastructure (ICTI 2008)*, Beijing, China. April 24-26, 2008

² TruckGuru, "Importance of the Road Transportation Services in Economic Development of the Country" Posted on 02/11/2018

³ Kingsley Adegboye, "No motorable roads in Nigeria", *Vanguard News Paper*, July 25, 2017

⁴ U. O Emmanuel, I. Ogbonnaya, & U. B. Uche, "An investigation into the cause of road failure along Sagamu-Papalanto highway southwestern Nigeria," *Geo-environ Disasters*, 8, 3 (2021). <https://doi.org/10.1186/s40677-020-00174-8>, 2

of alternative modes of transportation as an estimated 90% of passengers and freight in Nigeria rely on the road network, with the attendant challenge of increased number and incidence of road traffic crashes.⁵ Factoring this analysis within the proper argumentative framework, the Vanguard Newspaper of 25th July, 2017, reported that the terrible state of Nigeria's roads has resulted to untimely deaths of innocent Nigerians and foreigners through avoidable accidents.⁶ Although there are many causes of road accident ranging from reckless and dangerous driving, driving without licence, excess speed, alcoholism, faulty pedestrian attitude, etc. but what seem to take hold among the causes is the state and nature of the Nigeria's road. The bad condition of the Nigeria's road defines the scope of this paper and it is within the core of this problem that the thrust of this paper lies.

IMPORTANCE OF ROAD TRANSPORT TO NIGERIA ECONOMY

Transport is the means by which people and commodities are moved from one place to another by a number of physical modes including roads, water, railways, airlines and pipelines.⁷ In comparison to other means of transportation, road transport plays a fundamental role in passenger and freight transport nowadays, especially for short and medium distances. Road transportation has an advantage of higher operability and availability.⁸ According to Ahiaba, road transports are of vital importance in order to make a nation grow and develop. The wellbeing of the economy and hence the progress of the nation is therefore inevitably tied to the state of our roads.⁹ A good maintained roads also will enhance poverty reduction by improving access between regional and rural communities and, ultimately, enhancing

⁵ A. F. Sumaila, "Road crashes trends and safety management in Nigeria," *Journal of Geography and Regional Planning*, 2013, 6(3). 53-62, 54

⁶ Kingsley Adegboye, "No motorable roads in Nigeria", Vanguard News Paper, July 25, 2017

⁷ M. Aldagheiri "The role of the transport road network in the economic development of Saudi Arabia" (Department of Geography, Qassim University, Saudi Arabia, Urban Transport XV) www.witpress.com, ISSN 1743-3509 (on-line), WIT Transactions on The Built Environment, Vol 107, ©2009 WIT Press, Urban Transport XV275, doi:10.2495/UT090251, 275

⁸ I. Dostál & V. Adamec, "Transport and its Role in the Society" In Transactions on Transport Sciences, (Transport Research Centre, Brno, Czech Republic), Volume 4: Number 2, DOI: 10.2478/v10158-011-0006-8, 1

⁹ A. O. Ahiaba, "Public Private Partnership and Stakeholder Participation In Road Management In Nigeria" Trans-Saharan Road Liaison Committee Stage In Tunis 16th-29th May 2006, 2

socio-economic growth and development. In a nation like Nigeria, road transport networks form the vital links between production centres and markets, since majority of the population reside in the rural areas. In addition, road transport has multiple function of providing access to employment, social, health and education services, which makes road transport network crucial in fighting against poverty by opening up more areas and stimulating economic and social development.¹⁰ An efficient road transportation system is of vital importance for the economic development of Nigeria. Putting the importance of road transport into cognizance, it is therefore, imperative for Nigeria to have a transport policy, which will secure public services and encourage trade and industry in all parts of the country.¹¹ In analysing the importance of road transport, Aldagheiri opined that the development of road transport network plays an important role in the economic development of Nigeria because the kilometre-age of paved roads existing in a country is often used as an index to assess the extent of its development. The proper development of the road transport network not only reduces the cost of transportation, both in terms of money and time, but also helps in the integration of various regions within the country and the better understanding of neighbouring countries at the international level. According to Aldagheiri road transport network contributes to the development of a country by bringing in direct benefits from its role in the development of some sectors, such as minerals, agriculture, industry and commerce.¹²

Reacting to the above, Edith and Emmanuel stated that, road transport network is an important component of the economy; impacting on development and the welfare of populations. Road transportation penetrates further into the nooks and cranny of the human

¹⁰ Kjell Levik, "How to sell the message: Road maintenance is necessary, to decision makers", 2

¹¹ Levik, "How to sell the message,3

¹² Aldagheiri "The role of the transport, 275

environment than other means of transportation in Nigeria.¹³ Olubomehin in line with Edith and Emmanuel also emphasized that the presence of an adequate, reliable and efficient transport system is a critical factor in local economy development. A well-developed transportation infrastructure provides adequate access to local communities, which in turn is a necessary condition for the efficient operation of manufacturing, retail, labour and housing markets. Road transport is a wealth creating industry on its own as well as the life-line of an economy.¹⁴ By “lifeline”, we mean that road transport network is very important for the survival and sustenance of any economy. It is indeed worthy to comment on the view of Camemark, where he posited that, the provision of a high quality transport system has been identified as a pre-condition for the full participation of remote communities in the benefit of national development.¹⁵ Road transportation opens up new areas of economic activities, increases agricultural production, revitalizes 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,¹⁶ makes it unique and accessible to all Nigerians.

Road transport network is very important in any infrastructural development in any country. Gibbons et'al argued that, better road transport infrastructure brings places and people closer together.¹⁷ According to them, better infrastructure has two effects on the actual

¹³ Edith Aghadiaye Olamigoke and Adebayo Adewunmi Emmanuel, “The Role of Road Transportation in Local Economic Development: A Focus on Nigeria Transportation System” *Developing Country Studies*, ISSN 2224-607X (Paper) ISSN 2225-0565 (Online), Vol.3, No.6, 2013, (accessed 20th May, 2021), retrieved from www.iiste.org, 46

¹⁴ O.O. Olubomehin, (2012). Road Transportation as Lifeline of The Economy in Western Nigeria, 1920 to 1952. *African Journal of History and Culture*, 4(3), 2012, 37-45, 38

¹⁵ C. Camemark, “Some Economic, Social and Technical Aspects of Rural Roads,” 1979, Dhaka: ESCAP Workshop on rural Roads. (accessed 14th June, 2019), Available at: www.scribd.com/doc/2423416/Role-of-Transport-in-EconomicDevelopment, 3

