



## RESEARCH ARTICLE

### URBAN MASS TRANSIT AND SOCIO-ECONOMIC DEVELOPMENT IN THE FEDERAL CAPITAL TERRITORY, ABUJA

MOHAMMED GULU YUSUF<sup>1</sup>, YAKUBU CHIWAR GAMBO<sup>2</sup>, SALIHU KOKO  
MUSA<sup>3</sup>, ABDALLAH MUHAMUD<sup>4</sup>, JOSEPH IRIPIA OWAN<sup>5</sup>

<sup>1, 4 & 5</sup>Department of Public Administration, Faculty of Administration and Management Science  
University of Calabar; <sup>2</sup>Department of Political Science, Faculty of Social Science, University of  
Calabar; <sup>3</sup>Department of Urban and Regional Planning, Faculty of Environmental Sciences,  
University of Calabar.

#### ABSTRACT

This study examines the impact of urban mass transit on socio-economic development in the Federal Capital Territory (FCT) of Abuja, Nigeria. The Economic Theory of Transportation provides the theoretical framework for understanding the relationships between urban transport efficiency and economic outcomes. The study methodology is quantitative; survey research design was used and data for the study were generated from primary source. The instrument of the primary data collection used was questionnaire. Questionnaires were distributed to a sample of 384 respondents selected from 1,406,239 populations. Stratified random sampling technique was used to draw sample from the population. Data were analyzed using both descriptive and inferential statistical tools and multiple Regression analysis was used to test the hypothesis. The tests results revealed that, urban mass transit significantly influences employment opportunities, The study recommends improvements in transport policies, better infrastructure investment, and enhanced public-private partnerships to improve better transportation system.

**Keywords:** Urban mass transit, socio-economic, development, Abuja, employment opportunities.

#### Corresponding Author

Mohammed Gulu YUSUF

Email Address: [mygulu007@gmail.com](mailto:mygulu007@gmail.com)

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## 1.0. INTRODUCTION

The population of rural areas has been moving toward urban centers due to the concentration of economic, social, cultural, and intellectual activity in cities, including Federal Capital Territory Abuja, Nigeria. As a result, cities have grown. Their reliance on a reliable and efficient transportation system to guarantee a steady flow of goods and services is substantial. According to The Canadian Urban Transit Association (2019), good urban transportation facilitates the movement and spatial interaction of city dwellers, which is essential for the smooth operation of the city. Urban mass transit is important for any culture at any given moment because the relationship between the average level of living standards and the level and pattern of society plays a major influence in determining the social and economic advancement of that society (Su, 2022).

The rapid degree of urbanization that most emerging nations, particularly Nigeria and FCT Abuja as the capital city, are experiencing has made movement difficult and therefore impeded overall growth (Nwankwo, Fawohunre & Obasanjo, 2016). The viability and endurance of urban communities are predominantly contingent upon the effectiveness and accessibility of sufficient transportation infrastructure that ensures smooth and harmonious spatial dynamics. The population's well-being and necessary maintenance cannot exist in the absence of a sufficient and effective supply of transportation infrastructure, and industry output would be significantly lower. Hence, the provision of adequate transportation services is necessary for both intra- and interurban mobility, and any limitations or obstacles to these services impede socioeconomic growth (Mulalic & Rouwendal, 2022).

According to Lee (2019), the transportation industry plays a significant role in the general growth and development of society. The integration of different sectors within a society is significantly aided by urban transport. Shorter public transit delays are also linked to higher employment levels, as demonstrated by Johnson, Ercolani, and Mackie (2017) using data from the 2011 UK Census. According to Knowles and Ferbrache (2016) and Fernando, Heinen, and Johnson (2021), light rail transit (LRT) fosters more favourable outcomes for sustainable neighborhood improvements, economic investment, and the expansion of employment markets than tire-based systems. Since becoming the country's capital, Abuja, the Federal Capital Territory (FCT) of Nigeria, has experienced notable urbanization and population expansion. Nigeria's political, economic, and infrastructure improvements all revolve on Abuja, a metropolitan center that is growing quickly. Investments in urban mass transit networks have multiplied as a result of this expansion in demand for dependable and efficient transportation (Adewale, 2019). Because they offer easily accessible transportation that supports trade, healthcare, education, and other vital services, urban mass transit systems play a critical role in influencing the socioeconomic growth of cities (Cervero, 2013).

