



Transportation and Economic Development in Lagos State, Nigeria

ANOZIE Regina Nkechinyere (0009-0004-0965-4585)

Department of Logistics and Transport Technology, School of Innovative Technology, Federal University of Technology, Minna, Niger State, Nigeria.
08035888282, regluv04@yahoo.co.uk

Abstract

Lagos state as the commercial capital of Nigeria has chains of commercial activities driving its overall economic wellbeing. While it is difficult to clearly state the major drivers of economic development in Lagos, it is certain that Lagos witnesses the influx of people from all walks of life as settlers and for business purposes. This brings about the need to enhance the transportation system and the infrastructure to accommodate the ever-increasing population of the commercial city. This study therefore examines the effect of transportation on the economic development of Lagos state, Nigeria. Transportation was assessed using three themes (transport infrastructural quality, transportation policy frameworks and operational performance) while economic development was considered from the overall well-being of the state. The study utilized qualitative research design and deployed content analysis on the reviewed extant literature to draw inferences based on the themes of the study. The study found that Lagos has robust transportation infrastructure in place and outstanding transportation policy framework. However, the operational performance of the transport system requires the implementation of the state transport policy to achieve the desired efficiency. It was recommended among others, that the state should intensify effort in ensuring full implementation of its transport policy to mitigate incidence of congestion, touting among commercial drivers and enhance transportation safety.

Keywords: Transportation, Economic Development, Infrastructure, Urban Mobility

1.0 Introduction

Transportation is one of the cornerstones of every nation's economy as it stimulates economic activities through the movement of people, goods, and services across spatial and market boundaries. Efficient transportation networks facilitate access to markets, employment opportunities, and social services, thereby enhancing economic output and competitiveness. According to Rodrigue (2020), transportation does not only support production and distribution processes but also, links regions and stimulating industrial growth. In developing economies like Nigeria, the quality and accessibility of transportation infrastructure often determine the pace and direction of economic development. Economic activities encompass the various processes through which goods and services are produced, distributed, and consumed within an economy. These activities include trade, manufacturing, construction, logistics, and service delivery, all of which rely heavily on a well-structured transportation system for optimal performance. Banister (2021) affirmed that efficient transportation networks reduce transaction costs, enhance supply chain reliability and increase productivity by minimizing delays in production and distribution.

In the context of Lagos State, where commerce, industry, and informal trade dominate the economic landscape, transportation is not merely a support system but a catalyst that drives investment, employment, and regional integration. Hence, understanding how transportation infrastructure influences these economic activities is vital for sustainable urban development.

Road transportation which is the focus of this study is a dominant mode of transportation in Nigeria, accounting for the majority of passenger and freight movement across the country and

Lagos in particular. These facilities include highways, expressways, bridges, urban roads, and feeder routes that connect residential, industrial, and commercial areas. According to the Federal Ministry of Works and Housing (2022), over 90% of human and goods movement in Nigeria occurs via road transport, making it the most critical mode for daily economic transactions. Well-maintained roads facilitate efficient mobility, reduce vehicle operating costs, and ensure timely delivery of goods and services. Conversely, inadequate or deteriorating road infrastructure results in increased travel time, higher transportation costs, and reduced productivity. As highlighted by Aderamo and Magaji (2021), the condition of road networks directly correlates with economic performance, particularly in urban areas where industrial and commercial activities are concentrated.

