INTERNATIONAL JOURNAL OF SOCIAL SCIENCES
Volume: 9 Issue: 1 Review Article March, 2026

Public Transport Availability And Urban Poverty In Lagos Metropolis

Oteh Charles Ozule PhD
Department of Geography and Environmental Studies, Faculty of Social Sciences, Ignatius Ajuru University of Education, Rivers States, Nigeria.
charleoteh@gmail.com, charles.oteh@iaue.edu.ng

Keywords

Public Transport, Urban Poverty, Accessibility, Lagos Metropolis, FGT Poverty Index.

Abstract
This study examined the relationship between public transport availability and urban poverty in Lagos Metropolis, with a focus on how mobility constraints influence economic conditions among urban residents. Rapid urbanization in Lagos has intensified pressure on infrastructure and contributed to the expansion of informal settlements, where poverty levels remain high. In this context, access to efficient and affordable transportation is critical for connecting individuals to employment opportunities, healthcare, and education. A correlational survey research design was adopted for the study. The population comprised urban residents of Lagos Metropolis, with a sample size of 400 respondents selected using a multistage sampling technique. Data were collected through a structured questionnaire, while urban poverty was measured using the Foster-Greer-Thorbecke (FGT) poverty index to capture poverty incidence, depth, and severity. Data analysis involved descriptive statistics and Pearson Product Moment Correlation (PPMC) at a 0.05 level of significance. The findings revealed that public transport availability in Lagos is moderate but characterized by inefficiencies in reliability, affordability, and accessibility. The FGT results indicated a high level of urban poverty, with a significant proportion of residents living below the poverty line. Furthermore, the study established a strong negative relationship between public transport availability and urban poverty, suggesting that improved transport systems contribute to better economic outcomes. The study concludes that public transportation plays a critical role in reducing urban poverty by enhancing access to opportunities and services. It recommends increased investment in transport infrastructure, fare subsidies for low-income earners, expansion of mass transit systems, and integration of informal transport into formal frameworks to improve mobility and support inclusive urban development.

I. Introduction

Urbanization has become one of the most defining demographic trends of the 21st

century, particularly in developing countries where cities are expanding faster than anyone seems prepared for. In Lagos, this growth has been especially dramatic, transforming the city into one of Africa's largest urban centers. The rapid influx of people into Lagos in search of economic opportunities has led to significant pressure on infrastructure, housing, and public services. While urbanization can drive economic growth and innovation, its unmanaged expansion often results in deepening inequalities and strained urban systems (UN-Habitat, 2022; World Bank, 2023).

The pace of urban growth in Lagos has contributed to the proliferation of informal settlements, where a large proportion of residents live under conditions of inadequate housing, poor sanitation, and limited access to essential services. These settlements, often located on the peripheries or environmentally vulnerable areas, are closely associated with urban poverty. The concentration of low-income populations in such areas reflects structural inequalities in income distribution and access to resources, reinforcing cycles of deprivation (Adelekan, 2020; Fox, 2021).

Urban poverty in Lagos is not merely a function of low income but is multidimensional, encompassing limited access to healthcare, education, employment opportunities, and basic infrastructure. One of the most critical but often overlooked dimensions of urban poverty is mobility. For many low-income residents, the ability to move efficiently within the city determines access to jobs, markets, schools, and health facilities. When mobility is constrained, poverty becomes not just a condition but a trap (Lucas, 2019; Oyesiku, 2020).

Transportation plays a central role in the functioning of urban economies, acting as a bridge between people and opportunities. Efficient public transport systems enable labor mobility, reduce transaction costs, and enhance productivity. In cities like Lagos, where private vehicle ownership is beyond the reach of many, public transportation serves as the primary means of daily movement. Its availability, affordability, and reliability directly influence the economic participation of urban residents, particularly those in lower-income groups (Cervero & Golub, 2021; Salon et al., 2020).

The link between mobility and access to opportunities is particularly evident in the context of employment. Individuals with reliable transport options are more likely to access diverse job markets, while those without are often restricted to low-paying, informal, or nearby opportunities. Similarly, access to education and healthcare services is heavily dependent on transportation systems. Inadequate transport infrastructure can therefore exacerbate social exclusion and reinforce inequality, making mobility a key determinant of urban welfare (Venter et al., 2019; World Bank, 2023).

