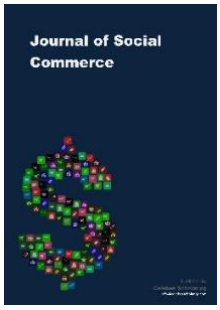

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Rethinking Transportation Mobility and Social Equity Policy in Lagos Metropolis

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Abstract

Lagos, a Nigerian state, is one of the world's most populous cities, and its transit infrastructure is under immense pressure. The state's public transportation infrastructure is grossly inadequate in suburban areas, causing traffic congestion since many residents lack access to affordable and reliable transportation. Another factor contributing to Lagos' transportation challenges is the city's socioeconomic disparities. In light of this, this study examines the transportation mobility and social equity policies in metropolitan Lagos. The study employed the interpretivist philosophy also known as qualitative or phenomenological research approach in data collection. Primary data were generated mainly through key informant interviews, while secondary data were gathered from the internet, journals, newspaper editorials, transportation policy documents, and other government publications. Key informant interviews were conducted with officers from the Lagos State Ministry of Transportation. The acquired data was analysed using a content analytic approach. Findings of the study revealed that population growth in the state's sub-urban and rural areas has put pressure on the city's infrastructure, especially its transportation system, necessitating a rethinking of transportation mobility. The study concluded that the government must invest heavily in public transport services in suburban and rural areas through public-private partnerships (PPPs) in order to improve the quality and expand the state's public transport network. The study further asserted that the state government's system of discounted fares will make transportation more affordable and accessible to low-income residents.

Introduction

Transportation infrastructure that is well-planned is critical to economic activities in both developed and developing nations all over the world. It determines urban growth patterns that allow the movement of products and services, as well as guaranteeing fair access to

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opportunities for people (Adagunodo & Filani, 2023). A better transport network in Lagos will boost connections between firms, workers, and markets, promoting economic growth and productivity. Pedreira et al. (2022) opine that efficient transit decreases travel time and expenses, allowing firms to function more efficiently and workers to more quickly access job opportunities. Furthermore, a dependable and economical public transportation system may connect underprivileged neighbourhoods to vital services, education, and job hubs, fostering social inclusion. Scholars like Castro et al. (2022) argues that the transport mobility and social equity policy in Lagos are complicated, complex, and challenging. It is instructive to note that the city has a rapidly growing population, and its transportation infrastructure is struggling to keep up. As a result, traffic congestion, pollution, and safety problems have arisen. The state has a population of over 23 million people, and its transportation infrastructure is severely underutilized.

Lagos is the commercial nerve centre of Nigeria, and the city is characterized heavy traffic congestion which is associated with its rapidly growing population (Cantilina et al., 2021). There are several challenges associated with the current state of transportation in the city which serves as barriers to equitable transport system among residents (Cantilina et al., 2021; Levine, 2013). One of the keys to equitable transport system is investment in infrastructure so as to be able to accommodate the rapidly growing population of Lagos Maga city irrespective of their socioeconomic status in the society (Olanipekun, 2013; Popogbe et al., 2023). Another major challenge is the menace of overcrowded buses and long waiting hours at bus stops. This can only be mitigated if government develop an integrated public transportation network that will include light rail, buses, and water transport (Haque et al., 2013). The Lagos State Government has taken some giant steps in the recent years in addressing this particular problem.

The transportation challenges in Lagos are also exacerbated by the city's social inequality. Pereira et al. (2017) asserted that a just and equitable transport system must prioritize social inclusion and accessibility. This can be achieved by ensuring that transportation services are accessible different categories of people including the elderly, disables as well as other vulnerable groups in the society. People living in low-income areas are more likely to rely on public transportation, which is frequently unreliable and congested. Besides, the high cost of developing and maintaining transportation infrastructure is exigent (Pedreira et al., 2022; Hosseini & Pishvaee, 2022). Due to its low resources, Lagos has little money available for transit development. Investing in new infrastructure and transportation technologies, such as bike lanes and mass transit systems, becomes difficult as a result. Traffic congestion is also a major problem in the city, and many residents lack access to affordable and reliable transportation system (Shah et al., 2021; Abdulrazzaq et al., 2020). There is no doubt that lack of transportation mobility also has a detrimental impact on social equity. People who live in low-income areas or on the outskirts of the city often have difficulty accessing jobs, schools, and other essential services. This has led to increase in the level of poverty, unemployment, and other social problems (Hernandez & Dávila, 2016; Zainea et al., 2020).