In Lagos State, road transportation facilities significantly affect the state's economic activities due to the city's high population density and complex mobility patterns. Lagos, Nigeria's economic powerhouse, serves as a critical node in the national transportation network and a gateway to regional and international trade. With a population exceeding 20 million people, the state's rapid urbanization and economic vibrancy have created an enormous demand for efficient and reliable transport services. However, road congestion, poor maintenance, and inadequate infrastructure continue to impede economic efficiency. The World Bank (2023) notes that traffic congestion in Lagos leads to an estimated economic loss of over \$1 billion annually due to lost working hours and increased vehicle maintenance costs. Despite these challenges, efforts such as the expansion of the Bus Rapid Transit (BRT) system, road network rehabilitation, and the development of alternative corridors have been introduced to ease congestion and enhance mobility. According to the International Finance Corporation (2022), these initiatives are crucial in improving service delivery, promoting sustainable transport, and strengthening the state's economic resilience. The Lagos State Government has recognized the importance of transportation in its development agenda. Policies such as the Lagos State Transport Policy (2024) and the Lagos State Development Plan (2022–2052) outline strategies for sustainable transport development. These policies emphasize the need for integrated transport systems, public-private partnerships, and investment in infrastructure to support economic growth and improve quality of life for residents (Lagos State Government, 2024; World Bank, 2023).

Lagos State continues to grapple with severe transportation challenges that undermine its economic potential and urban efficiency. The state's road network, which carries over 90% of passenger and freight traffic (Federal Ministry of Works and Housing, 2022), is overstretched due to rapid population growth and urban expansion. According to the National Bureau of Statistics (2023), Lagos contributes approximately 30% of Nigeria's Gross Domestic Product (GDP), yet loses an estimated ₦3 trillion annually due to traffic congestion, productivity loss, and increased fuel consumption. The World Bank (2023) further estimates that the average Lagos commuter spends over four hours daily in traffic, representing one of the highest congestion rates in Africa. These practical realities highlight the urgent need for an efficient and sustainable transportation framework that can support economic development in Lagos State.

From a theoretical standpoint, this challenge aligns with the growth pole theory and the urban transportation economic model, which posit that infrastructure development particularly transportation acts as a catalyst for economic activities by improving accessibility, reducing transaction costs, and enhancing labour mobility (Perroux, 1955; Rodrigue, 2020). However, when transportation systems are inefficient, the expected multiplier effects on industrial growth, trade, and productivity are significantly diminished. In the case of Lagos, the disjointed transport infrastructure has resulted in high logistics costs, limited access to industrial zones, and low competitiveness in trade and service delivery. The theoretical implication suggests that

without a functional and integrated transportation system, Lagos's role as Nigeria's economic nerve centre may continue to be constrained by structural inefficiencies.

Empirically, several studies have underscored the relationship between transportation and economic growth in Nigeria, yet persistent challenges remain. For instance, Aderamo and Magaji (2021) found that inadequate road networks in Lagos significantly contribute to increased travel times and reduced industrial productivity. Similarly, Banister (2021) observed that poor transport coordination and weak policy implementation in urban centres limit the full exploitation of economic opportunities. In another study, Olagunju and Ajayi (2022) reported that while government investments in projects such as the Bus Rapid Transit (BRT) and Lagos Rail Mass Transit have improved mobility, but systemic inefficiencies such as maintenance lapses, policy inconsistencies and limited stakeholder participation continue to impede sustainable outcomes.

This implies that Lagos State's economic development is largely constraint by transportation efficiencies that manifest in congestion, inadequate infrastructure, environmental degradation and policy incoherence. While substantial investments have been made in road expansion, traffic management and public transport modernization, the expected improvements in economic efficiency and social welfare remain minimal. It is on the basis of the foregoing that this study examined the role of transportation in the economic development of Lagos State by analysing infrastructural quality, policy frameworks, and operational performance.

2.0 Literature Review

This section reviews Relevant literature within the subject matter of this study, conceptually, theoretically and empirically.

2.1 Concept of Transportation

Transportation, according to Rodrigue (2020), is the spatial process that links geographical areas through the movement of people, goods, and information. It serves as a critical component of economic and social development by facilitating access to markets, employment, education and healthcare. Hoyle and Knowles (2021) define transportation as the means and methods by which society's spatial structures are organized to enable movement from one place to another. Button (2020) describes transportation as the provision of infrastructure and services that allow people and commodities to move safely and efficiently between locations. More so, Banister (2022) defines transportation as the process of enabling mobility within societies through the development of infrastructure, technology, and governance mechanisms. The foregoing definitions underscores the importance of sustainable transportation systems that balance economic growth with environmental preservation.