Despite its importance, public transportation in Lagos faces numerous challenges, including chronic congestion, high transport costs, long travel times, and inconsistent service quality. Informal transport systems such as minibuses dominate the sector but often operate without regulation, leading to inefficiencies and safety concerns. Additionally, the uneven distribution of transport services across the metropolis means that some areas are significantly underserved. These challenges collectively limit accessibility and place a disproportionate burden on low-income populations, raising important questions about the role of transport availability in shaping urban poverty outcomes (Oni & Okanlawon, 2021; Pojani & Stead, 2022).

II. Statement of the Problem

Public transportation in Lagos is characterized by inadequate capacity and uneven spatial distribution, which limits its effectiveness in serving the growing urban population. Many low-income communities, particularly those located in peripheral or informal settlements, experience limited access to reliable and affordable transport services. This uneven distribution creates mobility disparities, where certain areas benefit from relatively better transport infrastructure

while others remain underserved. As a result, residents in poorly connected areas face significant challenges in accessing economic and social opportunities (Oyesiku, 2020; World Bank, 2023).

In addition to accessibility issues, the high cost of transportation relative to household income places an additional burden on low-income populations. A significant portion of daily earnings is often spent on commuting, reducing disposable income and worsening living conditions. Limited transport options further restrict access to employment, healthcare, and education, reinforcing cycles of poverty and social exclusion. These challenges highlight the need to critically examine how public transport availability influences urban poverty in Lagos, as addressing mobility constraints may be central to improving the overall quality of life for urban residents.

Aim and Objectives of the Study

The aim of this study was to examine the relationship between public transport availability and urban poverty in Lagos Metropolis. The objectives of the study were to:

1. assess the level of public transport availability in Lagos Metropolis.
2. examine the extent of urban poverty in Lagos Metropolis.
3. determine the relationship between public transport availability and urban poverty in Lagos Metropolis.

Research Questions

1. What is the level of public transport availability in Lagos Metropolis?
2. What is the extent of urban poverty in Lagos Metropolis?
3. What is the relationship between public transport availability and urban poverty in Lagos Metropolis?

Research Hypothesis

H_{01}: There is no significant relationship between public transport availability and urban poverty in Lagos Metropolis.

III. Conceptual Clarification

Public transport refers to shared passenger transportation services that are available for use by the general public, typically operating on fixed routes and schedules. In Lagos Metropolis, public transport encompasses a mix of formal and informal systems, including government-regulated buses, Bus Rapid Transit (BRT) systems, ferries, and privately operated minibuses commonly known as *danfo*. These systems play a central role in urban mobility, especially for individuals who cannot afford private vehicles. Public transport is therefore not just a mobility service but a critical component of urban economic and social life (Cervero & Golub, 2021; Salon et al., 2020).

The Bus Rapid Transit (BRT) system represents one of the most structured forms of public transport in Lagos, designed to provide high-capacity, efficient, and relatively affordable services along designated corridors. In contrast, informal transport modes such as *danfo*, motorcycles, and tricycles dominate the urban transport landscape due to their flexibility and extensive coverage. While these informal systems fill critical mobility gaps, they are often associated with inefficiencies, safety concerns, and lack of regulation (Oni & Okanlawon, 2021; Pojani & Stead, 2022). This dual system highlights the complexity of defining and managing public transport in rapidly growing cities.

Urban poverty is a multidimensional concept that extends beyond low income to include deprivation in living conditions, access to services, and overall quality of life. It encompasses factors such as inadequate housing, poor sanitation, limited access to healthcare and education, and vulnerability to economic shocks. In urban centers like Lagos, poverty is often concentrated

in informal settlements where residents face significant infrastructural and environmental challenges (Adelekan, 2020; Fox, 2021). This broader understanding of poverty is essential for analyzing its relationship with transportation systems.

Income remains a central indicator of urban poverty, as it determines the ability of households to meet basic needs and participate in economic activities. However, income alone does not fully capture the realities of urban deprivation. Living conditions, including access to clean water, electricity, and safe housing, are equally important dimensions. Additionally, access to essential services such as healthcare and education significantly influences human development outcomes, making urban poverty a complex and multifaceted issue (Booth et al., 2000; World Bank, 2023).