There is no doubt that there is disparities in access to transportation, particularly among the marginalised communities in Lagos State. The transport-related social exclusion situations shows the temporal and spatial valuation of the impact of inadequate public transport system on urban poor who are resident in the city. It is therefore evident that poor public transport as well as the high opportunity costs, has resulted into social exclusion among the poor people resident in the city. For instance, *Danfo* vehicles are mostly used as a means of transportation by the urban poor and the drivers of these buses operates as self-employed individuals. contend that these drivers are predominantly men, some women also work as danfo drivers. These buses are usually operated as lease buses, that are expected to generate income that must be delivered on daily basis to the owner of the bus. A revenue target is usually set for the drivers after

deducting all expenses such as park fees, union fees, fuel costs, repairs, bus conductor daily allowance etc. Sometimes, the drivers may find it difficult to meet this target due to factors like rainfall, traffic congestion and mechanical problems. The passengers are therefore forced to paid higher fares at peak periods. However, if the driver fails to meet the agreed target, the owner of the bus may re-assign it to another driver. To avert this situation, most drivers may drive recklessly, disregard traffic rules, and passengers who cannot afford the high transport fares may be left to suffer. To have an affordable transportation system, residents should not spend more than 15% of their budgets on transportation and should also be able to have access to basic goods or services such as work, healthcare, education, etc. Unfortunately, research have shown that modern transport planning in Nigeria and other developing economies tend to respond well to the demands of wealthy travellers rather than the urban poor.

Thus, Lagos is a highly unequal city, with a large gap between the rich and the poor. This gap is reflected in the city's transportation system. The rich have access to private transportation, whereas the poor rely on fragmented and insufficient public transit infrastructure (Hernandez & Dávila, 2016). However, the public transportation system has a variety of transportation modes, including buses, trains, ferries, and motorcycles, but these modes are not properly integrated (Akpoghome & Nwano, 2020). This makes navigating the city difficult and time-consuming, particularly for those who rely on public transport. Another element contributing to Lagos' transportation challenges is the city's informal economy. The informal sector employs a considerable city's workforce, which means that they are not employed by the formal sector. This makes it difficult for them to access formal transportation services (Olajide & Lawanson, 2022).

As a result, a high number of people live in informal settlements, making it difficult to adopt and enforce transit laws that meet the requirements of all inhabitants. Furthermore, people with disabilities also face significant challenges getting around the city. Also, because the state transportation policy is currently fragmented, with several government bodies accountable for different components of the system (Adagunodo & Filani, 2023), there is a lack of coordination between different levels of government. This makes comprehensive and integrated transportation solutions difficult to deploy. There is resistance to change from existing stakeholders (Shah et al., 2021). Private operators dominate the transportation sector in Lagos, and they frequently have a strong interest in sustaining the status quo (Kumar, 2011). This resistance can make it difficult to implement new policies that would improve the efficiency and equity of the transportation system.

The state government has acknowledged the significance of transportation mobility and social equity. In 2021, the government released a new transportation policy tagged: Rethinking Transportation Mobility and Social Equity Policy in Metropolitan Lagos, which according to Olajide & Lawanson (2022) can be regarded as a bold and ambitious policy. The policy has the potential to make a significant improvement in the transportation mobility of all residents of Lagos, regardless of their income level or where they live. It will also promote social equity by ensuring that all residents have access to affordable and reliable transportation, as well as reduce congestion and pollution, and improve road safety.