The preceding notions suggest that the implementation of organized mass transit in Abuja, like as buses and rail systems, has the potential to ease traffic congestion, shorten commute times, and give inhabitants a reasonably priced means of transportation (Adedotun, 2023). Reducing environmental impact, improving social fairness, and stimulating socioeconomic activity all depend on a public transit system operating efficiently. Given Abuja's strategic importance as Nigeria's administrative and socioeconomic center, it is crucial for sustainable urban planning and policy-making to comprehend how urban mass transportation affects the socioeconomic development of the city.



However, FCT Abuja continues to struggle with issues like traffic congestion, restricted access to effective transportation, and socioeconomic inequality despite large investments and efforts to upgrade the metropolitan mass transit system. The mobility issue, along with several counterproductive transportation challenges, has presented significant obstacles to the socio-economic development and spatial evolution of cities and other urban centers (Akanmu, Umar, Obafemi, Simeon, Sekinat, Oluwatobi, Adebimpe, 2020; Kolade, Abdulfatai, Olugbenga, and Adekunle, 2023). Thus, this study examines the impact of urban mass transportation on the socioeconomic development of the Federal Capital Territory Abuja.

### **1.1. Research Hypothesis**

Ho: There is no significant effect of Urban Mass Transit on Employment opportunities in the Federal Capital Territory Abuja.

## **2.0. CONCEPTS, THEORY, AND EMPIRICAL REVIEW**

### **2.1. Conceptual Review**

#### **Urban Mass Transit**

Technological advancements like autonomous vehicles, real-time tracking tools, and smart ticketing systems have all been incorporated into urban mass transit to improve its convenience and efficiency (Cervero, 2013). Urban mass transit is the term used to describe well-organized, effective public transportation networks that are intended to carry big crowds of people across metropolitan areas. Light rail, commuter trains, buses, subways, and trams are examples of these systems. In order to solve problems like air pollution, traffic congestion, and effective mobility inside cities, the idea of urban mass transportation is essential (Adewale, 2019).

Urban mass transit is the term used to describe the network of public transportation that runs across urban regions. It usually consists of light rail, buses, subways, and trams that are designed to move a lot of people quickly (Hensher & Button, 2001). In the context of an urban transport system, urban form refers to the geographical imprint on an urban network, while urban (spatial) structure refers to the collection of relationships that result from the movements of people and products beneath the urban form (CUTA, 2018).

In order to provide citizens and visitors with effective, secure, and eco-friendly transportation options, urban mass transit systems are essential to sustainable urban growth. In order to promote social fairness and economic progress, urban mass transit is a crucial piece of infrastructure that improves accessibility, connectivity, and general quality of life in densely populated metropolitan regions (Nwankwo, 2016). "Urban mass transit networks are made up of a variety of connected public transportation services that improve energy efficiency, lower carbon emissions, and create a more livable urban environment."

#### **Social Development**

Inclusion of volunteers and personal well-being, as well as giving citizens the power to identify their own needs and have an impact on decisions that affect them, are all part of social development. The creation of social policies and economic initiatives takes public concerns into account, as noted by



Pawar (2014). A set of desired outcomes, such as greater incomes, longer life expectancies, lower infant mortality, and greater levels of education, were the idea behind social development until quite recently. The focus has recently moved from the outcomes to the tactics, public policies, and enabling conditions that are needed to achieve the outcomes peace, democracy, decent governance, social freedoms, equal access, laws, institutions, markets, infrastructure, education, and technology. However, there has been limited focus on the underlying social development process that dictates how society formulates, adopts, initiates, and organizes, and there has been no effort to provide a framework for this kind of work (NITI, 2018).