¹⁶ Edith and Emmanuel, “The Role of Road Transportation, 46

¹⁷ Stephen Gibbons, Teemu Lyytikäinen, Henry Overman, and Rosa Sanchis-Guarner, “Road Transport: the Effects on Firms”, Preliminary Draft, This study has been presented at the Urban Economic Association

size of the markets. Firstly, for a given location of firms and workers, effective density increases, as it becomes easier to reach other locations using the improved transportation network. Secondly, new infrastructure increases the attractiveness of locations, which may boost spatial concentration if firms and workers relocate.¹⁸ The importance of road transport network in this case should not be taken for granted by any government, most especially the Nigerian Government. In reaction to the above, Kolluru and Ponnampalamedu revealed that vital road infrastructure is regarded as an important determinant for the success of a nation's effort in diversifying its production base, expanding trade and linking together resources and markets into an integrated economy. It is also necessary for connecting villages with towns, market centres and in bringing together remote and developing regions closer to one another.¹⁹

In line with the importance of road transport network, Jain and Dhiman expressed the view that in any economy road transport infrastructure act like a baseline to ensure continues smooth flow of movability of public and goods as input and output from all economic sectors are transported. There is a need therefore to maintain and improve the existing road transportation and build new infrastructures for a national wealth.²⁰ Ivanova and Masarova added to the view by stressing the fact that road transport network transcends national boundaries, the expansion and upgrade of road network is vital to increase economic performance. Hence, poor road infrastructure poses hindrance to foreign investments in countries depending on them in terms of their economic performance and competitiveness enhancement.²¹ Looking at the importance of road transport from the lens of

Meetings (Denver, November 2010) and at the SERC Work in progress seminar in December 2010. (Accessed at 20th May 2021), Available at: <https://www.parisschoolofeconomics.eu> › pdf, 1

¹⁸ Gibbons et'al, "Road Transport, 1

¹⁹ Srinivas Kolluru and Kiran K. Ponnampalamedu, "Explaining the Significance of Transportation Lead Time in Indian Road Logistics: An Econometric Analysis" *Serbian Journal of Management*, 4 (2) (2009) 203 – 213, 203

²⁰ Seema Jain and Pawan Kumar Dhiman, "Road Transport in Economic Development" In *International Journal of Management and Applied Science*, ISSN: 2394-7926 Volume-3, Issue-9, Sep.-2017, <http://iraj.in>, 33

²¹ Eva Ivanova and Jana Masarova, "Importance of Road Infrastructure in the Economic Development and Competitiveness" In *Journal of Economics and Management*: 2013. 18 (2), ISSN 2029-9338 (Online) (accessed 20th May, 2021), Available at: <https://open.uct.ac.za> › handle, 263

Jain and Dhiman, we agree with them that the consequences of economic liberalization demand of transport services drastically increased in recent years, and the demand has been shifted to mainly road transport. Easy accessibility, flexibility of operations, door to door service and reliability has earned road transport an increasingly higher share of both passenger and freight traffic than other modes of transport.²² Thus road infrastructure is essential for banishing hunger, alleviating poverty, and improving the quality of human life. Road transport is a means of transport that offers door-to-door transport which is suitable for the delivery of finished goods to consumers. Road infrastructure has the potentials of transforming subsistence farming into a commercial and dynamic farming system which unlock the potentials embedded in rural areas. Understanding the conditions in which more or new road infrastructure does indeed foster economic growth is crucial for efficient management of road infrastructural project.²³ Agbigbe is of the view that road transportation infrastructure investment produces real and measurable economic impact that comes directly and indirectly from the ability of businesses to get access to production inputs and marketplaces essential to the country's economic vitality and development. Although individual strata experiencing benefits may vary, transportation infrastructure significantly influences individual mobility and can be linked to economic stratification of the population, all of which can benefit a nation's productivity. A country's transportation infrastructure influences economic development in two ways: as an independent factor of production and through its impact on total productivity progress and therefore on economic development.²⁴

It is also important to note that road transport is tight to the success of agricultural production. Khan observed that agriculture constitutes the predominant sector of the economy

²² Jain and Dhiman, "Road Transport, 33

²³ Sidiq Okwudili Ben, "Significance of Road Infrastructure on Economic Sustainability" In American International Journal of Multidisciplinary Scientific Research; Vol. 5, No. 4; 2019, ISSN 2638-1249 E-ISSN 2638-1273, Published by Centre for Research on Islamic Banking & Finance and Business, USA, 1

²⁴ William A. Agbigbe, "The Impact of Transportation Infrastructure on Nigeria's Economic Development" (Walden Dissertations and Doctoral Studies, Walden University, College of Management and Technology, 2016), 5

of underdeveloped countries. The need for food and the extremely low level of efficiency in agricultural production demand that most of the labour force and land resources in low income countries be engaged in agriculture.²⁵ The means of transport are an indispensable pre-requisite for development of the agriculture sector. The raw material and food stuff produced in the country side are to be transported to the required places and the manufactured goods produced in the factories located in the cities and other goods not produced in the rural areas to be sent to villages. Thus road enabled traders to move from different geographical areas everywhere to purchase goods for resale or for housekeep and movement of goods from agricultural production centres to market for sale.²⁶ There should also be a good means of transport for the supply of all the material required from out-sides for agricultural development such as fertilizers, good quality of seeds and suitable implements. The development of cottage and small scale industries, which are required to supplement the income of the rural people from agriculture, also depends on an efficient means of road transport which may be required for the supply of raw materials and appliances and the transport of goods produced by such industries to the required places.²⁷

The importance of road transport to distribution of goods and services cannot be left out. Mellor stated the importance of road transportation as readily available! Efficient transportation according to him has been shown to be important to several aspects of adequate market performance. Poor and expensive transportation increases marketing costs in a number of ways with some of the effects having a very substantial absolute and percentage

²⁵ Ahmad Saghir Khan, "Role of Road Transportation in Economic Development of Underdeveloped Countries" (Interdepartmental Program in Regional and Community Planning, Kansas State University Manhattan, Kansas, 1968), 26

²⁶ I. Dostál & V. Adamec, "Transport and its Role in the Society" In Transactions on Transport Sciences, (Transport Research Centre, Brno, Czech Republic), Volume 4: Number 2, DOI: 10.2478/v10158-011-0006-8, 12

²⁷ Khan, "Role of Road Transportation, 27

effect.²⁸ Road transportation plays significant role in production and marketing of product from the producers to the consumers. As Engström would argue:

The use of the road for freight movements allows products to be available to customers. It creates time and place utility. The product can be where it is needed when it is needed. Since freight transport can typically be understood as a cheap factor of production the truck transports are often used in a way that might not be optimal from a freight efficiency perspective, but may be optimal when taking the logistical chain -including production and warehousing strategies -into account. However, road freight transports definitely have drawbacks for our current and future society and its inhabitants. Roads have an aesthetical dimension if they are used or not. Roads can constitute a barrier. Road freight transport is a source of congestion. Freight transports reduce the available capacity for passenger movement. The most severe consequences of the use of roads for freight transports deal with sustainability. This includes economic sustainability for individuals, companies and society; environmental sustainability for current and future generations and the survival of planet earth; and social sustainability for traffic accidents, working conditions and gender equality. Even though these are just a few examples it is clear that all three of these dimensions are interrelated and must be addressed.²⁹