Litman (2023) conceptualizes transportation as the organized movement of people and goods designed to meet the spatial and temporal needs of human activities through different mode and means of transportation. Furthermore, Black (2021) defines transportation as the movement of passengers and freight through various modes, including road, rail, air, and maritime systems, each governed by specific physical, economic, and institutional characteristics. In this study transportation is conceptualized as the movement of people, goods and services from one location to another using different modes such as air, water and land. The various modes of transportation as identified by Litman (2023) and Banister (2022) are air, water and land modes of transportation.

Air transport involves the movement of passengers and cargo by aircraft. It is the fastest mode of transportation, suitable for long distances, high-value goods and time-sensitive travel (Litman, (2023). In Nigeria, air transport connects major cities and supports international trade

and tourism. Water transport entails moving goods and passengers through oceans, rivers and coastal waterways (Banister, 2022). It is the oldest and most cost-effective mode for bulky, heavy and international shipments. In coastal cities like Lagos, water transport is also used for ferry services across inland waterways. Land transport includes road and rail systems and is the most widely used mode globally due to accessibility and flexibility (Litman, 2023). It enables door-to-door mobility and supports daily socioeconomic activities. In Lagos, land transportation particularly road transport is the dominant mode due to the city's dense population, widespread road networks and heavy reliance on buses, cars, motorcycles and commercial vehicles for commuting and freight movement. Given the three modes of transportation and the context of the study (Lagos state), the study dwell on land transportation (road and rail that carries over 80% of commuters and goods within the state).

From the foregoing definitions, it is evident that transportation is not merely about physical movement but also about the facilitation of economic, social, and spatial connectivity that serves as a critical determinant of economic performance, especially in urban centers like Lagos, where mobility challenges directly impact trade, employment and service delivery (World Bank, 2023; IFC, 2022; ScienceDirect, 2023).

2.1.2 Concept of Economic Development

Samuelson and Nordhaus (2020) define economic development as a sustained improvement in the economic well-being and quality of life of a population. It goes beyond mere increases in income or output to include structural transformation, improved living standards, enhanced human capital and expanded opportunities for individuals and businesses. Unlike economic growth which focuses mainly on quantitative expansion such as rising GDP economic development emphasizes qualitative changes such as better health, education, infrastructure, technological advancement, and institutional efficiency (Todaro and Smith, 2021). It is therefore a broad process that reflects how a country or region progresses socially, economically, and institutionally over time.

Gregory and Stuart (2020) affirmed that economic activities contribute to economic development when they generate employment, income, and productivity improvements that stimulate broader societal advancement. For example, investments in industries, services, agriculture, and technology lead to increased production, innovation, and market expansion. These activities create jobs, raise household incomes and expand government revenue, enabling greater public investment in infrastructure, education, healthcare and social services (Mankiw, 2022). As these improvements accumulate, they enhance human welfare, attract more investment, strengthen institutions and foster sustainable growth (Krugman and Wells, 2023; Aigbokhan, 2021). consequently, everyday economic activities such as trading, manufacturing, transportation, and service provision serve as engines that gradually transform a society from basic subsistence toward higher levels of prosperity and development.

From these definitions, it is clear that economic activities are central to the functioning of any economy. They involve a complex interaction between production, distribution, and consumption processes that drive income generation, employment, and overall economic growth. The efficiency of these activities is influenced by infrastructure, human capital, technology, and governance (World Bank, 2023; UNDP, 2022; Lagos State Ministry of Economic Planning and Budget, 2024). In the context of Lagos State, economic activities are particularly dynamic due to the state's status as Nigeria's commercial hub. The manufacturing, service, transportation, and informal sectors collectively contribute to the state's Gross Domestic Product (GDP). However, challenges such as inadequate road infrastructure, congestion, and urban inequality continue to hinder the full potential of economic activities

(IFC, 2022; Lagos State Government, 2024). For the purpose of this study, economic activities are operationally defined as all human and institutional efforts directed toward the production, distribution, and consumption of goods and services that generate income, create employment, and enhance the standard of living within Lagos State. This definition is adapted from Todaro and Smith (2021) because it comprehensively captures the productive and developmental dimensions of economic activities while aligning with the study's focus on how transportation influences economic performance in Lagos.