Studies such as Adagunodo & Filani (2023), Kumar (2011), Galster & Lee (2021), Iqbal & Mirakhor (2012) and other credible scholarship have attempted to come up with suggestions on how aforementioned challenges can be ameliorated, however, none of these studies has focused on the affordability impact of innovative financing mechanisms to fund transport projects in the state's sub-urban and rural areas. It is this identified gap in the extant literature that this study intend to fill. Based on this, the study examines rethinking transportation mobility and social equity policy in metropolitan Lagos. In specific terms, the objectives are to

(1) Analyse innovative financial strategies to fund transportation projects in the state's suburban and rural areas; (2) Review the informal transportation sector of the city into state transportation policy; (3) Assess the integrated and multimodal transportation system throughout the state's suburban and rural areas. Rethinking transportation mobility and social equity policy requires a comprehensive approach that addresses the root causes of transportation inequities and promotes inclusive and equitable transportation systems. Meanwhile, transportation mobility and social equity are two important aspects of urban planning and policy. Transportation mobility refers to the ability of people to move around a city or region, while social equity refers to the fair and just distribution of resources and opportunities.

Theoretical Framework

There are a number of theories that have been developed to rethink transportation mobility and social equity policy. The study is anchored on efficiency-based theories and transportation justice theory. One of the most prominent efficiency-based theories is intelligent transportation systems (ITS). Intelligence Transport Systems (ITS) are systems that use information technology to improve the efficiency of transportation systems. ITS proponents argue that ITS can help reduce traffic congestion, improve air quality, and save money (Van Wee & Geurs, 2011). Another efficiency-based theory is new urbanism. New urbanism is a movement that promotes the development of walkable, bikeable, and transit-oriented communities (Chavez Basurto, 2020). New urbanism proponents argue that new urbanist communities are more sustainable and livable than traditional suburban communities.

Transportation justice is a framework that advocates for equitable and sustainable transportation systems. This theory emphasises the need to address the historical and systemic injustices that have created unequal transportation access and outcomes for different groups of people (Anderson et al., 2021). The theory focuses on the right to mobility for all people, regardless of their income, race, ethnicity, gender, disability, or other factors (Dadashzadeh et al., 2022). It emphasises the need for transportation systems that are affordable, accessible, reliable, and safe for everyone. It calls for transportation policies that are fair, equitable, and sustainable and that empower marginalised communities to have a voice in transportation planning and decision making (Oluyede, 2022), and this can be achieved by identifying and addressing transportation disparities, incorporating equity goals into planning processes, and monitoring and evaluating outcomes to ensure that they are equitable (Manaugh et al., 2015). It is based on this that those who are mostly affected by transportation decisions should have a say in shaping those decisions. Transportation justice proponents argue that transportation systems should be designed to meet the needs of all people, regardless of their race, class, or income.

Meanwhile, each theory has its strengths and weaknesses, and there is no one-size-fits-all solution to the challenges of transportation mobility and social equity. It is also important to note that these theories are not mutually exclusive, and by considering the different theories that have been developed, we can begin to develop more equitable and sustainable transportation systems. Ultimately, the best approach to rethinking transportation mobility and social equity policy is to develop policies that are tailored to the specific needs of each community.

Methods

The study examines rethinking transportation mobility and social equity policy in metropolitan Lagos, with specific reference to Lagos State, Nigeria. The interpretivism paradigm serves as

the study's philosophical foundation. A qualitative method was used to gather data for the study. An exploratory research design was considered appropriate for the study because of its flexibility to consider many different aspects of the phenomenon (Creswell & Creswell, 2018). This research design was used to discover the government's innovative financial strategies to fund transportation projects in the state's suburban and rural areas, especially in areas incorporating the informal transportation sector of the city into state transportation policy. Data were gathered from both primary and secondary sources. Primary data were generated using the key informant interviews method, as residents of the suburban and rural state officials in the Lagos State Ministry of Transportation were the subjects of the key informant interviews, which were purposefully selected based on their involvement in the transportation policy process in the state. Secondary data were gathered from journals, articles, newspapers, and other publications. Multiple secondary sources were used to reduce the risk of error and improve the study's reliability and validity. The collected data were content analysed as the study adhered to the qualitative model of social research.

Results and Discussion

Innovative Financial Strategies to Fund Transportation Projects

Lagos State Government has explored more traditional funding sources, such as grants, loans, and taxes to fund transportation projects in the state (Mawoli, 2021). However, traditional funding sources can be difficult to secure for transportation projects in suburban and ruraareas, as these areas are often seen as less profitable to investors. Also, traditional funding sources may not be sufficient to meet the state's growing transportation needs. LAMATA asserted that with a combination of innovative and traditional funding strategies, the state government can secure the funding needed to improve transportation infrastructure and services in suburban and rural areas (Akpoghome & Nwano, 2020). This will help to create a more equitable, accessible, and sustainable transportation system for all residents of Lagos State.