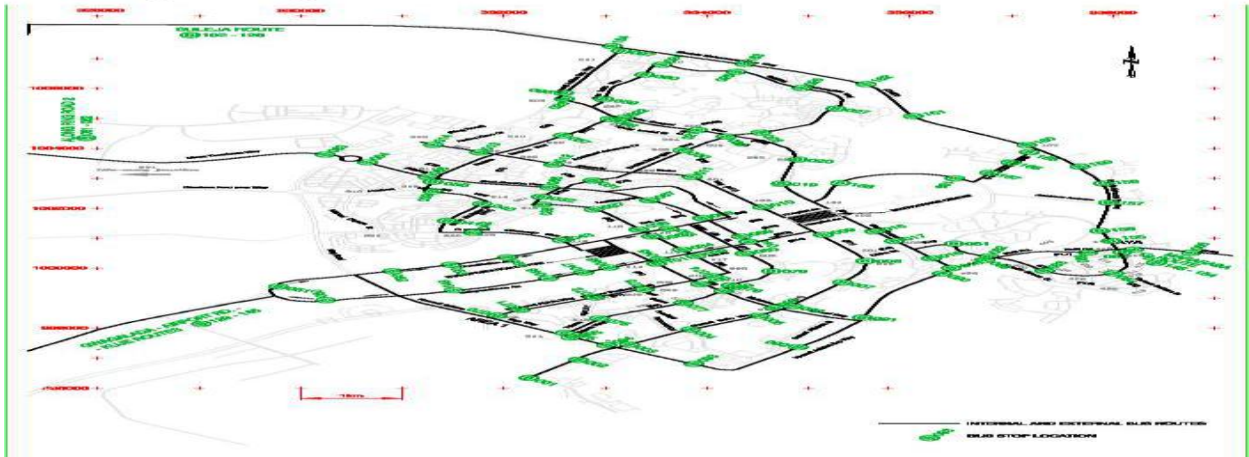
In its broadest sense, social development is the upward movement of society from lower to higher levels of strength, effectiveness, quality, productivity, complexity, understanding, creativity, choice, mastery, satisfaction, and achievement. Growing freedom of choice and the ability to carry out decisions independently and with initiative are outcomes of society's and individuals' development (NITI, 2018). By enabling marginalized groups, both men and women, to take charge of their own development, to enhance their social and economic standing, and to find their proper place in society, social development aims to create a sustainable society worthy of human dignity.

### **Concept of Economic Development**

Long-term investments in infrastructure and the creation, diffusion, and assimilation of new ideas are the foundation of economic Development. Both group effort and substantial, long-term investments are necessary for economic success. Infrastructure development has historically focused on projects, but it now includes the digital sphere as well (Raj and Naem, 2022). The expansion of the standard of literacy coincides with the requirement of a bachelor's degree for entry into the labor force, together with the expectation of lifetime education and training.

Partnerships between government and private industry are the cornerstone of economic development, which is shaped by the policies and initiatives of the former. Long-term economic growth is made feasible by economic progress, even though it is conceivable to have growth without it in the short- or even medium-term (Industrial Revolution, 2019). Economic development is the process of building competencies that increase the capabilities of economic players, according to Sengupta (2019). The consistent rise in real per capita income, wealth and income distribution metrics, and life expectancy, crime rates, and environmental quality indicators are all signs of economic development (van den Berg, 2012).

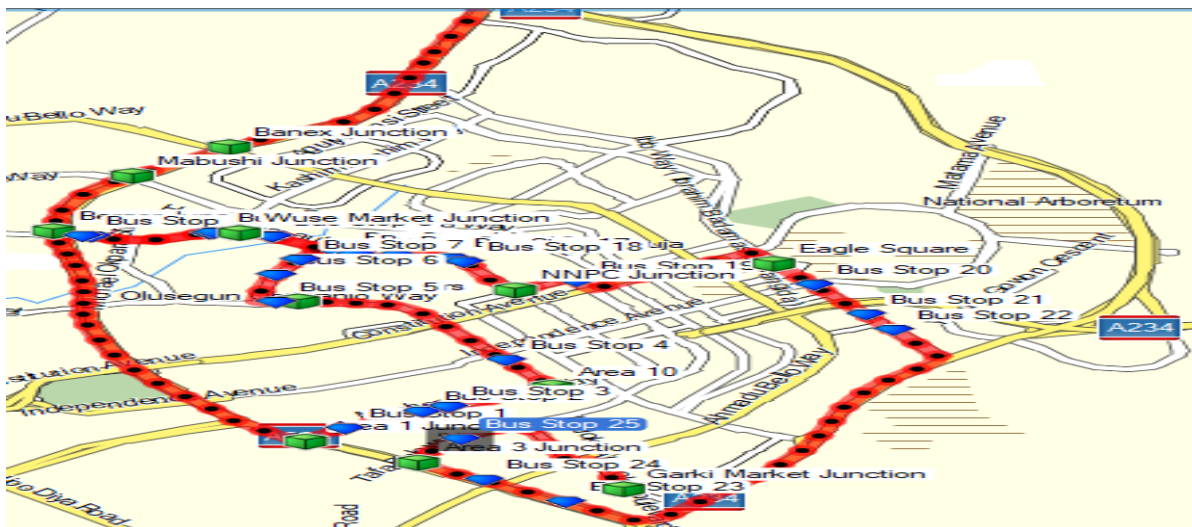
Economic development, broadly understood, is the structural change of an economy through the introduction of more modern and mechanized technology to raise labor productivity, employment, earnings, and the population's standard of life. Infrastructure, social, political, and institutional developments should go hand in hand with economic development in order to support economic transformation (Midgley, 2014).



