

DECAYING ROAD TRANSPORTATION INFRASTRUCTURE AND COMMUTERS' SECURITY IN ONDO STATE, NIGERIA

¹Babatope Andrew OGUNDARE (PhD), ²Majekodunmi Olusesan IBITOYE (PhD), &
³Akeem Olalekan BELLO

¹Department of Geography and Environmental Management, Bamidele Olumilua University of Education, Science and Technology, Ikere-Ekiti, Ekiti State, Nigeria
Email: ogundare.babatope@bouesti.edu.ng

²Department of Political Science and International Diplomacy, Bamidele Olumilua University of Education, Science and Technology, Ikere-Ekiti, Ekiti State, Nigeria
Email: ibitoye.olusesan@bouesti.edu.ng

³Department of Political Science and International Diplomacy, Bamidele Olumilua University of Education, Science and Technology, Ikere-Ekiti, Ekiti State, Nigeria.
Email: bello.akeem@bouesti.edu.ng

Abstract

The provision of efficient and economically viable transportation infrastructure stands as a primary objective for any responsive and accountable government. Regrettably, minimal positive changes have been observed, hindering societal improvement. Without a reliable transportation system, the pursuit of economic development remains an elusive goal. Consequently, this study addresses the challenges associated with the deteriorating state of transportation infrastructure in Nigeria, focusing on the resulting security threats to Nigerians, especially commuters on the roads of Ondo State. The study adopts the Human Security Theory and gathers data from both primary and secondary sources. Primary data are derived from questionnaires, while secondary data encompass journals, books, archival materials, newspapers, and magazines. A total of six hundred questionnaires were randomly distributed to commuters on the four major routes connecting Akure to Edo, Ekiti, Osun, and Ogun States. The collected data underwent analysis using descriptive and inferential statistics, revealing a substantial correlation between poor road conditions and heightened insecurity for commuters on Ondo State roads. In light of these findings, the study advocates for a considerable allocation from national and state budgets specifically dedicated to road construction and maintenance.

Keywords: Road, transportation, infrastructure, insecurity, commuters

1.0 Introduction

The state of transportation infrastructure in Ondo State, specifically the roads connecting Akure, the state capital, has been a pressing concern owing to its degraded condition. The lack of adequate maintenance and investment in the state's transportation sector has led to several difficulties encountered by passengers, including escalated security threats. This problem is of utmost importance given that Akure functions as a crucial transportation hub for both intra-urban and interstate travellers, thereby requiring an efficient and secure transportation system. As Akure experiences rapid population growth and urbanisation, there has been a corresponding surge in the demand for transportation services; however, the existing roads have not kept pace with this expansion, resulting in myriad problems that significantly impede commuters' journeys to the city. The poor state of these roads, marked by potholes,

deteriorating conditions, and restricted access to vital amenities, also hinder connectivity between Akure and neighbouring towns and cities within Ondo State. Furthermore, the substantial influx of commercial activity attracts large numbers of individuals to Akure every day from diverse regions of Ondo State and beyond, underscoring the urgent necessity for improved road infrastructure.

A recent study conducted by Owoeye (2018) highlights the longstanding shortcoming of inadequate road links to Akure, emphasizing the imperative to enhance road conditions to facilitate seamless and safe passage into and out of the city. By addressing these concerns through sustained investments in road maintenance and construction, it is possible to mitigate the adverse effects of subpar transportation on the lives of residents and visitors alike, ultimately contributing to the overall development of Ondo State.

Investment and maintenance deficits within Ondo State's transportation systems have significantly contributed to the degradation of its infrastructure, thereby jeopardizing the safety of commuter traffic. Specifically, inadequate road lighting and substandard public transport facilities expose passengers to potential criminal threats. According to Olorunfemi and Agbola (2020), insecurity on Nigerian roads, including those in Ondo State, poses a substantial challenge to commuters, prompting them to adopt risk-avoidant behaviour patterns. Concomitantly, the scarcity of reliable public transportation options forces individuals to rely on unregulated and potentially dangerous forms of transportation, which can be exploited by criminal actors or transformed into instruments of criminality themselves. Transportation encompasses various means of facilitating mobility across different spatial domains, including passenger and freight transportation via vehicles like cars, buses, trucks, motorcycles, and even bicycles. Moreover, in rural settings, head portage remains the predominant mode of transportation. As noted by Ogundare and Ogunbodede (2014), developing an efficient transport network is crucial for fostering economic growth at both national and international levels. Therefore, participation in transportation activities holds significance not only for individual well-being but also for broader societal prosperity.

Transportation is an essential component of urban planning and development, serving as a critical infrastructure that enables the efficient movement of both people and goods within and between cities. According to Basorun (2005), the network of transportation systems plays a crucial role in fostering urban agglomeration by connecting different regions and urban areas through various modes of transportation, including inter-urban and intra-urban road networks, railways, airports, and waterways. These transportation systems not only facilitate the movement of people and goods but also provide vital channels of communication and interaction among different locations.

Onokerhoraye and Omuta (1994) identify three key components of transportation infrastructure: right-of-way or network of footpaths, roads, railways, and waterways; terminal facilities such as motor parks, garages, railway stations, seaports, river ports, airports, and loading and unloading sites; and carriers or rolling stocks that execute the actual transportation services along the network. These components work together to enable the smooth functioning of transportation systems and support economic growth and development.