The role of road transport network in the society has generally always been to add value to a person or a commodity. Roads facilitate the transport process and improve logistic utility.³⁰ Thus in a nutshell, a good road network promotes the distribution of agrarian goods and creates additional opportunities for the agricultural sector. Good transport infrastructure results in the development of markets and market operations. With better transportation infrastructure, it will be easier to provide inputs to workers in the farms as well as products to markets which will contribute to the growth of the agro-allied industry. Improved transportation inspires farmers to work harder to increase their production, get value products, minimize the spoilage, and wastage. Hence, if the transportation services in the rural area are good, it will greatly impact the farmers' productivity, employment, income and

²⁸ John Mellor, *The Economics of Agricultural Development*, (New York; Cornell University Press, 1966), 30

²⁹ Rikard Engström, "The Roads' Role in the Freight Transport System" 6th Transport Research Arena April 18-21, 2016, The Swedish Transport Administration, Kruthusgatan 17, 405 33 Göteborg, Sweden, Transportation Research Procedia 14 (2016) 1443 – 1452 Available online at www.sciencedirect.com, 1444

³⁰ Engström, "The Roads' Role, 1446

also decreases the poverty.³¹ However, despite these multiple advantages, vehicle crashes and road accidents have continued to take hold on lives and properties, distort economic development and national growth.

CONDITION OF NIGERIA'S ROADS

The condition of Nigeria's roads is very poor and the deplorable state of Nigerian roads can best be described as a national shame and embarrassment. This is because most of the roads across the nation, whether Trunk A roads which are federal, or Trunk B which are state roads or Trunk C roads which are local government roads, are in decadent state, and there is hardly any part of the country that can boast of decent motorable roads,³² because all the roads are in terrible state even after almost 17 years of uninterrupted democracy in the country.³³ According to the Government Concession Regulatory Commission, Nigeria has the largest road network in Africa with about 195,000km of road network of which about 60,000km are paved and about 135,000 kilometres of road network in the country were un-tarred or in very bad condition.³⁴ The Federal Government is in charge of about 34,000 kilometres, states 50,000 kilometres and the local governments 111,000 kilometres. Unfortunately, no tier of government has done well enough on matters of roads construction and maintenance.³⁵ It is quit unfortunate that in spite of Nigerians petro-dollar wealth, Nigeria's highways are dilapidated and unmotorable such that travel experiences on these highways are not only harrowing and expensive,³⁶ but a sure highways leading to untimely death.

³¹ TruckGuru, "Importance of the Road Transportation Services in Economic Development of the Country" Posted on 02/11/2018

³² Kingsley Adegboye, "No motorable roads in Nigeria", Vanguard News Paper, July 25, 2017

³³ Editorial Board, "State of Nigeria's roads," *The Guardian Newspaper*, 23 September 2016

³⁴ Racheal Ishaya, Infrastructure Concession Regulatory Commission (ICRC), "Infrastructure Concession Regulatory Commission (ICRC)," <http://www.nan.ng/news/135000km-road-network-nigeria-un-tarred-icrc/>

³⁵ Editorial Board, "State of Nigeria's roads," *The Guardian Newspaper*, 23 September 2016

³⁶ The Editorial Board, "Improving the condition of Nigerian roads" *BusinessDay*, Aug 13, 2020

The lamentation by road transport workers on the deplorable condition of roads in the country and their consequent threat to increase transport fares should be understood by all Nigerians. Recently, luxury bus owners and association of private companies of Nigeria announced plans to increase transport fares by as much as 70 per cent, citing unbearable rising maintenance costs and terrible road condition in the country.³⁷ The terrible situation of bad roads in Nigeria are observed in the countries highways such as Lagos-Ibadan expressway, Lagos-Abeokuta expressway, Ibadan-Akure road; Shagamu-Ore road, Onitsha-Enugu-Port Harcourt road, Abuja-Lokoja road, Ikorodu-Shagamu road, Okene-Lokoja-Abuja, Jos-Abuja road, Jos-Kano road, Jos-Zaria road, Bauch-Maiduguri road, Gombe-Adamawa road, Nasarawa-Makurdi road, Abuja-Lokoja road, Kogi-Benin road, Oyo-Ogbomosho road, Benin-Shagamu road, Gombe-Taraba road and Rijau-Kontagora road in Niger State, and several others have become a nightmare to motorists who ply them on daily basis. There is hardly any day an accident or accidents are not recorded as a result of this pitiable condition of Nigerian roads. Specifically, Apapa roads are worst hit by this decadence. Whether accessing Apapa through Oshodi-Tin Can end or through Wharf Road, the situation has remained irredeemable for years now. The experience navigating through Apapa during rainy season becomes more terrible as vehicles break down, heavy-duty trucks overturn or get stuck in the mud while motorists disembark at very terrible sections of the roads to push rickety and articulated vehicles thereby causing traffic gridlock on the roads.³⁸

Another disturbing example is the problem of Pot-holes on the Nigerian roads has become an embarrassing national stigma. This deplorable condition of the Nigerian roads is such that require a national emergency to ameliorate the situation. Indeed, normal interactions in several parts of the country have been frustrated by pot-holes that hampered vehicular movements. Most vehicles are not optionally utilized as these several and multiple pot-holes

³⁷ Editorial Board, "State of Nigeria's roads

³⁸ Kingsley Adegboye, "No motorable roads in Nigeria", Vanguard News Paper, July 25, 2017

and detours imply that these vehicles break down severally, which at the end prolong and frustrate commuters, leaving them stranded with numerous severe consequences on the road.³⁹ In response to this problem, the Nigeria government is said to have above thirty five thousand (35,000) kilometres of Federal roads and about 1.414trillion Naira has been expended on their maintenance since 1999. Despite this colossal sum spent on the roads, these still remain death traps and exposed motorists and commuters that ply these roads to some bizarre things and damages. Many Nigerians transiting from one part of the country to the other are usually stranded, spending nights on the roads for a journey of less than eight hours, while some even lose their lives due to fatal accidents as a result of potholes.⁴⁰ According to the Japan International Cooperation Agency, road condition in Nigeria tends to be poor level comparing to the other countries categorized in ‘Resource-rich country in Sub-Sahara Africa’ and ‘Middle-income country’. This report also pointed out that there are some problems in terms of road maintenance because of lack of systematic planning for road maintenance and management and inadequate budget allocations.⁴¹ With this situation in mind, Otegbulu comment that:

Bad roads as a result of potholes in the cities can disconnect and prevent the cities in playing their key role in the evolution of national and global economies. This is because cities act as catalyst for the generation of vast wealth and is the engine room of the national economy. So, potholes or bad roads in the Nigerian cities have direct correlation with the Nigerian economy as a whole. This is anchored on the fact that the strength and growth of the Nigerian economy, “the Contact Point of international economies, the health of our democracy and the vitality of the humanistic endeavours are all dependent on whether the city works.”⁴²

³⁹ Socio-economic Impacts of Pot-holes on Nigerian Roads and Sustainable Development: An Essencist Ethical X-Ray. November 2018 Retrieved from <https://ukdiss.com/examples/socio-economic-impacts-of-pot-holes.php?vref=1>

⁴⁰ Ibid

⁴¹ Japan International Cooperation Agency, “Pilot Survey for Disseminating SME’s Technologies for the Inspection Technics of Civil Engineering Structures by Using Concrete Tester (CTS)” (Federal Ministry of Works Summary Report Federal Republic of Nigeria, 2015), 1

⁴² A. Otegbulu, “Economic Valuation of Poor Road Infrastructure in Lagos: A Focus on Urban Households”, *Global Journal of Human Social Sience*, Vol. II, Issue 10, Version 1.0, December 2011, pp.7-14, 8

According to Coleman, poorly maintained roadways cause accidents in a variety of ways, mostly due to the fact that they create an enormous hazard to drivers. In many instances, a driver may attempt to avoid a certain situation, like a pothole or pooling water which could cause a serious accident.⁴³ Enwerem and Ali listed the causes of bad roads in Nigeria which include operation of Heavy Duty trucks and vehicles, natural disaster, potholes, bumps, construction and methods, effects of weather conditions, wrong construction activities, unstable grounds and poor drainage, improper use of the roads, and poor workmanship and inadequate maintenance.⁴⁴ The dilapidation of the road network due to potholes is a true reflection of the Nigerian state. Reports have been gathered that out of 3,800 bad roads that needed to be fixed, The Federal Government has disclosed that only 500 roads will be fixed due to low budget. Senator Abdulfatai Buhari has said of the 3,800 federal roads identified as requiring attention, only 500 have been captured in the 2020 budget. According to him, “due to cash crunch, majority of the bad roads will not be fixed for now as the total of N260 million was budgeted for renovations of the roads in Nigeria, but unfortunately the money can only fix 500 roads.”⁴⁵ This unconcern of road maintenance by the government made Odufuwa Ademiluyi and Adedeji to observe that:

In recent time, transportation infrastructure is often viewed by national policy makers as a second tier investment priority, pitted against more immediate, socially oriented poverty reduction programmes. In the face of fiscal pressures, spending on the maintenance of transport infrastructure, let alone on the building of new infrastructure, is often the first to be postponed, if not forgone. The concomitant effect of population explosion on the urban areas is the inadequacy of transport provision; which has given place to dilapidated roads and very rickety vehicles plying death traps roads. It is a common sight to see urban dwellers travel in over-crowded public transport vehicles, with

⁴³ Greg Coleman, “Accidents and Injuries Caused by Bad Road Conditions”,
file:///C:/Users/first%20user/Downloads/list%20of%20bad%20road/Effects%20of%20Bad%20Road%20Condi
ons%20on%20Traffic%20Acciden

⁴⁴ Enwerem, G. C. and Ali, G. A. “Economic Effects of Bad Roads on Vehicle Maintenance in Nigeria”
International Journal of Scientific and Research Publications Vol.6, Issue 6, June, 2016, 761-766, 762

⁴⁵ Faith, “FG To Fix Only 500 Roads Out Of 3,800 Bad Roads In Nigeria”, Harald online newspaper on Politics,
Government, Entertainment, Sports and more

extremely poor services and unhealthy travel environment. In many Nigerian cities, transport situation has reached a crisis point; the consequence of several years of neglect by succeeding administrations.⁴⁶

In view of this, Okin stated that the essence of maintaining highways regularly is primarily “to ensure that highways are maintained in a condition such that vehicles carrying passengers, goods, livestock, etc. can travel safely and economically between given locations”. However, roads in Nigeria are somehow death traps, due to irregular maintenance and repair by the authorities.⁴⁷ Adedotun and Adedotun buttress further that transport services in the country over the years have increased tremendously, while the supply of transport services has declined due to lesser infrastructure in place in the system.⁴⁸ Thus the problems pervading road transport network in Nigeria ranges from inadequate and poor quality of infrastructure, mismatch between demand and supply to increased rate of accidents.⁴⁹

It is imperative to argue that road transport accounted for about 90% of the internal movement of goods and people in Nigeria. It is the main mode of transportation and the only means of access to most rural communities where other modes of transport like air, water and rail are either non-existent or too expensive. Yet, at any one time over the previous two decades, about 50% of the total road network was in poor condition. For example, in 1999, the condition of all 53,250 kilometres of roads carrying more than 30 vehicles a day was monitored, 27 per cent of the roads were in good condition and the situation has deteriorated

⁴⁶ B. O Odufuwa, I. A. Ademiluyi and O. H Adedeji, Transport Poverty and Deviant Driving Behaviour in Nigerian Intermediate Cities, *In Retour Sommaire*, (accessed 20th June, 2021) available at: [http://workon.codatu.org › wp-content › uploads, 6](http://workon.codatu.org/wp-content/uploads/6)

⁴⁷ S. O, Okin, “Road Planning, Design and Maintenance for Safety” in Bolade T & Ogunsanya A. A. (ed), *Accident Control Safety Measures in Mass Transit Operations in Nigeria*, (Ibadan University Press, Ibadan, Nigeria 1990), 203- 210

⁴⁸ S.B. Adedotun and D.O. Adedotun, “Road Concession and Pricing: Panacea for Urban Road Sustainable Development in Osun State, Nigeria” *International Journal of Comparative Studies in International Relations and Development*, Vol.3 No1, July 2014, 47-59, 48

⁴⁹ S.B. Adedotun, “A study of Urban Transportation System in Osogbo, Osun State, Nigeria” *In European Journal of Sustainable Development*, Vol. 4, No. 3, 2015, 93-101, 94

ever since. Latest estimates showed that the share of Federal roads in good condition has shrunk to 15 per cent.⁵⁰ However, these roads suffered from weak designs, inadequate drainage systems and deterioration as a consequence of a poor maintenance system/culture. Furthermore, the persistent poor road condition was due to the default government policy stance in favour of new road construction and rehabilitation at the expense of maintenance;⁵¹ severe under-funding of road maintenance resulting in heavy road maintenance backlog irregular releases of budgetary allocations resulting in incomplete road rehabilitation contracts and poor construction quality; and absence of a strategic planning process coupled with a poor road management information system. These pointed to the need for strong institutional reforms to bring about efficiency in provision and management of road assets.⁵²

To give more light to this paper image of bad conditions of road transport in Nigeria are shown below.