**Figure 1:** Map showing AUMTCO Route Network  
**Source:** Kolade et al. (2023).



**Figure 2:** Bus Route Network on FCC Map (GPS MapSource)  
**Source:** Kolade et al. (2023).



**Fig. 3:** Bus route network in Phase 1 of FCC  
**Source:** Kolade et al. (2023).



## 2.2. Theoretical Framework

This study adopted Economic Theory of Transportation as theoretical foundation. The economic theory of transportation investigates the ways in which infrastructure and transportation networks affect economic results. Meyer et al. (1965) discuss several topics, including the socioeconomic effects of transportation, accessibility, affordability, and efficiency. In addition, the Economic Theory of Transportation looks at how transportation resources are distributed to suit societal demands. Understanding the impact of transportation activities on regional and urban economies, as well as how they add to the gross domestic product of a country is crucial. The impact of transportation on market systems, resource allocation, and economic development can be comprehended through an examination of the Economic Theory of Transportation (Jara-Díaz, 2007).

### Basic Assumptions of Economic Theory of Transportation

Several fundamental assumptions underline the economic theory of transportation:

*Demand and Supply:* There is a demand for transportation services, which is influenced by factors like population, income levels, and economic activity. The supply of transportation services depends on infrastructure, technology, and policy regulations.

*Cost-Benefit Analysis:* Transportation decisions are often guided by cost-benefit analysis, evaluating the trade-offs between different transportation modes and investments.

*Utility Maximization:* Individuals and businesses aim to maximize their utility or profits by choosing the most efficient and cost-effective transportation options available.

*Externalities:* Transportation activities generate externalities, both positive (such as improved accessibility) and negative (such as pollution and congestion), which need to be accounted for in transportation planning.

*Spatial Economics:* Transportation affects the spatial distribution of economic activities, influencing urban development, land use patterns, and regional economic growth (Basso, and Jara-Díaz, 2005).

By using economic theory of transportation in this research, the Federal Capital Territory of Abuja's urban mass transit system will influence economic activity, including job creation, business opportunities, revenue production, and overall economic growth. Furthermore, the Federal Capital Territory of Abuja's internal revenue and total economic growth are boosted by improvements in accessibility and mobility for inhabitants, especially for low-income groups and small and medium-sized businesses. These factors have an impact on business life and economic opportunities. Effective and efficient transit system in ways such as job opportunities, time savings, and access to work. Promotion and efficient Abuja's transportation system can minimize expenses (such as waiting times and crowding) and maximize benefits (such as comfort and dependable services). The effectiveness and accessibility of mass transit systems influence people's choices about work and social interactions, which promotes socioeconomic growth.

## 2.3. Empirical Review

The 2019 CUTA research study, The Economic Impact of Transit Investment in Canada. A research question is: What is the return on investment? How much is it worth for Canadians to enjoy these benefits? Throughout the inquiry, a Mixed Method was employed. The survey carried out a comprehensive and unique research to look at the economic impact of Canada's present investment in transportation networks and services. The study examined the benefits of investing in operations and infrastructure, jobs in the industry, and the effects of transit users on motor vehicle operating costs, crashes, and pollution.