Looking at the feasibility of the financing mechanism for transportation system within the context of the specific socio-economic and political context of Lagos State. There is no doubt that PPPs have been successful in financing projects like the Lagos Mega City and the Lagos-Ibadan Motorway. However, there are challenges such as exposure to currency risk which is a critical in infrastructure financing. Infrastructure project revenues are often generated in local currencies, while servicing of foreign capital, whether debt or equity, involves payment in foreign currency. Fluctuations in the exchange rate of the domestic currency, as well as capital controls limiting currency convertibility and transferability, pose a particularly difficult problem for foreign investors and financiers (Hamid & Hassan, 2023). Also, the relatively high cost of projects sometimes discourage infrastructure financiers. As a result of economic and political factors, the cost of undertaking PPP projects in Lagos State and other parts of Nigeria is relatively higher compared to costs of similar projects in other countries. identified some innovative financial strategies to fund transportation projects in Lagos State's suburban and rural areas:

PPPs are contractual arrangements between the public and private sectors in which the private sector provides financing, construction, and/or operation of public infrastructure (Dhanshyam & Srivastava, 2021). PPPs have been used to finance a variety of transportation projects around the world, including the Lagos Mega City. The Lekki-Epe Motorway was funded through a PPP arrangement between the Lagos state government and a consortium of private investors. Also, the Lagos-Ibadan Motorway is being funded through another PPP arrangement between the federal government of Nigeria and a consortium of private investors (Akpoghome &

Nwano, 2020). The expressway is being built and operated by the private sector, and the residents will pay a toll to the private sector to use the expressway once it is completed. Furthermore, the Eko Atlantic City development is being funded through a combination of private investment and value-capturing financing. The development is being built on reclaimed land, and the Lagos state government will capture a portion of the increase in property values that is generated by the development to help finance the project (Basso & Silva, 2014).

This is a way to finance public infrastructure and transportation projects by capturing the increase in property values that is generated by the project (Ahijo, 2019). VCF can be implemented through a variety of mechanisms, such as tax increment financing (TIF), development impact fees, and special assessment districts (SADs). The Lagos Metropolitan Area Transport Authority (LAMATA) is using VCF to finance the construction of the Lagos Light Rail project. VCF has been used to fund a number of transportation projects in Lagos State, including the Lekki-Epe Motorway and the Eko Atlantic City development. Oladokun & Mooya (2023) observed that one of the major challenges associated with implementing VCF in Lagos State, include weak property rights institution with attendant transaction costs, underhand dealings among professionals, undocumented charges, undisclosed information, scarcity of data relating to specialised assets and limited access to the subject property and required documents during valuation. Thus, while VCF has been utilized for projects like the Lagos Light Rail and the Lekki-Epe Motorway, its applicability in funding a broader range of transportation initiatives is largely determined by an understanding of local land markets and development dynamics.

Transportation infrastructure bonds are a type of municipal bond that is used to finance transportation projects. These bonds can be classified into three types: impact bonds, diaspora bonds, and community bonds. Impact bonds are a type of pay-for-success financing in which investors provide upfront financing for social programmes and are repaid based on the achievement of predetermined outcomes. Impact bonds have been used to finance a variety of social programmes around the world, including transportation programmes (Ahijo, 2019). The Lagos state government is considering using impact bonds to finance the construction of new bus terminals in suburban and rural areas. The diaspora bonds are a type of bond that is sold to members of a diaspora community in order to raise money for development projects in their home country (Gelb et al., 2021). Diaspora bonds have been used to fund transportation projects in a number of African countries, including Nigeria. Finally, the community bonds are a type of debt financing in which investors lend money to community-based organisations to finance local projects (Chen & Volz, 2021). Community bonds have been used to finance a variety of projects, including transportation projects. The Community Transportation Association of Nigeria (CTAN) is using community bonds to finance the purchase of new buses for rural communities in Lagos State.