Picture 3 Lagos-Abuja Road



Picture 2: Onitsha Road

⁵⁰ Federal Ministry of Transportation Medium-Term Roads Strategy 2005

⁵¹ The World Bank, Implementation Completion and Results Report, Nigeria Federal Roads Development Project (P090135), December 29, 2017, 6

⁵² Ibid



Picture 3: Abuja-Lokoja Road



Picture 4: Unizik Junction Awaka



Picture 5: Abuja Road



Picture 6: Lagos-Ibadan Road



Picture : Kogi



Picture : Lokoja



Picture: Jos – Abuja Road



Picture : Akwa Road



Picture : Akoko Road



Picture : Ondo Road

CASES OF ROAD ACCIDENTS AND DEATHS IN NIGERIA

Road accident has become one of the major issues of great concern in Nigeria that needed serious attention. This is because it involves every category of persons in the country.⁵³ According to Eze, road accident in Nigeria is yet to receive the appropriate attention considering the magnitude of the problem and loss of life so far.⁵⁴ Sumaila posited that road traffic accidents have claimed more lives than deaths resulting from all communicable diseases put together including the dreaded Acquired Immune Deficiency

⁵³ S. K Oguagbaka, " Statistical Analysis of Road Accidents In Anambra State" In *COOU Journal of Physical sciences*, 2(8),2019, 120

⁵⁴ B. Eze, "Road Traffic Accidents in Nigeria: A Public Health Problem", In *Afri-medic Journal*, 3(2): 34-36. 35

Syndrome (AIDS).⁵⁵ In the same analogy, Adekoye stressed the view that “road accident in Nigeria claim more lives daily than any other faster, because of the multiple lapses in our system contribute to such road mishap, source of which are fatal in some cases” there is nothing you can do that will guarantee you a constantly safe and totally accident free driving experience in Nigeria for a long period of time.⁵⁶ According to the World Health Organization (WHO), despite progress, road traffic deaths continue to rise, with an annual 1.35 million fatalities. Road traffic injuries are now the leading killer of persons,⁵⁷ and Nigeria is ranked second-highest in the rate of road accidents among 193 countries of the world. Thus, Nigeria’s annual 8,000 to 10,000 traffic accident deaths between 1980 and 2003 were a major personal and traffic safety problems as well as a terrible waste of human resources for the country. In terms of the personal safety problem, Nigeria is a high risk region with an average of 32 traffic deaths per 1,000 people.⁵⁸ Again, in a slide different but the same record, another statistics revealed that between 1970 and 2001, Nigeria recorded a total of 726,383 road accidents resulting in the death of 208,665 persons and 596,425 injuries. In that period, each succeeding year recorded more accidents, deaths and injuries. Road accidents claim the largest toll of human life and tend to be the most serious problem in Nigeria today.⁵⁹

Historically, in 1976, there were 53,997 road traffic accidents resulting in 7,717 deaths. In 1981 the magnitude reduced to 35,114 accidents but the deaths increased to 10,236,

⁵⁵ Sumaila AG (2001). “Strategies for minimizing Road Traffic Accidents in Nigeria”, NITT Position Paper submitted to Federal Ministry of Transport, Abuja, September, 2001

⁵⁶ Julius Adekoye, cited in Vincent Audu, *Statistical Analysis of Traffic Accident In Nigeria: A Case Study of Federal Road Safety Corps*, (Project of the Department of Mathematics and Statistics The School of Natural Science Joseph Ayo Babalola University Ikeji-Arakeji, Osun State, 2013), 10

⁵⁷ World Health Organization, “Fifth United Nations Global Road Safety Week - Nigerian Government re-commits to road safety”, WHO Africa Fifth United Nations Global Road Safety Week - Nigerian Government re-commits to road safety...09 May 2019

⁵⁸ M.O. Filani, and K.T. Gbadamosi, “Spatial and Temporal Pattern of Road Traffic Accident Occurrences in Nigeria: 1970-1995”, *In Nigerian Geographical Journal*, Vol. 5, No. 1, Pp. 55-70, 56

⁵⁹ Oyenuga Iyabode Favour, Ayoola Femi Joshua, Shittu Olanrewaju Ismail. *Statistical Analysis of Pattern on Monthly Reported Road Accidents in Nigeria*. *Science Journal of Applied Mathematics and Statistics*. Vol. 4, No. 4, 2016, pp. 119-128. doi: 10.11648/j.sjams.20160404.11, Received: June 7, 2016; Accepted: June 15, 2016; Published: June 28, 2016, 120-120

while in 1984 Nigeria was said to have the highest rate of road traffic deaths in Africa and indeed the world over with the chances of a vehicle killing someone in Nigeria was 47 times higher than Britain. In 1988 there were 25,292 road traffic accidents with as high as 9,077 deaths. From these statistics, it can be induced that as the number of accidents reduced, the number of deaths increased. Secondly using the 1988 accident data alone, it was observed that on the average there was an embarrassing rate of 69 accidents and 24 deaths every day of that year. In 1989, the country led 37 other nations with 240 deaths in 10,000 vehicle crashes followed by Ethiopia with 200 and Malawi with 180 deaths per 10,000 vehicles.⁶⁰ A contributory factor to increased crashes in Nigeria is the increase in private vehicle ownership. The National Bureau of Statistics (NBS) estimates the number of officially registered vehicles in Nigeria at 11,760,871 vehicles, of which 6,785,956 (57.7%) are commercial vehicles, 4,819,251 (40.9%) are privately owned, 149,470 (1.3 %) are government owned, while 6194 (0.1 %) are diplomatic vehicles.⁶¹ Nigeria loses about 80 billion naira yearly to road accident. In a low wage nation, road traffic injuries assessed to be 1% of the gross national product (GNP). In middle income nation it is assessed to be 1.5% of the (GNP) and 2% in high income nation and both the low and centre pay nation represent \$65 billion, more than they get in creating help.⁶² Trend analysis of fatal road accidents between June 2006 and May, 2014 using Nigeria Watch database shows that 15,090 lives were lost to fatal car accidents in 3,075 events. The highest fatality occurred in 2013 (2,061 deaths) and a 2.8% increase from 2012 record of 1,652 deaths. However, the probability for a

⁶⁰ Sumaila, AbdulGaniyu Femi, "Road crashes trends and safety management in Nigeria" In Journal of Geography and Regional Planning, Vol. 6(3), pp. 53-62, May, 2013, DOI: 10.5897/JGRP2013.0318, ISSN 1996-0816 © 2013 Academic Journals, <http://www.academicjournals.org/JGRP>, 55