In clear terms, transportation is a fundamental aspect of urban planning and development, consisting of multiple components that work together to promote mobility, connectivity, and economic activity within and between cities. In an academic context, the passage highlights the crucial role played by transportation systems in ensuring the smooth functioning of a nation's economy. The integration of multiple transportation modes and networks leads to fluctuations in traffic flow, which can have significant consequences on travel times and costs. Adequate transport infrastructure is essential to support economic growth and development, while inefficient or insufficient transport systems can lead to increased insecurity and instability in various regions of Nigeria, including urban and rural areas. To further analyze this phenomenon, the authors identify several key transport issues affecting Nigeria, including

1. **Poor road conditions:** The state of Nigeria's roads is a major concern, leading to frequent breakdowns and delays
 2. **Fuel scarcity and high prices:** Limited access to fuel and expensive fuel costs contribute significantly to transportation difficulties, making it challenging for individuals and businesses to move goods and people efficiently.
 3. **Traffic congestion:** Congested roads result from numerous factors such as excessive loads, reckless driving practices, and poorly planned intersections, causing lengthy commute times and lost productivity.
 4. **Lack of public transport options:** Insufficient investment in public transportation has led to limited choices for passengers, resulting in overcrowding and safety concerns.
 5. **Vehicle maintenance and spare availability:** Ineffective vehicle upkeep and scarce replacement parts hinder effective transport operations, increasing downtime and decreasing overall performance.
 6. **Drivers' behavioural patterns:** Irresponsible driving behaviours like speeding, tailgating, and disregard for traffic rules create hazards for other drivers and increase the likelihood of accidents.
 7. **Overpopulation:** Rapid population growth puts pressure on available transportation resources, exacerbating existing challenges.
 8. **Weather conditions:** Inclement weather such as heavy rainfall and extreme temperatures can cause road closures and make transportation more difficult, further complicating an already complex situation.
- By examining these categories of transportation issues, researchers may gain valuable insight into the underlying causes of insecurity in various regions of Nigeria and develop strategic solutions to address them effectively.

The lack of adequate transport infrastructure and services has profound consequences for marginalized communities, exacerbating already existing poverty levels. This situation is characterized by limited access to essential amenities such as markets, healthcare facilities, and potable water sources, further hindering social and economic development. To mitigate these issues, policymakers must prioritize the implementation of targeted interventions aimed at improving transportation systems and enhancing the mobility and accessibility of disadvantaged populations.

Statement of Problem

It is crucial to recognize that the fundamental objective of transportation systems is to enhance accessibility or facilitate travel for a particular purpose. Nevertheless, addressing security concerns within the transportation sector requires a comprehensive approach that includes improved management and efficient monitoring mechanisms. Simultaneously, it is important to tackle the underlying issues contributing to insecurity, such as poverty, which disproportionately affects a significant portion of the population in Nigeria particularly in Ondo State. According to recent estimates by reputable sources like the World Bank (2019) and the National Bureau of Statistics (2020), the number of impoverished individuals in Nigeria stands at approximately 95.1 million, accounting for around 40% of the country's total population, or roughly 83 million people living below the poverty line of \$1.90 per day. Furthermore, projections suggest that these challenges may exacerbate in the coming years, with the national poverty rate expected to rise from 40.1% in 2019 to 45.2% in 2022, accompanied by an unemployment rate anticipated to reach 32.5%. These complex interconnected factors contribute significantly to the existing insecurities within the transportation sector.

After the commencement of 2021, Nigeria experienced a total of 111 documented instances of kidnappings, with an approximate demand for ransom amounting to #11.415 billion. This alarming trend continued until August 2022, resulting in the loss of 915 lives and 571 individuals being abducted (Okotie, 2022). Moreover, it is worth noting that an average of 13 individuals were kidnapped every day during the initial six months of 2021, underscoring the gravity of the situation regarding security, safety, and the ferocity of criminal elements in Nigeria. The Northern regions of the country appear particularly vulnerable, with victims frequently being taken captive in numerous settings, including educational institutions, public thoroughfares, private residences, and healthcare facilities, as well as coordinated attacks against convoys of travellers along highways. Recently, the nation has been confronted with another devastating consequence of these criminal activities, namely the mass abduction of civilians.

On March 28th, 2023, an incident occurred on the Abuja-Kaduna rail line resulting in the loss of eight innocent lives and the abduction of more than 160 individuals. Similarly, another attack took place on a train travelling through the Edo region, leading to the capture of over two dozen passengers. These events highlight the growing concern regarding the targeting of unsuspecting civilians by armed groups along major thoroughfares across Southern Nigeria. Specifically, herders have been implicated in the abduction of farmers working in rural areas and on highways, with instances reported on several routes including the Akure/Owo/Akoko/Benin highway, Akure/Ilesa/Ibadan highway, Akure/Ikere/Ado highway, and Akure/Ore/Ijebu-ode/Lagos route.

The primary focus of this study, then, is to investigate how inadequate transportation infrastructure contributes to the menace of insecurity and danger in Nigeria's Ondo State specifically. By examining these factors, we aim to provide insight into the underlying causes of these incidents and identify potential solutions to mitigate future occurrences.