Considering the intricacies of issuing transportation infrastructure bonds, factors like creditworthiness, bond structuring, and investor appetite are important in Nigeria. Given the complex financial landscape of Lagos State, including its debt sustainability and credit rating, the potential risks and benefits associated with leveraging bonds as a financing tool for transportation projects must be considered. Nigeria's huge infrastructural deficit is better financed by bonds instead of loans. It is instructive to note that in the past, infrastructure investments have been financed with public funds where governments were the main actors because of the positive externalities often generated by such facilities. It has been discovered however, that public deficits, tend to increase public debt to GDP and the inability of the public sector in most cases to deliver efficient investment spending have resulted in the reduction in the level of public funds allocated to infrastructure.

It is evident that the strong attraction for investors to infrastructure bonds will include minimal effect of fluctuations in the stock market, predictability of future earnings, and secured recoverability of principal and interest payments based on expected cash flow from the operation of the relevant infrastructure facility. Also, the principal and interest payments for infrastructure bonds are usually based on the expected cash flows from a project rather than the issuer's credibility. Consequently, such bonds will require an independent, differentiated evaluation method that takes into account uncertainty in future expected cash flows.

This is a type of fundraising that uses the internet to raise money from a large number of people. Crowd funding can be used to fund a variety of transportation projects, such as bike lanes, pedestrian walkways, and public transit improvements. This is a type of financial service that provides small loans to low-income individuals and businesses. Microfinance loans can be used to fund a variety of transportation needs, such as purchasing a vehicle or starting a transportation business. It is instructive to note that the practicalities of implementing crowd funding and microfinance for transportation initiatives, including considerations such as investor outreach, regulatory compliance, and risk management. While these mechanisms offer opportunities for community participation and local empowerment, their scalability and effectiveness depend on factors like financial literacy, market demand, and institutional capacity. In addition to these innovative financial strategies, the state can fund the transportation projects that are needed to improve mobility and economic opportunity in suburban and rural areas; likewise, the government could intensify efforts on traditional funding sources, such as government bonds and grants from international development organisations, for a more equitable, accessible, and sustainable transportation system for all residents of the state, irrespective of their social strata.

Informal transportation sector and the state transportation policy

The Lagos State Government has recognised the significance of the informal transportation sector in the city's transportation system and is working to incorporate it into its transportation policy. In 2018, the government launched the Lagos Urban Transport Reform Project (LUTRP), which aims to improve the efficiency and safety of the city's transportation system (Otunola et al., 2019). According to a 2018 study by the World Bank, over 2 million people are directly employed in the informal transportation sector in Lagos (Basso & Silva, 2014). Hence, it provides employment and income for a large number of people. This transportation sector plays a vital role in the transportation system of the state, as it is estimated that over 80% of all passenger trips on a daily basis in the state are made using informal modes of transportation, such as minibuses (Danfos), motorcycles (Okadas), tricycles (Keke Marwas), and boats (Ibitayo, 2012). However, the sector is largely unregulated and often operates in unsafe and inefficient conditions, as the sector is characterised by its flexibility, affordability, and accessibility. It provides transportation to areas that are not served by formal transportation modes, and it is often the only option for low-income residents.

Rekhviashvili & Sgibnev (2020) asserted that the informal sector is often seen as a threat to formal modes of transportation. Also, the sector is largely unregulated. This can lead to safety concerns as well as traffic congestion and pollution as shown in appendix I. Ibitayo (2012) identified a strategic mode the government can adopt to incorporate the informal transportation sector of the city into state transportation policy.

This assessment should include information on the size and scope of the sector, the types of vehicles used, the routes served, and the socioeconomic characteristics of the operators. This can be achieved by establishing a working group or task force to develop and implement a plan for incorporating the informal transportation sector into Lagos State transportation policy. The working group should include representatives from the Lagos State government, the informal

transportation sector, and other stakeholders. The government should provide training and certification programmes for informal transportation drivers to improve their knowledge and skills. The training programme should cover topics such as road safety regulations, traffic laws, and customer service. This would help to ensure that informal transportation operators are meeting minimum safety and service standards and that their vehicles are in good condition. The government should provide designated routes, parking, and loading areas for informal transportation vehicles to improve traffic flow and safety, as it will reduce traffic congestion and improve efficiency. This can be achieved by developing dedicated infrastructure to support informal modes of transportation and by developing intermodal transfer facilities. This will integrate the informal transportation sector into the formal transportation system.