⁶¹ Uchenna Nnabuihe Uhegbu and Miles R. Tight, "Road User Attitudes and Their Reported Behaviours in Abuja, Nigeria", Nigeria. Sustainability 2021, 13, 4222, <https://doi.org/10.3390/su13084222>, 3

⁶² Safety – Net, "European road safety observatory annual statistical report" Work package 1 –Task 3, Deliverable, 2006, No. D1, 1.

high fatality record in 2014 remains high considering the 964 deaths already recorded between January and May.⁶³

In response to the severity of road accident, Aderamo opined that the problem of transportation and its safety is of great importance. Aderamo analysis of road traffic crashes data which recorded over a seven-year period (2000-2006), shows that 98,494 cases of traffic crashes were recorded out of which 28,366 were fatal and resulted into 47,092 deaths. This revealing statistics show that Nigeria is placed among the fore front nations (especially the third world nations) experiencing the highest rate of road tragedies in the world.⁶⁴ The Vanguard Newspaper, of September 9th, 2018, reported that in every four hours, no fewer than two lives are lost on Nigerian roads. And every year, about 20,000 of the 11.654 million vehicles in the country are involved in accidents, Sunday Vanguard's investigations and analysis of data released by the National Bureau of Statistics, NBS, and the Federal Road Safety Corps, FRSC, have shown that the number of lives lost to road traffic accidents from January 2013 to June 2018 are as follows: 2013 – 5,539; 2014 – 4,430; 2015 – 5,400; (FRSC): 2016 – 5,053; 2017 – 5,049; and January to June, 2018 – 2,623. The full year 2019 Road Transport Data compiled by the National Bureau of Statistics (NBS) covered 36 states of the federation inclusive of the Federal Capital Territory (FCT) which reflected that 11,072 road crashes occurred in 2019 with 35,981 Nigerians injured. The tally indicated that between July and September 7, 2018, no fewer than 126 lives had also been wasted in road crashes.⁶⁵ According to Yushau, Nigeria losses \$6.2 billion yearly to road crashes.⁶⁶ Summation of these figures gives a heartrending total of 28,195 lives crushed in 68 months, an equivalent of

⁶³ Ukoji, Vitus Nwankwo, "Trends and Patterns of Road Accidents In Nigeria: (JUNE 2006 – MAY 2014)

⁶⁴ A. J. Aderamo, "Spatial Pattern of Road Traffic Accident Casualties in Nigeria," *In Mediterranean Journal of Social Sciences*, 2012, 3(2): 61–72., 62

⁶⁵ Clifford Ndujihe & Nicholas Esekile, "Highways of Death: 28,195 killed in road accidents in 68 months," Vanguard Newspaper, September 9, 2018

⁶⁶ Muhammad Nuruddeen Isa and Peter Siyan "Analyzing Factors Responsible For Road Traffic Accidents along Kano-Kaduna-Abuja Dual Carriageway Nigeria" *In Journal of Economics and Sustainable Development*, ISSN 2222-1700 (Paper) ISSN 2222-2855 (Online), Vol.7, No.12, 2016, 156

415 lives per month, 14 persons per day, and two lives every four hours. This makes Nigeria one of the countries with very high road fatalities in the world.⁶⁷ To give more value to the above, table of road accident is shown below by states.

Table 1: ROAD TRAFFIC CRASHES ON STATE BASIS (2ND QUARTER 2020)

STATE	FATAL	SERIOUS	MINOR	TOTAL CASES	NUMBER INJURED	NUMBER KILLED	TOTAL CASUALTY	PEOPLE INVOLVED
Abia	5	12	1	18	44	8	52	92
Adamawa	9	37	2	48	115	17	132	226
Akwa Ibom	1	11	6	18	20	1	21	67
Anambra	16	28	9	53	92	22	114	263
Bauchi	32	46	-	78	313	55	368	501
Bayelsa	2	4	-	6	8	5	13	27
Benue	12	67	3	82	232	19	251	314
Borno	1	2	1	4	13	4	17	22
Cross River	10	11	6	27	47	15	62	143
Delta	18	22	8	48	90	40	130	230
Ebonyi	4	5	2	11	25	5	30	56
Edo	20	30	11	61	163	51	214	363
Ekiti	1	10	1	12	21	1	22	42
Enugu	1	6	4	11	20	1	21	45
FCT	22	108	35	165	303	25	328	723
Gombe	5	19	1	25	49	8	57	108
Imo	1	12	2	15	34	1	35	61
Jigawa	9	34	1	44	146	13	159	262
Kaduna	48	120	9	177	552	67	619	1,084
Kano	11	25	-	36	162	43	205	245
Katsina	15	53	2	70	187	28	215	335
Kebbi	16	55	3	74	254	29	283	353
Kogi	12	53	15	80	189	13	202	483
Kwara	31	35	6	72	332	77	409	660
Lagos	19	47	27	93	139	24	163	387
Nasarawa	16	88	3	107	240	26	266	398
Niger	11	55	5	71	245	34	279	376
Ogun	34	100	36	170	356	52	408	845
Ondo	16	29	7	52	134	22	156	346
Osun	18	23	4	45	112	25	127	256
Oyo	40	79	19	138	296	53	349	718
Plateau	5	33	1	39	93	13	106	189
Rivers	3	3	2	8	25	7	32	50
Sokoto	6	19	-	25	79	8	87	117
T araba	8	27	1	36	118	11	129	202
Y obe	14	23	1	38	149	27	176	255
Zamfara	7	14	2	23	138	15	153	199
TOTAL	499	1,345	236	2,080	5,535	855	6,390	11,033

SOURCE: NATIONAL BUREAU OF STATISTICS: ROAD TRANSPORT DATA ((Q2 2020)

⁶⁷ Ibid

In Nigeria, official road crash data were solely collected by the Nigerian Police Force (NPF) from 1960–1988;⁶⁸ however, since the formation of the Federal Road Safety Commission (now Federal Road Safety Corps) in 1988, the Federal Road Safety Corps (FRSC) has been responsible for the collection of crash data nationwide. The annual FRSC crash data for all the 36 states in Nigeria and the Federal Capital Territory (Abuja) are aggregated, but are divided on a state-by-state basis into the numbers of fatal cases, serious cases, minor cases, total cases, persons killed, and persons injured, as well as total casualty.⁶⁹ Despite integrated efforts towards reducing fatal car accidents, Nigeria still remains one of the worst hit. As the most populous country in Africa with a total land area of 910,771 square kilometers and human population of about 167 million and a high level of vehicular population estimated at over 7.6 million, the country has suffered severe loss of manpower and economy to fatal car accidents. Nigeria has a total road length of about 194,000 kilometres (comprising 34, 120 km federal, 30,500 Km, State and 129,580 km of local roads). Its population density varies in rural and urban areas at about 51.7% and 48.3% respectively and translates to a population- road ratio of 860 persons per square kilometres indicating intense traffic pressure on the available road network. Undoubtedly, this immense pressure contributes to the high road traffic accidents in the country.⁷⁰

CONCLUSION

The benefit of road transport network to Nigeria cannot be overemphasized because adequate road transport system act as an agent to national development. The dilapidating condition of road transport infrastructure in Nigeria today raises so many concerns in the mind of Nigerians while considering the number of deaths recorded in the Nigeria's road accidents. The number of deaths on the Nigeria highway on a daily bases shows how

⁶⁸ S. E Asogwa, "Road traffic accidents in Nigeria: A review and appraisal" *Accid. Anal. Prev.* 1992, 24, 149–155.