2.2 Theoretical Framework

Therefore, this paper is anchored on Urban Economic Theory. Urban Economic Theory focuses on how economic activities shape and are shaped by cities, focusing on land use, housing markets, and transportation systems (Fujita, 2024). It analyses how policies, infrastructure and governance impact urban development and the welfare of city residents. The understanding of urban economics helps make informed decisions about urban planning and sustainable growth ((Elo *et al.*, 2020; Vaia, 2024). A central concept in urban economic theory is the study of agglomeration economies, which occur when firms and individuals concentrate in urban areas, leading to increased productivity and innovation. This concentration allows for better access to labour, suppliers, and markets and transportation thereby fostering economic growth and development (Fujita, 2024).

2.3 Empirical Review

Fadare and Ayantoyinbo (2010) conducted a study on the Impact of Road Traffic Congestion on Freight Movement in Lagos. Utilizing stratified sampling, they surveyed 85 truck drivers, 91 shippers, and 108 suppliers, analysing the data through multiple regression techniques. The study found that congestion leads to decreased vehicle utilization, reduced fuel efficiency, increased fleet operation costs, and a shrinkage in market coverage, ultimately raising shipment costs. The authors recommended implementing traffic flow management strategies, off-peak transport incentives, and strategic route planning to enhance freight transport cost efficiency and sustainability. Basse (2022) study on Urban Traffic Congestion in Calabar identified factors contributing to urban traffic congestion in Calabar, Nigeria. Through purposive sampling, the research focused on four major intersections: UNICAL Roundabout, Effio-Ette Roundabout, Watt Market Roundabout, and Ekpo Abasi Roundabout. The study utilized 200 randomly sampled questionnaires to gather data. Findings indicated that poor road conditions, inadequate infrastructure, and high vehicle volume were significant contributors to congestion. The study recommended improving road infrastructure, enforcing traffic regulations, and developing alternative routes to alleviate congestion.

Atoyebi (2015) examined Public Transport Efficiency at Ojuelegba Park, Lagos. The study employed physical observation, field inventory, oral interviews, and questionnaire administration to assess service efficiency. Findings revealed issues such as overcrowding, irregular schedules, and inadequate facilities affecting service efficiency. The authors recommended enhancing bus fleet management, improving scheduling, and upgrading facilities to meet increasing demand. World Bank (2020) analysed the Transport Infrastructure and Welfare in Nigeria. The study utilized data analysis of transport infrastructure and welfare indicators. Findings indicated that reducing transportation costs leads to increased crop revenue, non-agricultural income, wealth index, and local GDP. The report recommended investing in transport infrastructure to stimulate economic growth and improve welfare outcomes.

Banerjee *et al.* (2020) studied on the Access to Transportation Infrastructure and Economic Growth in China. The research analysed regional economic data over a twenty-year period. Findings revealed that proximity to transportation networks has a moderate positive causal

effect on per capita GDP levels across sectors. The study recommended prioritizing infrastructure development in under connected regions to promote balanced economic growth. World Bank (2023) examined The Economic Role of Transportation Infrastructure and Investment in Nigeria. The study employed an ARDL model to analyse time series data from 1980 to 2021. Findings highlighted the pivotal role of transportation infrastructure investment in driving economic growth in Nigeria. The report recommended increasing public and private investment in transportation infrastructure to sustain economic development.

3.0 Methodology

The study utilized qualitative research design. The of the research design is in tandem with nature of the study where the exploration and interpretation of the findings of the extant literature were reviewed to gain deeper understanding of the subject matter of this study. The reviewed empirical literature provides insights into the key themes of the study (infrastructural quality, policy frameworks and operational performance in relation to economic development). The reviewed literature were analysed using content analysis based on the themes of the study. This allows the study to discuss and draw inferences from the existing studies which provide basis for the conclusion and recommendations. The method also supports interpretive analysis, allowing for in-depth reflection on how improvements in transportation system can enhance economic growth and development.