Transport accessibility refers to the ease with which individuals can reach desired destinations such as workplaces, schools, markets, and healthcare facilities. It is commonly measured in terms of distance, travel time, cost, and service reliability. In Lagos, accessibility is often constrained by long commuting distances, traffic congestion, and inadequate transport infrastructure, which disproportionately affect low-income populations (Lucas, 2019; Venter et al., 2019). Accessibility is therefore a key determinant of social inclusion and economic participation.

Affordability is a critical dimension of transport accessibility, particularly for low-income households. When transportation costs consume a significant portion of household income, individuals may be forced to limit their mobility or make trade-offs between transport and other basic needs. This can lead to reduced access to employment opportunities and essential services, thereby reinforcing poverty conditions. Studies have shown that transport affordability is closely linked to social equity and overall urban well-being (Oyesiku, 2020; Salon et al., 2020).

Reliability and service quality are also fundamental components of transport accessibility. Reliable transport systems ensure that individuals can travel consistently and predictably, reducing uncertainty and improving productivity. In contrast, unreliable services characterized by delays, overcrowding, and irregular schedules can hinder mobility and increase the economic burden on commuters. In cities like Lagos, where informal transport systems dominate, reliability remains a major challenge, further limiting the effectiveness of public transport in addressing urban poverty (Pojani & Stead, 2022; World Bank, 2023).

IV. Theoretical Framework: Accessibility Theory

The study is anchored on **Accessibility Theory**, originally developed within transportation and urban planning literature and widely advanced by Walter G. Hansen in **1959**. The theory focuses on the ease with which individuals can reach desired goods, services, activities, and destinations within a given spatial environment. Hansen defined accessibility as the potential of opportunities for interaction, emphasizing that transportation systems are not valuable in themselves but in their ability to connect people to opportunities. Over time, the theory has been expanded and applied in urban development, social inclusion, and poverty studies, particularly in rapidly growing cities.

The core assumptions of Accessibility Theory are that mobility determines access, and access determines opportunity. In other words, individuals who can move easily and affordably within a city are more likely to access employment, education, healthcare, and social services. The theory also assumes that disparities in transport infrastructure and service distribution lead to unequal access to opportunities, thereby reinforcing social and economic inequalities. Key dimensions of accessibility include distance, travel time, cost, and reliability, all of which directly influence an individual's ability to participate in economic and social activities (Lucas, 2019; Venter et al., 2019).

The relevance of Accessibility Theory to this study lies in its direct explanation of the relationship between public transport availability and urban poverty in Lagos Metropolis.

Inadequate or inefficient transport systems limit accessibility, thereby restricting individuals' ability to secure employment, access essential services, and improve their living conditions. Conversely, improved transport availability enhances mobility, expands access to opportunities, and contributes to poverty reduction. This theoretical perspective provides a strong foundation for understanding how transport systems influence economic inclusion and supports the study's finding that better public transport is associated with lower levels of urban poverty.

V. Empirical Review

A study by Cervero and Golub (2021) examined the role of informal public transport systems in urban mobility across developing cities. The study aimed to assess how informal transport contributes to accessibility and economic participation. A descriptive research design was adopted, using data from multiple urban centers, including cities in sub-Saharan Africa. The study utilized secondary data and transport performance indicators, and analysis was conducted using comparative statistical techniques. The findings revealed that informal transport systems significantly enhance mobility for low-income populations, despite inefficiencies and lack of regulation. The study concluded that improving transport systems can enhance access to economic opportunities, thereby reducing urban poverty.

Similarly, Lucas (2019) investigated the relationship between transport disadvantage and social exclusion. The study adopted a mixed-method approach, combining survey data with qualitative interviews across urban populations. The population consisted of low-income households in urban areas, with a sample drawn using stratified sampling techniques. Data were analyzed using regression and thematic analysis. The findings showed that limited access to reliable and affordable transport significantly restricts employment opportunities and access to services, reinforcing poverty and exclusion. The study concluded that transport accessibility is a key determinant of socio-economic inclusion.

In another study, Salon et al. (2020) examined the impact of transportation infrastructure on economic development. The study employed a quantitative research design using panel data from developing countries. The population included urban households, and data were analyzed using econometric modeling techniques. The findings indicated that improved transport infrastructure reduces travel time and cost, increases labor market participation, and enhances income levels among low-income groups. The study concluded that transportation plays a critical role in poverty reduction and economic growth.