⁶⁹ Uchenna Uhegbu and Tigh, "Road User Attitudes, Academic Editor: Victoria Gitelman, Received: 12 March 2021, 3

⁷⁰ Nwankwo, "Trends and Patterns, 4

dilapidating our roads are and effort to maintain those part by the government proves abortive. It is so unfortunate to note that road traffic injuries place an immense burden on hospitals and health systems generally. Because it is the most readily used mode, road transportation is the noted cause of most deaths, with over 6,000 deaths and 39,000 injuries recorded on Nigerian roads each year.⁷¹

RECOMMENDATION

This paper in all sense is an attempt to call on governments at all level to step up their game in road maintenance first, before considering developing new ones. There is only one way solution to this problem, which is, government should repair the existing poor roads in the country to safe lives of her citizenry.

REFERENCE

- Adedotun S.B., “A study of Urban Transportation System in Osogbo, Osun State, Nigeria” *In European Journal of Sustainable Development*, Vol. 4, No. 3, 2015, 93-101
- Adegboye Kingsley, “No motorable roads in Nigeria”, *Vanguard News Paper*, July 25, 2017
- Adekoye Julius, cited in Vincent Audu, *Statistical Analysis of Traffic Accident In Nigeria: A Case Study of Federal Road Safety Corps*, (Project of the Department of Mathematics and Statistics The School of Natural Science Joseph Ayo Babalola University Ikeji-Arakeji, Osun State, 2013)
- Aderamo A. J., “Spatial Pattern of Road Traffic Accident Casualties in Nigeria,” *In Mediterranean Journal of Social Sciences*, 2012, 3(2): 61–72.), 62
- AG Sumaila, “Strategies for minimizing Road Traffic Accidents in Nigeria”, NITT Position Paper submitted to Federal Ministry of Transport, Abuja, September, 2001
- Agbigbe William A., “The Impact of Transportation Infrastructure on Nigeria ' s Economic Developmeny” (Walden Dissertations and Doctoral Studies, Walden University, College of Management and Technology, 2016)
- Ahiaba A. O., “Public Private Partnership and Stakeholder Participation In Road Management In Nigeria” Trans-Saharan Road Liaison Committee Stage In Tunis 16th-29th May 2006

⁷¹ A. Anthonia Ekpa, “Road Safety Implementation In Nigeria : Issues , Actions And Next Steps” A Paper Presented at the 8th Meeting Of The Comcec Transport And Communications Working Group , October 27th at the Crownie Plaza Hotels & Resorts , Ankara –Turkey, 4

- Aldagheiri M. “The role of the transport road network in the economic development of Saudi Arabia” (Department of Geography, Qassim University, Saudi Arabia, Urban Transport XV) www.witpress.com, ISSN 1743-3509 (on-line), WIT Transactions on The Built Environment, Vol 107, ©2009 WIT Press, Urban Transport XV275, doi:10.2495/UT090251
- Anthonia Ekpa A., “Road Safety Implementation In Nigeria : Issues , Actions And Next Steps” A Paper Presented at the 8th Meeting Of The Comcec Transport And Communications Working Group , October 27th at the Crownie Plaza Hotels & Resorts , Ankara –Turkey,
- Asogwa S. E,” Road traffic accidents in Nigeria: A review and appraisal” *Accid. Anal. Prev.* 1992, 24, 149–155.
- Ben Sidiq Okwudili, “Significance of Road Infrastructure on Economic Sustainability” *In American International Journal of Multidisciplinary Scientific Research*; Vol. 5, No. 4; 2019, ISSN 2638-1249 E-ISSN 2638-1273, Published by Centre for Research on Islamic Banking & Finance and Business, USA
- Camemark, C. “Some Economic, Social and Technical Aspects of Rural Roads,” 1979, *Dhaka: ESCAP Workshop on rural Roads.* (accessed 14th June, 2019), Available at: www.scribd.com/doc/2423416/Role-of-Transport-in-EconomicDevelopment
- Coleman Greg, “Accidents and Injuries Caused by Bad Road Conditions”, <file:///C:/Users/first%20user/Downloads/list%20of%20bad%20road/Effects%20of%20Bad%20Road%20Conditions%20on%20Traffic%20Acciden>
- Dostál I. & Adamec V., “Transport and its Role in the Society” *In Transactions on Transport Sciences*, (Transport Research Centre, Brno, Czech Republic), Volume 4: Number 2, DOI: 10.2478/v10158-011-0006-8,
- Editorial Board, “Improving the condition of Nigerian roads” *BusinessDay*, Aug 13, 2020
- Editorial Board, “State of Nigeria’s roads,” *The Guardian Newspaper*, 23 September 2016
- Emmanuel U. Ogbonnaya O, I. & Uche U. B., “An investigation into the cause of road failure along Sagamu-Papalanto highway southwestern Nigeria,” *Geo-environ Disasters*, 8, 3 (2021). <https://doi.org/10.1186/s40677-020-00174-8>,
- Engström Rikard, “The Roads’ Role in the Freight Transport System” 6th Transport Research Arena April 18-21, 2016, The Swedish Transport Administration, Kruthusgatan 17, 405 33 Göteborg, Sweden, Transportation Research Procedia 14 (2016) 1443 – 1452 Available online at www.sciencedirect.com,
- Eze B., “Road Traffic Accidents in Nigeria: A Public Health Problem”, *In Afri-medic Journal*, 3(2): 34-36
- Faith, “FG To Fix Only 500 Roads Out Of 3,800 Bad Roads In Nigeria”, *Harald online newspaper on Politics*, Government, Entertainment, Sports and more

Favour Oyenuga Iyabode, Joshua Ayoola Femi, Ismail Shittu Olanrewaju. Statistical Analysis of Pattern on Monthly Reported Road Accidents in Nigeria. *Science Journal of Applied Mathematics and Statistics*, Vol. 4, No. 4, 2016, pp. 119-128. doi: 10.11648/j.sjams.20160404.11, Received: June 7, 2016; Accepted: June 15, 2016; Published: June 28, 2016, 120-120