4.0 Discussion of findings based on extant literature

Findings emanating from the reviewed literature are reviewed hereunder in line with the themes of the study.

4.1 Infrastructure Quality and economic development

The reviewed literature revealed that transportation systems and infrastructure exert a dual influence; positively when efficient and accessible, but negatively when characterized by congestion, inefficiencies and infrastructural decay. Evidence from the Lagos State Government's infrastructure reports (2024) and World Bank (2023) affirmed that efficient road networks and functional public transport highly correlate with increased economic productivity and trade facilitation, while bottlenecks and inefficiencies constrained growth and reduced competitiveness. One of the prominent sub-themes that emerged from the reviewed literature was traffic congestion, consistently identified as a major constraint on economic productivity in Lagos State. Empirical reports indicate that Lagos ranks among the most congested cities in Africa, with peak-hour travel extending up to three hours on major corridors such as the Lagos-Ibadan Expressway and Third Mainland Bridge (Fadare and Ayantoyinbo, 2010; Bassey, 2022). Congestion contributes to significant economic losses through reduced labour mobility, increased operational costs for businesses, and diminished access to employment centres. The inefficiency of freight movement also disrupts supply chains and logistics operations, resulting in higher commodity prices. This finding aligns with Banerjee, *et al.*, (2020), which established that urban congestion reduces city-level competitiveness and elevates logistics costs in major metropolitan economies.

There is clear evidence of huge investment in public transport to enhance mobility and economic inclusion in Lagos state. However, despite the presence of multiple transport options such as buses, and motorcycles; public transport in Lagos suffers from overcrowding, irregular scheduling and inadequate coverage, limiting accessibility to key economic zones (Atoyebi *et al.*, 2015). This inefficiency compels a shift towards private vehicle use, worsening congestion and environmental degradation. Remarkably, the ongoing initiatives such as the Bus Rapid Transit (BRT) system and Lagos Rail Mass Transit (LRMT) demonstrate the zeal of the state government to improve the public transport infrastructure and this has over the years, significantly enhanced workforce mobility, expand labour market access and stimulate small

and medium-scale enterprises. These findings affirm that accessible and efficient transport systems and infrastructure are foundational to inclusive economic growth and development.

4.2 Transport Policy Frameworks and Economic Development

Evidence from extant literature reveal that transportation infrastructure and management practices require necessary policy to exert a significant influence on economic development outcomes in Lagos State. Evidence shows that inefficiencies in transportation, particularly traffic congestion and inadequate public transit systems are policies issues that the state government of Lagos has achieved a remarkable feat in facilitating a seamless transport system in Logos state. Lagos State, Nigeria, has implemented several transportation policies aimed at improving mobility, reducing congestion, and supporting economic growth and development. Key policies include the Lagos State Transport Policy in 2018, which emphasizes the development of integrated and sustainable transport systems, the expansion of road networks, promotion of mass transit solutions such as Bus Rapid Transit (BRT) and encouragement of private sector participation in transport services. The state also prioritizes the development of rail, ferry, and light rail systems to complement road transport, as outlined in the Lagos State Strategic Transport Master Plan. These policies translate into substantial investments in transportation infrastructure, including the construction and rehabilitation of major roads, bridges and terminals, as well as the procurement of modern buses and ferries. This facilitated the efficient movement of goods and people, stimulates trade, attract business opportunities and enhance labour productivity, thereby driving the broader economic development of Lagos State.

4.3 Transport Operational performance and Economic Development

Revelation from the reviewed literature revealed strong linkages between transportation operational performance and the economic outcomes. Efficient transportation systems is confirmed to reduce travel time, minimize logistics costs, and enhance market access, thereby stimulating productivity and economic growth and development. Key economic zones in Lagos such as Ikeja, Victoria Island and Apapa depend heavily on functional transport operational efficiency to sustain commercial activities and attract investment. Comparative analysis shows that cities like Shanghai and New York leverage integrated transport planning and sustained investment to boost regional competitiveness and resilience (Banerjee *et al.*, 2020; Lagos State Ministry of Economic Planning and Budget, 2024). Thus, strategic improvements in Lagos's transportation system and operational efficiency are vital for sustaining long-term economic prosperity and maintaining its position as Nigeria's commercial capital.