Human Security and the Safety of Road Commuters.

Specifically, the Human Security Concept (HSC), offers a holistic perspective on the complex interplay of factors influencing the safety and well-being of individuals in the context of transportation. The HSC, first introduced in the early 1980s, marks a significant shift away from traditional state-centric approaches to security. Rather than focusing solely on the defence of national borders and territorial integrity, the HSC considers the broader spectrum of security concerns affecting individuals, including economic, political, social, and environmental factors. By acknowledging these multiple sources of insecurity, the HSC underscores the intricate connections between different forms of threat and their cumulative impact on human well-being.

Gregoretti (2007) argues that the HSC represents a paradigmatic change in how we think about security, moving the focus from state security to the protection of individuals from both conventional and unconventional dangers, such as poverty and illness. Similarly, the notion of "common security" proposed by the United Nations (1984) emphasizes the interdependence of nations in addressing global security issues, recognizing that the security of one nation is inherently linked to the security of others.

By incorporating these perspectives, the HSC serves as a useful tool for analyzing the complex dynamics at play in Nigeria's transportation sector, where insecurity often stems from a combination of internal and external factors. As noted by the authors, the state remains a crucial player in ensuring security, yet an exclusive focus on state security can ultimately compromise human well-being. Therefore, the HSC offers a more inclusive and nuanced approach to understanding the multidimensional nature of security in Nigeria and other contexts.

In Nigeria, the prevalence of threats to physical safety and individual liberty within the realm of road transportation has become an increasingly pressing concern. As highlighted by the United Nations Development Programme's Human Security Concept (HSC) in 1994, measures must be taken to shield individuals from acts of aggression and ensure their protection from harm. Specifically, the HSC underscores the significance of providing secure environments for travellers through means such as augmented security personnel, strengthened law enforcement, and designated areas of refuge.

The adverse effects of insecurity in road transportation are far-reaching, extending beyond the immediate physical perils faced by passengers and drivers. Incidences of attacks and disruptions can have profound consequences for the economy, as they can obstruct the efficient movement of goods and services, thereby undermining commercial activity and hindering the generation of employment opportunities. According to Baerentsen, Hansen, and Randrup-Thomsen (2020), the HSC recognizes the criticality of economic security, which includes the capacity of individuals to maintain stable sources of income and sustainable livelihoods. Therefore, addressing insecurities within the road transportation sector assumes paramount importance for safeguarding the financial well-being of those whose livelihoods rely upon it.

Moreover, instances of insecurity in road transportation can also limit people's access to vital social services like healthcare, education, and marketplaces. This further exacerbates the already precarious situation facing many individuals, particularly those living in rural or remote

areas where these resources may be scarce or unavailable. By prioritizing security measures aimed at mitigating these risks, it becomes possible to enhance both the personal safety and socioeconomic resilience of vulnerable populations.

According to the United Nations Development Programme (1994), it is crucial to ensure that individuals have access to fundamental services despite security concerns. However, in regions like Nigeria where insecurity may limit mobility and impede access to medical care as well as the distribution of critical commodities to isolated communities, this poses significant difficulties. Addressing these problems necessitates multifaceted security strategies as well as improvements to physical infrastructure.

It should be noted that insecurity has the potential to undermine social cohesion and threaten individuals' basic rights, such as freedom from violence and discrimination (Barakat et al., 2011). For instance, in the realm of transportation in Nigeria, insecurity can exacerbate intercommunal tensions and hinder progress toward economic growth. To address these issues, it is necessary to prioritize initiatives aimed at promoting safety, upholding the rule of law, and safeguarding individual rights.

The Human Security Concept (HSC) plays a crucial role in fostering social unity and facilitating secure and welcoming transportation environments. This theoretical framework sheds light on the far-reaching consequences of insecurity on road transportation in Nigeria by examining the interconnected aspects of physical safety, livelihood stability, access to fundamental amenities, and social cohesion. In essence, the HSC underscores the complexity of addressing insecurity through conventional security measures alone; rather, it necessitates a comprehensive strategy that incorporates socioeconomic advancement, societal integration, and the promotion of human rights.

Transport Infrastructure and Insecurity in Nigeria

Urban centre development relies heavily on transportation as a crucial catalyst for fostering economic, social, political, and strategic growth. Efficient and well-planned transportation systems are essential for facilitating the rapid movement of people and goods within cities. According to Sumaila (2012), rational transport infrastructure planning is necessary to guarantee swift, cost-effective, secure, comfortable, and environmentally responsible travel. To optimize these advantages, Gbujie (2003) stresses the importance of developing a comprehensive transport strategy that integrates various transport modes for both economic and defensive purposes. However, achieving sustainability in transportation requires more than just strategic planning; it also necessitates ensuring safe, dependable, energy-efficient, and environmentally conscious travel. Congestion caused by population density, housing shortages, and vehicle volume poses significant challenges to urban areas worldwide, including Nigeria's experience with Lagos, where this issue has had profound effects on the country's overall mental state. Therefore, creating a sustainable transport system capable of addressing these issues is critical for long-term success.