Federal Ministry of Transportation Medium-Term Roads Strategy 2005

Femi Sumaila, AbdulGaniyu, "Road crashes trends and safety management in Nigeria" *In Journal of Geography and Regional Planning*, Vol. 6(3), pp. 53-62, May, 2013, DOI: 10.5897/JGRP2013.0318, ISSN 1996-0816 © 2013 Academic Journals, <http://www.academicjournals.org/JGRP>,

Filani M.O., and Gbadamosi K.T., "Spatial and Temporal Pattern of Road Traffic Accident Occurrences in Nigeria: 1970-1995", *In Nigerian Geographical Journal*, Vol. 5, No. 1, Pp. 55-70,

G. C Enwerem and G. A Ali, "Economic Effects of Bad Roads on Vehicle Maintenance in Nigeria" *International Journal of Scientific and Research Publication*,s Vol.6, Issue 6, June, 2016, 761-766, 762

Gibbons Stephen, Teemu Lyytikäinen, Henry Overman, and Rosa Sanchis-Guarner, "Road Transport: the Effects on Firms", Preliminary Draft, This study has been presented at the Urban Economic Association Meetings (Denver, November 2010) and at the SERC Work in progress seminar in December 2010. (Accessed at 20th May 2021), Available at: <https://www.parisschoolofeconomics.eu> › pdf,

Ighodalo C. A, "Transport Infrastructure and Economic Growth in Nigeria", *Revised Paper Submitted for Presentation at the First International Conference on Transport Infrastructure (ICTI 2008)*, Beijing, China. April 24-26, 2008

Isa Muhammad Nuruddeen and Siyan Peter "Analyzing Factors Responsible For Road Traffic Accidents along Kano-Kaduna-Abuja Dual Carriageway Nigeria" *In Journal of Economics and Sustainable Development*, ISSN 2222-1700 (Paper) ISSN 2222-2855 (Online), Vol.7, No.12, 2016

Ishaya Racheal, Infrastructure Concession Regulatory Commission (ICRC), "Infrastructure Concession Regulatory Commission (ICRC)," <http://www.nan.ng/news/135000km-road-network-nigeria-un-tarred-icrc/>

Ivanova Eva and Masarova Jana, "Importance of Road Infrastructure in the Economic Development and Competitiveness" *In Journal of Economics and Management*: 2013. 18 (2), ISSN 2029-9338 (Online) (accessed 20th May, 2021), Available at: <https://open.uct.ac.za> › handle, 263

Jain Seema and Dhiman Pawan Kumar, "Road Transport in Economic Development" *In International Journal of Management and Applied Science*, ISSN: 2394-7926 Volume-3, Issue-9, Sep.-2017, <http://iraj.in>, 33

- Japan International Cooperation Agency, "Pilot Survey for Disseminating SME's Technologies for the Inspection Technics of Civil Engineering Structures by Using Concrete Tester (CTS)" (Federal Ministry of Works Summary Report Federal Republic of Nigeria, 2015),
- Khan Ahmad Saghir, "Role of Road Transportation in Economic Development of Underdeveloped Countries" (Interdepartmental Program in Regional and Community Planning, Kansas State University Manhattan, Kansas, 1968)
- Kolluru Srinivas and Ponnampiran K., "Explaining the Significance of Transportation Lead Time in Indian Road Logistics: An Econometric Analysis" *Serbian Journal of Management*, 4 (2) (2009) 203 – 213
- Levik Kjell, "How to sell the message: Road maintenance is necessary, to decision makers",
- Mellor John, *The Economics of Agricultural Development*, New York; Cornell University Press, 1966
- Ndujihe Clifford & Esekhole Nicholas, "Highways of Death: 28,195 killed in road accidents in 68 months," *Vanguard Newspaper*, September 9, 2018
- Nwankwo Ukoji, Vitus, "Trends and Patterns of Road Accidents In Nigeria: (JUNE 2006 – MAY 2014)
- Odufuwa B. O, I. A. Ademiluyi and O. H Adedeji, "Transport Poverty and Deviant Driving Behaviour in Nigerian Intermediate Cities", *In Retour Sommaire*, (accessed 20th June, 2021) available at: <http://workon.codatu.org/wp-content/uploads>
- Oguagbaka S. K, "Statistical Analysis of Road Accidents In Anambra State" *In COOU Journal of Physical sciences*, 2(8), 2019
- Okin S. O, "Road Planning, Design and Maintenance for Safety" in Bolade T & Ogunsanya A. A. (ed), *Accident Control Safety Measures in Mass Transit Operations in Nigeria*, Ibadan University Press, Ibadan, Nigeria 1990, 203- 210
- Olamigoke Edith Aghadiaye and Adebayo Emmanuel Adewunmi, "The Role of Road Transportation in Local Economic Development: A Focus on Nigeria Transportation System" *Developing Country Studies*, ISSN 2224-607X (Paper) ISSN 2225-0565 (Online), Vol.3, No.6, 2013, (accessed 20th May, 2021), retrieved from www.iiste.org
- Olubomehin O.O., "Road Transportation as Lifeline of The Economy in Western Nigeria," 1920 to 1952. *African Journal of History and Culture*, 4(3), 2012, 37-45
- Otegbulu A., "Economic Valuation of Poor Road Infrastructure in Lagos: A Focus on Urban Households", *Global Journal of Human Social Science*, Vol. II, Issue 10, Version 1.0, December 2011, 7-14
- Safety – Net, "European road safety observatory annual statistical report" *Work package 1 – Task 3, Deliverable*, 2006, No. D1,

Socio-economic Impacts of Pot-holes on Nigerian Roads and Sustainable Development: An Essencist Ethical X-Ray. November 2018 Retrieved from <https://ukdiss.com/examples/socio-economic-impacts-of-pot-holes.php?vref=>

Sumaila A. F., “Road crashes trends and safety management in Nigeria,” *In Journal of Geography and Regional Planning*, 2013, 6(3). 53-62

TruckGuru, “Importance of the Road Transportation Services in Economic Development of the Country” Posted on 02/11/2018

Uhegbu Uchenna Nnabuihe and Tight Miles R., “Road User Attitudes and Their Reported Behaviours in Abuja, Nigeria”, *Nigeria. Sustainability*, 2021, 13, 4222, <https://doi.org/10.3390/su13084222>,

World Bank, Implementation Completion and Results Report, Nigeria Federal Roads Development Project (P090135), December 29, 2017

World Health Organization, “Fifth United Nations Global Road Safety Week - Nigerian Government re-commits to road safety”, WHO Africa Fifth United Nations Global Road Safety Week - Nigerian Government re-commits to road safety...09 May 2019