5.0 Conclusion and Recommendations

This study examined the critical role of transportation in fostering economic development in Lagos State, data obtained from government annual reports, statistical bulletins, and institutional publications. Economic development in this context was measured through indicators such as gross domestic product growth, employment generation, trade volume, infrastructure investment, and transport sector performance, as documented in official economic records. The paper revealed that transportation systems in Lagos State function as both enablers and constraints to economic activities. Traffic congestion emerged as a major bottleneck, contributing to productivity losses, increased logistics costs, and reduced business efficiency. Data from transport and economic reports indicate that peak-hour travel times and vehicle operating expenses have escalated significantly over the past decade, undermining competitiveness and profitability for both formal and informal enterprises. Similarly, inefficiencies in public transport characterized by overcrowding, irregular scheduling, and limited service coverage were found to restrict labour mobility and access to economic opportunities. These challenges disproportionately affect low-income commuters who rely heavily on public transit for daily economic participation. Furthermore, deficiencies in road

infrastructure and maintenance continue to impede the smooth flow of goods and services, increasing operating costs and discouraging investment in critical sectors.

The study concludes that transportation remains a central pillar of economic development in Lagos State. Efficient transport infrastructure enhances productivity, reduces transaction costs, and improves connectivity among economic hubs. However, the persistence of congestion, inadequate public transport systems, and weak policy coordination undermines the sector's contribution to sustainable growth. Based on the findings, the study proposes specific recommendations for stakeholders in Lagos State:

- i. There is an urgent need to implement comprehensive congestion management strategies across major traffic corridors in Lagos. The analysis of secondary data indicates that congestion reduces productivity by extending travel time and increasing logistics costs. The government should prioritize the adoption of intelligent traffic management systems, synchronized signal control, and dedicated bus lanes to improve traffic flow. The Lagos Metropolitan Area Transport Authority should also strengthen enforcement mechanisms to curb indiscriminate parking and roadside trading, which aggravate congestion.
- ii. Continuous modernization of public land transport systems is essential for improving labour mobility and accessibility. Evidences from transport sector reports and commuter data show that overcrowded and irregular transport services impede participation in economic activities. Investment in high-capacity bus rapid transit systems, urban rail expansion, and intermodal connectivity will enhance efficiency and reduce dependency on informal transport modes. Public-private partnerships can be leveraged to sustain funding and ensure operational effectiveness.
- iii. Road infrastructure development and maintenance must be institutionalized as a long-term strategy. Statistical evidence from the Lagos State Ministry of Works and Infrastructure highlights that poor road conditions contribute to high vehicle operating costs and reduced productivity. Allocating a dedicated transport infrastructure maintenance fund and enforcing quality control during road construction will ensure sustainability. Integrating drainage and pedestrian walkways into new road designs will also reduce the frequency of road deterioration.
- iv. Policy coordination and institutional reform are crucial for achieving systemic efficiency. Secondary data analysis points to fragmented transport governance and policy inconsistencies among agencies. Establishing a unified metropolitan transport policy framework will promote synergy across agencies such as the Lagos State Ministry of Transportation, the Lagos State Traffic Management Authority, and the Lagos Metropolitan Area Transport Authority. Institutional capacity building, periodic policy review, and stakeholder engagement should be emphasized to ensure coherent implementation.
- v. Data-driven decision-making should guide transport planning and investment. Regular collection and publication of transport performance data covering congestion levels, public transport patronage, freight movements, and infrastructure condition will support evidence-based policymaking. Strengthening collaboration with the National Bureau of Statistics and research institutions will ensure that future planning aligns with evolving economic and demographic realities.

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