The study also included a statistical summary of the quantity and distribution of current transit investment in Canada, an examination of academic and industry literature on the benefits of transit from an economic standpoint, and a compilation of economic evaluations of individual transit projects from across the nation. According to the report, Canada's present transit networks bring in at least \$19 billion in revenue annually. Direct employment in the transportation industry employs 59,600 Canadians, while capital investment in the industry creates an extra 65,000 jobs. Thanks to transportation, Canadian homeowners save approximately \$12.6 billion annually on auto operating costs. Roughly \$3.2 billion in economic damages from auto accidents are prevented annually by transportation.

Every year, transit users save \$207 million by producing 4.7 million fewer tons of greenhouse gas emissions. The annual savings from transportation in terms of respiratory illnesses comes to about \$137 million. Urban Mass Transit and Socio-Economy Development are used as independent dependent variables in the current analysis, while the evaluated study offers insightful information on a number of related topics. A mixed method was employed in the examination, and the review study also looked at the return on investment and the value of the benefits that Canadians obtain.

However, this current study will investigate how Urban Mass Transit enhances employment opportunities with quantitative method. Thus, several gaps and limitations that should be considered in relation to Urban Mass Transit and Socio-Economy Development. In the present study, however, a quantitative approach will be used to examine how urban mass transit improves employment prospects.

Lee (2019) conducted research on how land values, employment center growth, and productivity are affected by transportation infrastructure in the Seoul region. A quantitative methodology was employed in the inquiry. The results indicate that productivity, employment center expansion, and land values are all impacted by transportation infrastructure. In particular, residential and commercial land adjacent to rail stations, as well as properties in the broader area of rail stations, benefit from the favorable but minor proximity and accessibility impacts of rail transport completion. (1) Labor accessibility caused by transportation has a positive relationship with business productivity. The expansion of jobs in employment hubs is influenced by labour accessibility brought about by transportation. Infrastructure for transportation can boost performance as well as economic development. On the other hand, the current study intends to provide a thorough analysis of the impact of urban mass transit on socio-economic development in Nigeria, focusing on employment opportunities in the Federal Capital Territory (FCT) of Abuja.

The impact of the Abuja Urban Mass Transit Scheme on the mitigation of transportation problems in the Federal Capital Territory of Abuja was the subject of research done by Adewale (2019). Using a quantitative simple percentage logit analysis model was the method. In Federal Capital Territory (FCT), Abuja, this study examines the effect of a mass transit plan on reducing transportation-related issues. Survey research design was used to sample the opinions of select FCT inhabitants using probability sampling in order to meet the study's objectives. To determine the effects of the Federal Capital Territory Administration's mass transit plan, data were analyzed using the logit probability methodology. The Cronbach's Alpha test, which produced results larger than 0.5, was used to determine the instruments' dependability.

According to study findings, the presence of peak hours, traffic jams, and the type of road have a negative but significant impact on reducing transportation-related issues in the Federal Capital Territory. While transportation costs have a beneficial but small impact on reducing mobility problems, a lack of accessible, inexpensive transportation has a favorable and considerable impact. The recommendation was made for the FCTA to guarantee the enforcement of laws that forbid trade on streets and highways in order to improve the free flow of traffic during peak hours and to provide



private and commercial cars with sufficient secure parking spaces. Last but not least, FCTA ought to give building new roads, bigger roads with three lanes or more, and repairing old ones top attention.

In light of employment prospects in FCT Abuja, the current study seeks to further elucidate the implications of urban mass transit on socio-economic development in the region. Therefore, in contrast to Adewale's (2019) study on transportation-related issues, there is a lack of knowledge regarding the wider implications of urban mass transit on socio-economic development in the Federal Capital Territory of Abuja. Thus, taking into account elements like job opportunities in FCT Abuja, this study attempts to get deeper into the fundamental causes and dynamics defining Socio-Economic Development inside the Urban Mass Transit.