A study conducted by Venter et al. (2019) focused on the equity impacts of public transport systems, particularly Bus Rapid Transit (BRT). The study adopted a case study design and analyzed data from selected cities implementing BRT systems. Data collection involved household surveys and transport usage data, while analysis was conducted using statistical and distributional methods. The findings revealed that improved public transport systems enhance accessibility for low-income populations, reduce transport costs, and improve access to employment and social services. The study concluded that equitable transport systems are essential for inclusive urban development.

Finally, Oni and Okanlawon (2021) examined transportation challenges in Lagos Metropolis. The study adopted a descriptive survey design, with a population comprising urban commuters and transport operators. A structured questionnaire was used for data collection, and analysis was conducted using descriptive statistics and correlation techniques. The findings revealed that transport inefficiencies, high costs, and congestion significantly affect mobility and economic activities in Lagos. The study concluded that improving transport infrastructure and service delivery is essential for enhancing urban productivity and reducing poverty.

VI. Methodology

This study adopted a correlational survey research design to examine the relationship between public transport availability and urban poverty in Lagos Metropolis. The design was appropriate as it allowed for the investigation of relationships between variables without manipulation, reflecting real-life conditions within the urban transport system and socio-economic environment.

The study was conducted in Lagos Metropolis, a highly urbanized and densely populated area with an estimated population of approximately 14,800,000 residents. The population comprises diverse socio-economic groups, with a significant proportion relying on public transport for daily mobility.

A sample size of 400 respondents was determined using the Taro Yamane (1967) formula for sample size determination, which is widely used in social science research for large populations. A multistage sampling technique was employed in selecting respondents. In the first stage, selected local government areas within Lagos Metropolis were purposively chosen based on high transport activity and population density. In the second stage, communities were randomly selected, while in the final stage, respondents were selected using simple random sampling to ensure representativeness and reduce bias.

Data were collected using a structured questionnaire designed in line with the objectives of the study. The instrument contained sections on demographic characteristics, indicators of public transport availability such as accessibility, affordability, reliability, and frequency, as well as measures of household economic conditions. Responses were captured using a Likert scale where appropriate. The instrument was validated through expert review to ensure content and face validity, while reliability was established using Cronbach's alpha, which produced a coefficient within the acceptable range.

Urban poverty was measured using the Foster-Greer-Thorbecke (FGT) poverty measure, which captures the incidence, depth, and severity of poverty and provides a comprehensive assessment of poverty by capturing its incidence, depth, and severity. The FGT index is expressed as:

$$FGT_{\alpha} = \frac{1}{N}\sum_{i=1}^{q}\left(\frac{z - y_i}{z}\right)^{\alpha}$$

where $N$is the total population, $q$is the number of individuals below the poverty line, $z$represents the poverty line, $y_i$is the income of individual i, and $\alpha$is a parameter reflecting the sensitivity of the measure to poverty (0 = incidence, 1 = depth, 2 = severity). This approach allows for a multidimensional understanding of poverty beyond simple income classification.

This model provides a more comprehensive assessment of poverty by considering not only the number of individuals below the poverty line but also how far they fall below it.

Data analysis was carried out using both descriptive and inferential statistics. Descriptive statistics such as mean and standard deviation were used to analyze public transport availability, while the FGT index was used to compute poverty levels. Pearson Product Moment Correlation (PPMC) was employed to test the hypothesis at a 0.05 level of significance, with analysis conducted using Statistical Package for Social Sciences (SPSS) version 25.

4. Results and Data Analysis

Table 4.1: Demographic Characteristics of Respondents (N = 400)

Variable	Category	Frequency	Percentage (%)
Gender	Male	210	52.5

Variable	Category	Frequency	Percentage (%)
	Female	190	47.5
Age	18–30 years	140	35.0
	31–40 years	130	32.5
	41–50 years	80	20.0
	51 years and above	50	12.5
Income Level	Low income	220	55.0
	Middle income	130	32.5
	High income	50	12.5

Source: Field Survey, 2026

Table 4.1 shows that 52.5% of respondents were male while 47.5% were female, indicating a fairly balanced gender distribution. The majority of respondents (67.5%) were within the economically active age group of 18–40 years. In terms of income, 55.0% were low-income earners, confirming that the study adequately captured the population most affected by public transport challenges and urban poverty in Lagos Metropolis.