The significance of transportation infrastructure in a country's overall development cannot be overstated. Well-functioning transportation networks serve as a critical facilitator for economic growth by connecting people, goods, and services within a region and beyond. However,

Nigeria's current transportation infrastructure lags behind that of many other African countries in terms of both quality and service coverage, particularly in rural areas where the majority of the population lives. This disparity has significant implications for the country's social and economic progress.

According to President Muhammadu Buhari (2000), Nigeria's primary road network consists of approximately 32,000 kilometres of federal highways, including seven major river crossings along the Niger and Benue rivers, the Lagos ring road, and the Third Mainland Bridge. Additionally, there are some 30,500 kilometres of state roads and around 130,000 kilometres of local roads throughout the country. While these figures may seem impressive on their face, they pale in comparison to the transportation networks found in many other developing nations. For example, neighbouring Ghana boasts a comprehensive highway system spanning more than 24,000 kilometres, while South Africa has invested heavily in its rail network, with over 26,000 kilometres of track in operation.

The lack of adequate transportation infrastructure in Nigeria has far-reaching consequences, particularly for the rural poor who rely heavily on such systems for access to markets, employment opportunities, and essential goods and services. Limited connectivity hampers agricultural productivity, stifles entrepreneurship, and exacerbates poverty levels, making it difficult for communities to break free from cycles of dependence and inequality. Furthermore, substandard transportation networks can lead to increased travel times, lost revenues due to delayed or cancelled shipments, and higher costs associated with logistics management. All these factors contribute to an overall weakening of the economy and diminished competitiveness at the regional and global levels.

In light of these challenges, urgent action is required to address the deficiencies in Nigeria's transportation infrastructure. This includes investing in new construction projects, upgrading existing assets, and implementing strategies aimed at improving operational efficiency and safety standards. Moreover, policymakers must prioritize the needs of marginalized populations living in remote regions, ensuring that any interventions designed to improve transportation networks benefit all segments of society equitably. By taking decisive steps towards modernizing Nigeria's transportation landscape, policymakers can help unlock the potential for sustainable economic growth and prosperity for generations to come.

Local roads faced significant challenges. As of June 1996, merely 50% of Federal roads were deemed to be in satisfactory condition, with only approximately 5% of rural roads allowing unrestricted motor access. The Petroleum Trust Fund's rehabilitation initiative from 1996 to 1999 covered selected sections of Federal roads spanning 12,000 km and urban roads in 18 cities. However, this programme has waned, and the remaining Federal highway network is deteriorating due to overuse and insufficient maintenance.

A nationwide survey by the Central Bank of Nigeria (2003) reported that the total road network in Nigeria was approximately 194,000 kilometres as of December 2002. A majority of these roads, particularly in the South Eastern and North Western regions, were found to be in poor condition. Similar conditions were observed in other parts of the country. Some roads, constructed over three decades, had never undergone rehabilitation, resulting in significant

structural issues such as cracks, depressions, damaged bridges, and numerous potholes, compromising road safety and efficiency. The survey identified persistent challenges contributing to the subpar state of Nigerian roads, including flawed designs, inadequate drainage, easily eroded thin coatings, heightened road network use due to limited alternatives like waterways and railways, the absence of a comprehensive road program, and insufficient funding for maintenance.

The ramifications of insufficient maintenance and renewal of equipment and facilities manifest across all sub-sectors. This is evident in the suboptimal condition of roads necessitating subsequent reconstruction, inadequate replacement and maintenance of vehicles leading to elevated social costs of atmospheric pollution, and subsequently, increased operating expenses. The resulting escalated operating costs, by diminishing net operating revenues, pose challenges to the timely replacement of vehicles. Predominantly, national transport movements in Nigeria rely on road and air transport, with railways and inland waterways assuming significant albeit secondary roles. In international transport, sea transport is the primary mode, while air transport, along with coastal shipping and road transport linking neighbouring countries, serves as the primary mode for passenger carriers. Presently, road transport encompasses over 90% of the country's goods and passenger movements (Filani, 2002).

The utilisation of motor vehicles within urban areas incurs various costs, although these are not directly borne by the vehicle users. City residents bear diverse costs associated with coexisting with automobiles, such as bronchial patients suffering from vehicle exhaust fumes, office workers experiencing the strain of traffic noise and vibration, and society facing the consequences of damage to historically significant architectural structures caused by motor vehicles. Consequently, there is a call for road-user charges in urban areas, including fuel tax, vehicle registration tax, vehicle import taxes, driver licenses, road tolls, and taxes on tires, lubricants, and consumable spare parts. Globally, these charges are gaining acceptance as revenue sources to supplement government allocations for road maintenance and construction. The rationale is that those causing costs should bear responsibility for them. Well-designed user taxes have the potential to promote a more rational use of road capacity and may even serve as a technique for capacity rationing through a pricing mechanism (Sumaila, 2013; Oroleye, 2019).

Opting for efficient pricing for the use of limited urban road space, coupled with unsubsidized public transport, is deemed preferable to alternatives involving unpriced road use and compensatory public transport subsidies. This preference is based not only on the creation of a superior incentive structure but also on the imposition of a lower fiscal burden (The World Bank, 1999). Various transport modes, including rail, roads, and water, are employed to convey goods from inland depots and warehouses to seaports for overseas shipment. Available statistics indicate that road transport is a prominent mode in this context.