Government can also provide subsidies to informal transportation operators to help them reduce their costs. Based on this, the subsidies will assist operators in purchasing fuel-efficient and environmentally friendly vehicles, as it will help reduce the reliance on private cars and improve the overall transportation system in the city. Furthermore, the incorporation of the informal transportation sector into Lagos State transportation policy is essential to improving the overall transportation system in the city. It is essential to recognise that the informal sector meets a real need in the city, and any attempt to incorporate the informal sector into Lagos State transportation policy must be done in a way that is mutually beneficial to the informal sector and the formal sector. More so, the state must ensure that all residents of the city have access to safe, affordable, and efficient transportation.

It is instructive to note that despite some improvement in the transport sector following the amendment and implementation of the LAMATA law and other agencies in Lagos, however, transportation challenges in the city remain unabated. At different times, Lagosians and other law enforcement agencies such as police, members of the traffic unions, agberos and armed forces have engaged the traffic officials in free for all fight over violation of traffic rules and regulations. Similarly, the petroleum tanker drivers have, at different times in Lagos shut down access to Apapa, the Nigerian port complex, as a result of disagreement with the Traffic Officials.

Looking at the stakeholder viewpoints and techniques for engaging with the community on transport policy in Lagos State, some scholars have argued that stakeholder's inclusion in transport planning makes it very expensive and sometimes inconclusive. However, there is no doubt that increasing the diversity of stakeholders in transport planning increases problem definition and innovation diversity. Thus, one can argue that diverse stakeholder participation in transport planning can be beneficial but sometimes may be difficult to achieve. It is important to state that powerful actors that could otherwise obstruct such a forum might be prevented from doing so by legitimization of the forum by existing democratic structures (Ward, 2001). It is instructive to note that the Lagos State Government is constantly engaging all the stakeholders in the transport sector to collaborate and support the state government's policies and programmes aimed at promoting the free flow of traffic, safety and security of lives and property on Lagos roads. In addition, a number of obstacles and hindrances related to novel funding structures and transportation policy initiatives in Lagos State has been identified. Such challenges include lack of functional library, need for training on transport issues locally and internationally as well as lack of adequate infrastructure among others.

Integrated and multimodal transportation system

Building a better integrated and multimodal transportation system throughout the state's suburban and rural areas requires good road infrastructure, which is essential for the efficient movement of people and goods (Tolulope, 2023). Lagos State Government has been investing to improve the quality of roads and bridges, as well as building new roads to connect suburban

and rural areas to urban centers. The state government has invested in expanding and improving public transportation services, such as buses and trains. This includes building new bus and train lines as well as improving the frequency and reliability of existing services. Yet, there is a need to invest more, as it is essential for the sustainable development of the state (Krüger et al., 2021).

Public transportation is the backbone of any integrated transportation system, as it is pertinent to emphasise that the transport system should be integrated across different modes of transport, such as buses, trains, ferries, and para-transit services (Shah et al., 2021). This will offer a variety of different modes of transport to meet the needs of different users, allow passengers to easily and efficiently switch between modes, and make it easier to plan and travel long distances (Ibitayo, 2012). Buses are a good option for short-distance travel, while trains are a good option for long-distance travel. Ferries can be useful for crossing bodies of water, and para-transit services can provide last-mile connectivity (Tolulope, 2023).

It is important to consider accessibility, affordability, and sustainability. The system should be accessible to all users, including people with disabilities and the elderly (Basso & Silva, 2014). This means that vehicles and stations should be designed with universal accessibility in mind as well as affordability for all users. This means that fares should be set at a level that is affordable for the average person (Shah et al., 2021). More so, the transportation system should be sustainable, both environmentally and economically. This means using low-emission vehicles and fuels and designing the system to be efficient and cost effective (Ibitayo, 2012). Meanwhile, a better integrated and multimodal transportation system can be incorporated into the Lagos state transportation plan in the state's suburban and rural areas, as most residents are not aware of the benefits of an integrated transportation system (Tolulope, 2023). The state government needs to keep the public informed about the benefits of using public transportation and other modes of non-motorised transportation. This can be achieved as long as the state government can encourage the use of public transportation by offering subsidies to public transportation operators and by implementing policies that discourage the use of private vehicles, such as congestion pricing (Basso & Silva, 2014).