Table 4.2: Public Transport Availability in Lagos Metropolis

S/N	Item Description	SA	A	D	SD	Mean	Std. Dev
1	Public transport is readily available in my area	110	150	90	50	2.80	0.96
2	Public transport is affordable	95	140	110	55	2.69	0.98
3	Transport services are reliable and consistent	80	130	120	70	2.55	1.02
4	Waiting time for public transport is reasonable	75	120	130	75	2.49	1.05
5	Public transport routes cover my daily needs	90	135	115	60	2.64	0.99
	Grand Mean					2.63	

Source: Field Survey, 2026

Table 4.2 reveals that public transport availability in Lagos Metropolis is moderate, with a grand mean of 2.63. The highest mean score (2.80) was recorded for availability of transport, indicating that transport services exist within most areas. However, lower mean values for reliability (2.55) and waiting time (2.49) show that service quality is inconsistent. This suggests that while transport is present, it is not sufficiently efficient or dependable.

Table 4.3: Urban Poverty Level using FGT Index

Poverty Measure	Value
Poverty Incidence (FGT_0)	0.48
Poverty Depth (FGT_1)	0.29
Poverty Severity (FGT_2)	0.18

Source: Field Survey, 2026

Table 4.3 indicates that 48% of respondents fall below the poverty line, reflecting a high level of urban poverty. The poverty depth index (0.29) shows that poor households are significantly below the poverty threshold, while the severity index (0.18) indicates inequality among the poor. This confirms that poverty in Lagos is both widespread and deeply rooted.

Hypothesis Testing

H_{01}: There is no significant relationship between public transport availability and urban

poverty in Lagos Metropolis.

Table 4.4: Correlation between Public Transport Availability and Urban Poverty (N = 400)

Variables	N	Mean	Std. Dev	r	Sig. (2-tailed)
Public Transport Availability	400	2.63	0.80	-0.62	0.000
Urban Poverty (FGT Index)	400	0.48	0.21		

Source: Field Survey, 2026

Table 4.4 shows a strong negative relationship (r = -0.62) between public transport availability and urban poverty. This implies that improved transport access is associated with lower poverty levels. Increased accessibility enhances mobility, which in turn improves access to employment, healthcare, and education, thereby reducing poverty.

VII. Discussion of Findings

The findings of this study revealed that public transport availability in Lagos Metropolis is moderate but constrained by inefficiencies in reliability, affordability, and waiting time. This indicates that although transport services exist, they are not sufficiently effective to meet the mobility needs of urban residents. This finding is consistent with Buhari (2020), who observed that the transportation system in Lagos has not adequately matched the pace of urban population growth, leading to congestion and service inefficiencies. Similarly, Oni and Okanlawon (2021) reported that inconsistencies in transport operations and long waiting times significantly reduce the effectiveness of public transport systems in Lagos. These studies reinforce the argument that the mere presence of transport services does not guarantee accessibility or efficiency.

The study also found a high level of urban poverty, as indicated by the Foster-Greer-Thorbecke (FGT) indices, showing substantial poverty incidence, depth, and severity. This supports the position that urban poverty in rapidly growing cities is multidimensional and deeply entrenched. Previous studies have emphasized that poverty extends beyond income deprivation to include limited access to infrastructure, services, and opportunities (Booth et al., 2000; Fox, 2021). In the context of Lagos, Adelekan (2020) noted that the expansion of informal settlements has intensified socio-economic inequalities, further entrenching poverty among urban residents. This confirms that poverty in Lagos is both widespread and structurally embedded.

The most significant finding of the study is the strong negative relationship between public transport availability and urban poverty, indicating that improved transport access contributes to poverty reduction. This finding aligns with Lucas (2019), who argued that transport disadvantage is a key driver of social exclusion and economic deprivation. Similarly, Cervero and Golub (2021) found that efficient public transport systems enhance access to employment and income-generating opportunities, thereby improving household welfare. Empirical evidence from Salon et al. (2020) further supports this, demonstrating that improved transport infrastructure reduces travel costs and increases labor market participation among low-income populations.