Between 1970 and 1990, road transport played a predominant role in evacuating goods to seaports, maintaining its significance to this day. From 1970 to 1986, road transport contributed to 83.3% of goods transported to seaports, while water transport constituted only 5.0%. Rail transport, meanwhile, made up the remaining balance. By the 1970s, rail transport's involvement in goods conveyance to seaports diminished, sliding to second place after road

transport. This decline persisted until the late 1990s when rail transport usage dwindled to nearly zero. The introduction of pipelines, conveyor belts, and suction pipes in 1987 resulted in rail transport assuming pre-eminence, representing 62.1% of total goods conveyed to seaports from 1987 to 1999 (National Bureau of Statistics, 2000).

Insecurity has significantly impacted various sectors in Nigeria, particularly road transportation. This study, focusing on Ondo State, delves into the effects of insecurity, including robbery, theft, and kidnapping, generating unease among road users and potential repercussions for the economy and society. Despite arguments that poor transportation infrastructure is a primary cause of insecurity, there's an intriguing reciprocal relationship; insecurity in Nigeria contributes to the degradation of road infrastructure through attacks, bombings, and vandalism (Adama, 2016). Frequent assaults on highways and bridges disrupt transportation links, causing congestion, delays, and road closures. Consequently, road conditions deteriorate, leading to heightened maintenance costs and reduced transportation efficiency. Insecurity along transport routes adversely affects economic activities, with a 10% increase in incidents correlating to a 0.9% economic growth decline (Hisali, Kapingura, and Kato, 2014). Road transportation's pivotal role in goods and services movement is hindered by the surge in insecurity, impeding trade, investment, and business activities, not only impacting local enterprises but also discouraging foreign investments and hindering overall economic development (Hisali et al., 2014).

Arifalo (2019) asserts that the heightened insecurity in Nigeria has led to escalated transportation expenses, attributable to various factors such as the necessity for security escorts, elevated insurance premiums, and costs linked to vehicle repairs following attacks. These supplementary costs are transferred to consumers, resulting in augmented prices for goods and services, ultimately imposing a burden on the populace. While the insecurity on roads significantly contributes to the heightened transportation costs in Nigeria, particularly in Ondo State, Odugwu and Ekweozor (2018) observed that insecurity poses a substantial threat to passenger safety, inducing anxiety and a decline in public confidence in road transportation. The prevalent occurrences of kidnappings along major highways have instilled fear and reluctance among individuals to travel by road, especially during nighttime (Odugwu et al., 2018). Consequently, there has been a reduction in passenger numbers, with a corresponding shift towards alternative modes of transportation, notably air travel whenever feasible.

The impact of insecurity in Nigeria extends beyond the realm of transportation, affecting road infrastructure, economic activities, transportation costs, and passenger safety. The repercussions of insecurity permeate the broader economy and society. Addressing these challenges necessitates effective measures such as heightened security presence, infrastructure development, and public awareness campaigns, all aimed at ensuring the safety and efficiency of road transportation in Nigeria.


Study Area

The research is situated in Akure, the administrative capital of Ondo State in the Southwestern region of Nigeria, established in 1976 from the former Ondo province of the Western State. Geographically, Akure is located at approximately 7°15'00" North latitude and 5°15'00" East

Hypothesis

H0₁: *There is no significant relationship between decaying transport infrastructure and insecurity on the roads*

Methodology

The methodology employed in this study is designed to achieve the study's objectives. A preliminary survey was conducted to gather information on the major roads connecting the study area with other cities and the motor parks where commuters board buses for their journeys. Data were sourced from a broader cross-sectional survey of motor parks in Akure, frequented by commuters travelling to  neighbouring states. The sampling frame used encompassed the total estimated number of motor parks to ensure comprehensive coverage of the four major roads in Akure: Akure/Owo/Akoko/Benin; Akure/Ilesa/Ibadan; Akure/Ikere/Ado; and Akure/Ore/Ijebu-ode/Lagos roads. Primary data were collected through structured questionnaires, while secondary data were obtained from archival and published materials. The study focused on four motor parks along the major roads linking Akure to other cities, towns, and states, with 600 randomly selected respondents providing information on location, demographic characteristics, and road security issues.

A multi-stage sampling technique was employed, selecting 150 respondents from each motor park. Questionnaires were administered during morning, afternoon, and evening peak periods using random sampling. Data analysis involved both descriptive and inferential statistics, with the Gross Mean Weight Value determining the extent of road insecurity.

Data Presentation and Result Analysis

This section interprets the findings from 600 distributed questionnaires to public car or bus commuters at designated motor parks in the study area.

Socio-economic Characteristics of Respondents:

Sex of Respondents

Data on respondents' gender showed that 62.3% were males, and 37.7% were females (Table 1). The study indicates a higher proportion of male commuters using motor parks for travel compared to females. This gender imbalance may be attributed to the willingness of male commuters to traverse the state amidst road insecurity, potentially explaining the higher

percentage of males. The table provides a detailed representation of this distribution pie chart in Figure 2.