Williams & Seggerman (2014) highlight how integrated and multimodal transportation systems can be implemented in suburban and rural areas of the state. This according to them include Demand-responsive transit (DRT), a type of public transportation system that operates on a flexible schedule and route based on the needs of riders. This can be a particularly effective way to provide service in low-density areas, where traditional fixed-route bus service may not be feasible. Micro-transit, a type of shared mobility service that uses small vehicles, such as vans or shuttles, to transport riders on demand. Micro-transit can be a good way to connect riders to public transportation or other destinations, such as jobs, schools, and markets. Transit-oriented development (TOD), a type of development that is designed to be easily accessible by public transportation. Walking, biking, and cycling are healthy and sustainable ways of mobility. TOD can help reduce car dependence and create more vibrant and livable communities. Complete streets are designed to accommodate all users, including pedestrians, cyclists, motorists, and transit riders. This can involve adding features such as crosswalks, bike lanes, and bus shelters. The government is now promoting non-motorised transportation by building sidewalks and bike lanes, which is creating a safe and welcoming environment for pedestrians and cyclists as it is viewed as a healthy and sustainable way to get around.

Transportation and Economic Development

Transport like other critical factors in the production and distribution sectors of the economy is growth enhancing. Transportation is therefore an important and reliable indicator of development in any economy (Li et al., 2020). There is no doubt that there is a nexus between

transportation and economic development of any state. According to Mosaberpanah & Khales (2013), the transport sector is an important component of the economy impacting on development and the welfare of populations. In their opinion, there is a direct relationship between transportation and the economy. It follows logically that when the transportation systems are efficient, social and economic opportunities and benefits that result in positive multipliers effects including employment, accessibility to markets, and additional investments will flow from it. On the other hand, if the transportation systems are unreliable, it can result in economic costs. Thus, an efficient transportation system tends to reduces costs and vice versa.

The key informant interviews revealed that for the government to achieve innovative financial strategies to fund transportation projects, Lagos State must adopt and embrace emerging financial strategies to fund transportation projects in the state's suburban and rural areas. These strategies include impact investing, which seeks to generate both financial, social, and environmental impact. Impact investors may be interested in investing in transportation projects that provide benefits to suburban and rural communities, whereas the government at the federal and state levels can make funds available in the form of grants to fund transportation projects in suburban and rural areas. These grants can be used to fund a variety of projects, such as road construction, public transit improvements, and safety enhancements. Also, seek financial collaboration among private sector investors to invest as operators in public transportation investments. This can be done through a variety of methods, such as outsourcing funds from the capital market, which can have a long-term payment moratorium, and a public-private partnership mode of financing.

The findings of the study reflect the analytical data analyses based on the data gathered from the extant literature. Furthermore, the state government should incorporate sustainability-linked financing (SLF) methods on environmental, social, and governance (ESG) into the loan or bond issuance. This approach can encourage sustainable transportation practices while also attracting investors with ESG considerations. The above finding is in line with the views of Bongwa & van Dijk (2021), on community bond programmes to finance transportation projects in rural Lagos State, which stated that emerging technologies can be monetized to support transportation projects. This approach can provide a revenue stream while also improving the efficiency and effectiveness of transportation systems in suburban and rural communities. This viewpoint is consistent with the research findings of Objective I.

Meanwhile, the findings uncovered the state's position in incorporating the informal transportation sector of the city into state transportation policy. The state needs to formalise the sector by developing regulations and standards for informal transportation providers, such as requiring them to obtain licences, undergo safety training, and maintain their vehicles in good condition. Furthermore, the study reveals the need for the government to provide support to informal transportation providers. This could include providing access to affordable financing, training, and other resources to help them improve their operations. The findings of the study also reflect the analytical data analyses based on the data gathered from the extant literature. The above finding is consistent with the views of Alcorn & Karner (2021) on transportation, mobility, and social equity in Lagos, Nigeria: The Role of Informal Transportation Systems. They stated that integrating informal transportation into the formal transportation system would involve developing dedicated lanes or terminals for informal transportation providers and coordinating their schedules with formal transportation services. This would make it easier for passengers to transfer between different modes of transportation in terms of schedule coordination. This viewpoint is consistent with the research findings of Objective II.