In addition, the findings highlight the economic burden of transportation on low-income households. High transport costs relative to income reduce disposable income and limit the ability of households to meet basic needs. This is consistent with the findings of Venter et al. (2019), who reported that transport affordability is a critical factor influencing social equity in urban areas. Likewise, Oyesiku (2020) noted that a significant proportion of income among urban residents in Nigeria is spent on transportation, thereby exacerbating poverty conditions. These findings suggest that improving transport affordability is essential for enhancing economic well-being.

The study also revealed that inadequate transport accessibility limits access to essential services such as healthcare and education. Poor connectivity and unreliable services restrict

mobility, thereby reducing opportunities for human capital development and social advancement. This finding is supported by World Bank (2023), which emphasized that efficient urban transport systems are crucial for improving access to social services and reducing inequality. Similarly, Pojani and Stead (2022) argued that transport infrastructure plays a vital role in promoting inclusive urban development by connecting marginalized populations to opportunities.

VIII. Conclusion

The study examined the relationship between public transport availability and urban poverty in Lagos Metropolis and revealed several important insights. First, the findings showed that public transport availability in Lagos is moderate but constrained by inefficiencies such as unreliable services, long waiting times, and affordability challenges. While transport systems exist across the metropolis, their quality and accessibility remain inadequate, particularly for low-income residents who depend heavily on them for daily mobility.

The study further established that urban poverty in Lagos is both widespread and severe, as reflected in the Foster-Greer-Thorbecke (FGT) indices. A significant proportion of residents live below the poverty line, with many experiencing substantial deprivation in terms of income and access to essential services. Most importantly, the study found a strong negative relationship between public transport availability and urban poverty, indicating that improved transport systems are associated with reduced poverty levels. This implies that access to reliable and affordable transportation enhances mobility, increases access to employment and services, and ultimately improves living conditions.

Overall, the findings suggest that transportation is not merely a support service but a critical driver of economic inclusion and urban development. For a city like Lagos, where population growth continues to outpace infrastructure development, the state of public transport has direct implications for social equity and economic stability. If transport challenges persist, they will continue to reinforce poverty and limit opportunities for a large segment of the population.

IX. Recommendations

1. Government should invest significantly in improving public transport infrastructure, including road networks, bus terminals, and transit systems, to enhance accessibility and efficiency.
2. Transport fares should be subsidized for low-income earners to reduce the financial burden of commuting and improve access to economic opportunities.
3. Expansion of Bus Rapid Transit (BRT) and alternative transport systems such as rail and water transport should be prioritized to accommodate the growing urban population.
4. Informal transport systems, such as minibuses and tricycles, should be integrated into the formal transport framework through regulation, standardization, and capacity building to improve service delivery and safety.

References

Adelekan, I. O. (2020). Urban dynamics, everyday hazards and disaster risks in Lagos, Nigeria. *Environment and Urbanization, 32*(2), 421–438.

Booth, D., Hanmer, L., & Lovell, E. (2000). *Poverty and transport: A report prepared for the World Bank*. World Bank.

Buhari, A. (2020). Urban transportation challenges in Lagos. *Journal of Sustainable Development in Transport, 5*(2), 45–58.

Cervero, R., & Golub, A. (2021). Informal transport: A global perspective. *Transport Policy, 104*, 1–10.

Fox, S. (2021). Urbanization and development in sub-Saharan Africa. *World Development, 138*, 105247.

Lucas, K. (2019). Transport and social exclusion: Where are we now? *Transport Policy, 20*(1), 105–113.

Oni, S. I., & Okanlawon, K. R. (2021). Transportation challenges in metropolitan Lagos. *Journal of Transport Geography, 92*, 103023.

Oyesiku, K. (2020). Transport system and urban mobility in Nigeria. *Nigerian Journal of Transport Studies, 5*(1), 45–60.

Pojani, D., & Stead, D. (2022). Sustainable urban transport in developing countries. *Sustainability, 14*(3), 1205.

Salon, D., Gulyani, S., & Mobarak, A. M. (2020). Transportation and economic development. *Annual Review of Resource Economics, 12*, 365–387.

UN-Habitat. (2022). *World cities report 2022: Envisaging the future of cities*. United Nations.

Venter, C., Jennings, G., Hidalgo, D., & Valderrama-Pineda, A. (2019). The equity impacts of bus rapid transit. *Transport Reviews, 39*(5), 638–660.

World Bank. (2023). *Lagos urban transport project report*. World Bank Publications.