Table 1: Sex distribution of respondents

S/N	Gender	Frequency	% of Total
1.	Male	374	62.3
2.	Female	226	37.7
	Total	600	100.0

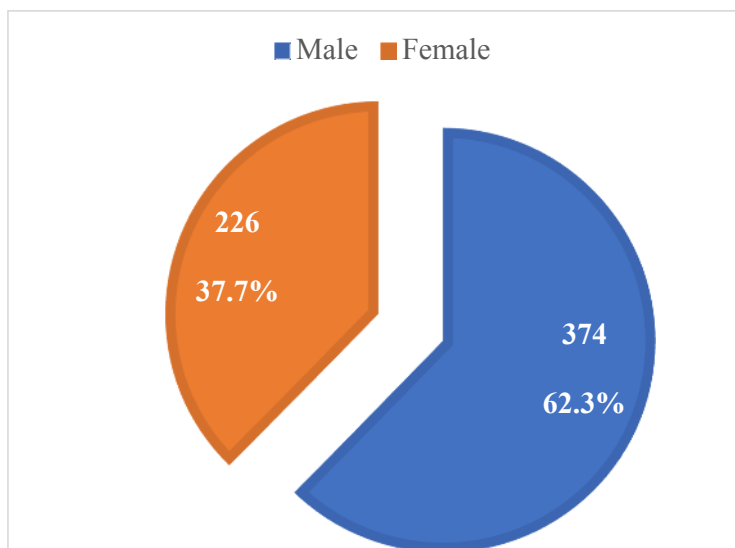


Fig. 2: Pie chart showing the sex distribution of respondents.

Age of Respondents

Data collected on the age of the respondents revealed that 17.3% are less than 20 years while 36.3% are between the age grades of 20 – 40 years. The majority of those in these categories are undergraduates, young school leavers in search of employment or those engaged in one profession or the other. The combination of these age grades took 53.6% of the total respondents because they are within economically active working age grades where the production level is expected to be high. 30.2% of the commuters are within age 41 – 60 while 16.2% are over 60 years of age as shown in Table 2 as well as Figure 3.

Table 2: Age distribution of respondents

S/N	Age Group	Frequency	% of Total
1.	< 20 years	104	17.3
2.	21–40 years	218	36.3
3.	41-60 years	181	30.2
4.	> 60 years	97	16.2
	Total	600	100.0

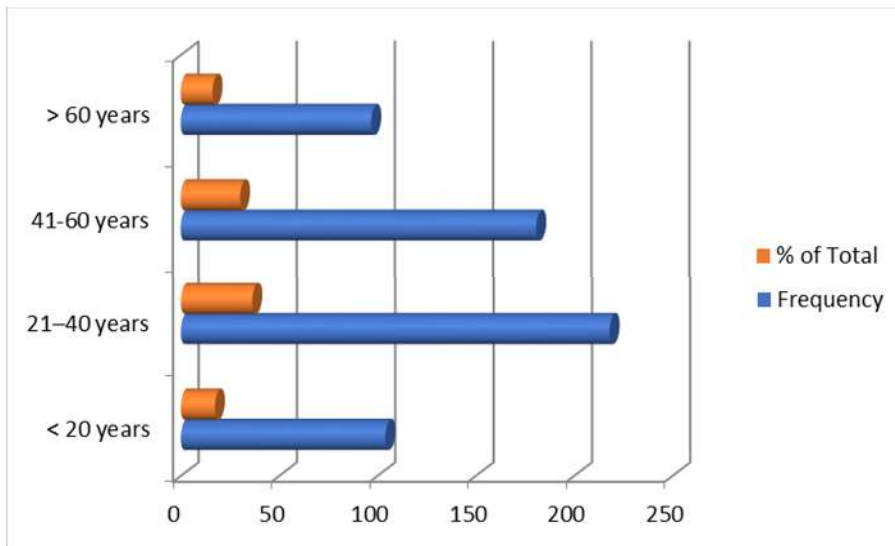


Fig. 3: Age distribution of respondents

Travelling Purpose on the Road

Despite the fear of insecurity of lives and properties on Nigerian roads, commuters still journey for various purposes. Some of these journeys are done daily while some are done occasionally. The study however revealed that 13% of respondents travelled for visiting purposes while 25.3% travelled for work purposes. 39.5% of the respondents claimed to journey for business purposes and 7% claimed they journey for health-related purposes. Consequently, 15.2% of respondents journey for educational-related purposes as shown in Table 3 and Figure 4. The implication is that road transport infrastructure is used for various purposes mostly daily and so is prone to various attacks which lead to insecurity on the roads.