In addition, a review of the integrated and multimodal transportation system throughout the state's suburban and rural areas has not been the same in the urban area based on the social equity in the state. The government needs to invest massively in suburban and rural infrastructure that supports multimodal transportation systems, as it may involve partnerships with private companies. This includes building and maintaining high-quality roads, bike lanes, and sidewalks, as well as providing safe and convenient access to public transportation. This can be achieved by expanding public transportation services to suburban and rural areas by adding new routes and providing on-demand transportation options by increasing the frequency of service. The findings of the study reflect the analytical data analysis based on the data gathered from the existing literature. The above finding further confirmed the need for multimodal transportation, as the Lagos State government is currently developing and integrating the multimodal transportation system in the state. The results aligned with recent studies (such as Tolulope, 2023; Olajide & Lawanson, 2022), who noted that public-private partnerships (PPP) can become a pivot to shared mobility options as they will help to fill the gaps in public transportation coverage in the suburban and rural areas of the state. This viewpoint is consistent with the research findings of Objective III.

Contributions to knowledge and limitations of the study

The study definitely adds to the body of knowledge, as this aspect of transportation mobility and social equity policy has not been sufficiently researched in Nigeria. More so, the study created opportunities for investors who are willing to invest in this area in Nigeria. However, it was piloted in Lagos metropolis and may not represent the rest of the country's suburban and rural areas if such a study is carried out.

Conclusion

Findings from the study have obviously shown that population growth in the state's sub-urban and rural areas has put pressure on the city's infrastructure, especially its transportation system, necessitating a rethinking of transportation mobility. The study found that innovative and emerging financial strategies to fund transportation projects in the state must be fully embraced, especially in the state's suburban and rural areas. The government must invest heavily in public transport services in suburban and rural areas through public-private partnerships (PPPs) in order to improve the quality and expand the state's public transport network. The study further asserted that the state government's system of discounted fares will make transportation more affordable and accessible to low-income residents. In conclusion, the study complements existing studies and spotlights new approaches to promoting sustainable transportation mobility in the suburban and rural areas of the state. The study is an innovation for the government so as to attract foreign and domestic investors to invest in the suburban and rural transportation systems of the state. This can enhance the economic growth of the area.

The study recommended that a policy document be designed to capture transportation mobility and social equity policies in the state, especially in underprivileged economic areas. Also, the policy document should clearly state how the government will protect investors' interests in this area in terms of tax holidays, infrastructure provisions, etc. The document must be able to empower the Lagos State Driver Institute to develop regulations and standards for informal transportation providers, such as requiring them to obtain licences, undergo safety training, maintain their vehicles in good condition, and also to adopt emerging technologies in operational activities. This will help to create a more sustainable, accessible, and equitable transportation system for all residents of Lagos State. The study further suggests that investments in transportation infrastructure, public transportation subsidies, and the city's light

rail system should be expanded in sub-urban and rural areas so as to achieve improved transportation mobility and social equity in the state.

There is no doubt that the presence and ease of access to transportation infrastructure are significant factors that impact consumer mobility patterns, purchasing behavior, and market accessibility for enterprises in Lagos State. It is therefore recommended that future studies should investigate the intricate relationships among transportation mobility, social fairness, and commercial dynamics, with a specific focus on web-based shopping and social commerce platforms.

More specifically, further research should endeavour to analyse the role of social commerce platforms such as e-commerce platforms and data driven technologies in enabling the availability of products and services in marginalised areas, or an investigation into the efficacy of digital marketing tactics in promoting sustainable mobility options, which might provide novel approaches to address transportation obstacles. Also, policymakers should encourage more inclusive and sustainable urban development policies in Lagos State by encouraging cooperation among transportation planners, urban economists, and digital commerce specialists. This collaboration can harness the synergies between transit mobility and social commerce.

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