Table 3: Purpose of Journey

S/N	Age Group	Frequency	% of Total
1.	Visiting	78	13.0

2.	Work	152	25.3
3.	Business	237	39.5
4.	Health	42	7.0
5.	Education	91	15.2
	Total	600	100.0

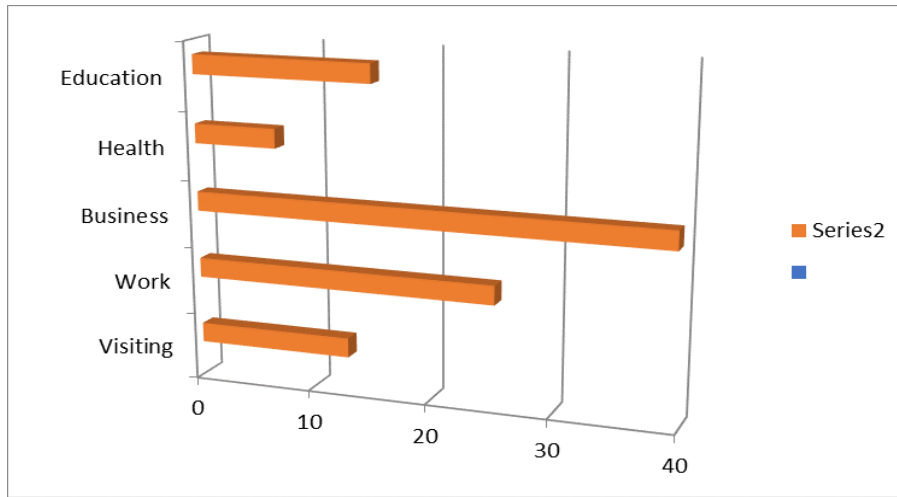


Figure 4: Travelling purpose of respondents.

Alternative Modes of Transportation

Nigeria boasts the most extensive highway and road network in Africa. The migration of individuals from rural to urban areas, driven by job prospects, business opportunities, and access to better education and health services, predominantly relies on road transportation. This reliance often leads to congestion in cities due to urbanization and overpopulation. Notably, 95.3% of respondents exclusively use road infrastructure and services for their travel, with only 4.7% acknowledging the existence of alternatives to road transportation. This reinforces the notion that approximately 90% of passenger and freight transportation activities within Nigeria's urban centres predominantly rely on roads.

Deteriorating Road Transport Infrastructure

In communities worldwide, a significant portion of the population commutes daily using various modes of transportation. A robust road-based transport system is integral to the economic growth and development of any city. Regrettably, the present state of road-based transport services in the study area falls short of adequately meeting the mobility needs of the

population. The roads are often described as unreliable, inconvenient, uncomfortable, and perilous, thereby contributing to heightened insecurity in the region. Additionally, Nigeria's dependence on the road system has increased due to the deterioration of other transportation modes such as rail, pipeline, and inland waterway systems. Table 4 presents a summary of respondents' perceptions regarding factors causing the decline in road transportation infrastructure and insecurity. Mean Weight Value (MWV) and Gross Mean Weight Value (GMWV) were calculated to determine respondents' sentiments. Following the Likert scale, variables with MWV above the cut-off point (GMWV = 3.31) were accepted, while those below the cut-off point were rejected, as detailed in Table 4.

Table 4: Decaying factors of road transportation infrastructure

S/N	Factors	SA	A	D	SD	4	3	2	1	MWV	Dec.
1.	Uneven surface and potholes	363	202	21	11	1452	606	48	11	3.53	Acc.
2.	Poorly constructed/maintained roads	310	265	21	04	1240	795	42	04	3.47	Acc.
3.	Low-level technology in road construction	327	204	48	21	1308	612	96	21	3.40	Acc.
4.	Low-quality materials	196	341	37	26	784	1023	74	26	3.18	Rej.
5.	Economic challenges	302	218	62	18	1208	654	124	18	3.34	Acc.
6.	Inadequate security personnel	363	374	41	22	652	1122	82	22	3.13	Rej.
7.	Poor drainage system and flooding	308	215	53	24	1232	645	106	24	3.35	Acc.
8.	Use of cheap and unguaranteed vehicles	238	235	84	43	952	705	168	43	3.11	Rej.
	GMWV									3.31	

Source: Fieldwork, 2023

Examining Table 4, factors like the use of low-quality materials, inadequate security personnel, and the use of cheap and unguaranteed vehicles were dismissed due to their respective Mean Weight Values (MWV) of 3.18, 3.13, and 3.11, which are lower than the Gross Mean Weight Value (GMWV) of 3.31. Conversely, factors including uneven surfaces and potholes, poorly constructed or maintained roads, low-level technology in road construction, economic challenges, poor drainage, and flooding were acknowledged as their MWVs of 3.53, 3.47, 3.40, 3.34, and 3.35 exceeded the GMWV of 3.31. Respondents highlighted the difficulties of driving on roads with uneven surfaces and potholes, especially during rainy seasons when flooding occurs, leading to accidents or attacks on commuters. According to Ogundare (2023),

these areas are designated as black spot areas, prone to insecurity on the roads. The respondents also observed that many roads in Nigeria, particularly in Akure, Ondo State, were poorly constructed and maintained, with most dating back to the 80s and 90s, resulting in wear and tear. Inadequate road repairs or construction, traffic jams, and poorly maintained roads aggravated insecurities on the roads.

However, 32.7% of respondents strongly agreed that low-quality materials were used for road construction and repair, noting that the government rarely addresses road issues unless they are severely damaged. Economic crises in the country were cited as increasing transportation costs and impacting vehicle maintenance due to rising spare parts prices. The surge in fuel prices further elevated bus fares as investors passed on high costs to customers.

Causes of Insecurity on the Roads

Nigeria, particularly Akure, grapples with escalating crime rates and numerous challenges, predominantly insecurity. Although constitutionally mandated to prioritize the security and welfare of the people, the government appears to have neglected this duty. Ogundare (2023) asserts that Nigeria's roads have become perilous, turning travel into a menace during the day and a serious risk at night due to the prevalent dangers of kidnapping, maiming, and killing. Table 5 summarizes respondents' perceptions of eight identified factors contributing to road insecurity, with farmer-pastoralist clashes and increasing secessionist agitations considered less serious, registering Mean Weight Values (MWV) of 2.25 and 2.37, respectively, below the Gross Mean Weight Value (GMWV) of 3.16. Consequently, commercial kidnapping emerged as the most significant factor, with an MWV of 3.61, followed by armed banditry at 3.52. These factors have made road transportation more challenging, given the insufficient and costly alternative means, unaffordable to many in the study area. Ogundare (2023) notes that commercial kidnapers often use firearms to threaten victims, demanding ransom before release, and resorting to violence if demands are unmet. Uneven surfaces and potholes are exploited as "black spot" points, where vehicles are forced to stop or slow down, facilitating kidnappings. Other factors such as unemployment, poverty, ineffective security personnel, a weak criminal justice system, and substance abuse surpass the GMWV of 3.16, establishing them as accepted factors contributing to road insecurity.

Table 5: Causes of insecurity on the roads

S/N	Factors	SA	A	D	SD	4	3	2	1	MWV	Dec.
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1.	Armed banditry	337	239	21	03	1348	717	42	03	3.52	Acc.
2.	Commercial kidnapping	421	126	49	04	1684	378	98	04	3.61	Acc.
3.	Farmer – Pastoralists clashes	103	116	210	171	412	348	420	171	2.25	Rej.
4.	The increasing spate of secessionist agitations	124	108	236	132	496	324	472	132	2.37	Rej.
5.	Unemployment and poverty	319	224	43	14	1276	672	86	14	3.41	Acc.
6.	Ineffective security personnel	306	245	27	22	1224	735	54	22	3.39	Acc.
7.	Weak criminal justice system	294	253	41	12	1176	759	82	12	3.38	Acc.
8.	Drug, explosives and chemical abuse	288	261	33	18	1152	783	66	18	3.37	Acc.
GMWV										3.16	

Source: Fieldwork, 2023

In addition to presenting a descriptive account of the collected data, this study conducted meaningful explanations, inferences, and deductions by subjecting the specified hypothesis to Pearson Product Moment Correlation analysis at a significance level of 5%. Table 6 illustrates the null hypothesis positing that there is no substantial relationship between the deterioration of transport infrastructure and insecurity on the roads.

Table 6: Correlation analysis between road transport infrastructure and insecurity

		Road Infrastructure	Insecurity
Road Infrastructure	Pearson Correlation	1	.887**
	Sig. (2-tailed)		.000
	N	600	600
Insecurity	Pearson Correlation	.887**	1
	Sig. (2-tailed)	.000	
	N	600	600

** . Correlation is significant at the 0.01 level (2-tailed).

The findings presented in Table 6 indicate that the calculated Pearson correlation coefficient (rcal) is 0.887, with a corresponding P value of 0.000 at a significance level of 0.05. Given that the P value is less than 0.05, it follows that the null hypothesis, asserting no significant relationship between deteriorating transport infrastructure and road insecurity, is rejected. The substantial real value of 0.887 suggests a highly significant correlation between the decline in road transport infrastructure and the prevalence of insecurity in Nigeria, supporting the acceptance of the alternative hypothesis. The study underscores that Nigeria is presently grappling with elevated crime rates and a myriad of issues, with insecurity being a prominent concern. Despite the constitutional mandate prioritizing the security and welfare of citizens,

this obligation has been overlooked, particularly in ensuring the provision of secure road infrastructure, free from incidents such as kidnapping, killing, and abduction.

The identification of black spot areas on roads as targets for such unacceptable activities emphasizes the urgency of addressing these security lapses. Achieving a peaceful and secure environment is deemed essential for fostering economic growth and development.

Conclusion and Recommendations

The current state of road transportation and the safety and security of lives and properties in Nigeria is distressing. Addressing the challenges in road transportation is imperative for meaningful development, necessitating collaborative efforts from both the government and the private sector. Nigeria, endowed with abundant resources, must demonstrate the willingness and readiness to overcome these challenges. The pivotal role of road transportation in social, economic, political, and environmental development cannot be understated.

Based on the study's findings, it is concluded that a high correlation exists between road transport infrastructure and insecurity in Nigeria, particularly in the study area. In light of this, the following recommendations are proposed:

- i. The government should allocate a significant portion of the budget to road construction and maintenance, addressing existing roads regularly to minimize repair costs and maintenance.
- ii. Both the government and private investors should diversify investments into alternative modes of transportation, such as airways, railways, flying boats, and ships. Encouraging commuters to use these alternatives can alleviate the strain on roads, reducing traffic delays and congestion.
- iii. The government must urgently enhance security on roads by implementing measures such as security lights, CCTV cameras, and an adequate number of police checkpoints.
- iv. Public transport usage should be promoted over private cars, especially for long-distance journeys, to mitigate the risk of kidnapping private car owners without security officials. Public buses should be accompanied by well-armed security officials during their journeys.
- v. The government should prioritize the development of durable and modern roads using contemporary technology and skills. This includes constructing proper drainage facilities, footbridges, underground tunnels, flyovers, and other modern infrastructure on the roads.

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