Akanmu, Obafemi, Umar, Simeon, Sekinat, Oluwatobi, and Adebimpe's 2020. The status of urban transportation in a traditional Nigerian city was examined in the study. Quantitative Regression was employed in the investigation. The status of urban transportation in a traditional Nigerian city was evaluated in this study. The study evaluated the socio-economic characteristics and transit needs of commuters, evaluated the standard of transportation infrastructure and services, and recognized the obstacles faced by urban transportation in Ibadan, Nigeria. 163 copies of questionnaires were methodically and randomly distributed to commuters in Ibadan along six (6) traffic corridors of their choice. For data analysis, both inferential (Binary Logistics Regression) and descriptive statistics were employed.

Significant research indicated that the bulk of commuters (about 40%) were employed as civil servants and made above 80,000 naira per month. The most popular and dominant means, according to the Mean Weighted Value statistics, are the motorcycle (3.756) and the cab (3.913). A journey to work (3.718) and the market (3.200) are the most frequent excursions in Ibadan, whereas availability (4.075), safety (4.000), and affordability (3.625) were the most-weighted criteria influencing the choice of commuting mode. While peak/off-peak transit problems (4.050) and vehicle mechanical failure (3.487) were the main obstacles influencing urban commuting, the majority of the evaluated infrastructure facilities were of low quality.

Based on binary logistic regression analysis, the state of urban transportation infrastructure has a substantial impact on commuters' overall satisfaction ( $p < 0.000$ ). R-Square (36%) and Nagelkerke's R (70%) indicate that the model is significant in forecasting the correlation between independent and dependent variables. In order to ensure commuter satisfaction and urban development, the study came to the conclusion that improvements to the urban transport system are necessary. Accordingly, it is advised that Ibadan implement an enhanced traditional public transportation system as well as an integrated transportation system with smart devices. Both the reviewed study and the current study took Urban Mass Transport into account as an independent variable. The present study is unique, nevertheless, since it concentrated on the relationship between Urban Mass Transport and socio-economic Development in Abuja considering factors such as employment opportunities in FCT Abuja.

A study on the effects of Abuja Urban Mass Transit Company operations on passengers' movement within the Abuja Metropolis was carried out in 2016 by Nwankwo, Fawohunre, and Obasanjo. Quantitative, pictorial, descriptive, and inferential statistics were employed in the study. The effect of Abuja Urban Mass Transport Company (AUMTCO) on passenger mobility is investigated in this study. Primary and secondary sources were the main sources of information used in the data gathering process. Information was gathered about the length of time passengers waited at bus stops, their degree of satisfaction, the reasons they used AUMTCO, and records from Abuja Urban Mass Transit.

The study shows that there were insufficient bus stops, insufficient buses, and overcrowded buses, which forced commuters to stand and resulted in subpar services. The research goes on to show that



there are no lanes specifically designated for buses, lengthy wait times, low dependability, uncomfortable ride quality, low efficiency, and extended vehicle breakdown times as a result of improper maintenance. In the end, the study suggests that more buses and bus stops be installed, that bus-only lanes be designated, and that the organization maintain a healthy maintenance culture. Urban Mass Transport was considered as an independent variable in both the reviewed study and the current investigation. While the review, study dependent variable is Passengers' Movement within Abuja Metropolis, this present study is on socio- economic Development. Thus, the present study is unique, nevertheless, since it concentrated on the relationship between Urban Mass Transport and socio-economic Development in Abuja considering factors such as employment opportunities in FCT Abuja.

The socio-economic effects of Dhaka's first mass rapid transit (MRT) system were studied by Raj and Naem in 2022. Combination technique we employed GIS, content analysis, and simple percentage. Around the world, a common method for urban design that maximizes the benefits of transit is called Transit-Oriented Development, or TOD. Among the TOD modes, mass rapid transit (MRT) provides balanced urban growth, fewer motorized cars, high-density development surrounding stations to counteract urban sprawl, and pedestrian facilities to improve quality of life.

In order to accomplish the Sustainable Development Goals (SDGs) by 2030, as a UN member country, Bangladesh must implement Transport Oriented Development (TOD) in order to become a sustainable metropolis, according to a report by Dhaka Urban Transport Project (DUTP). Nonetheless, in Dhaka, where donor and political agendas influence most development initiatives, the socioeconomic benefits of the Mass Rapid Transport (MRT) System have not yet been fully realized. Investigating the socioeconomic effects of the first MRT-6 in Dhaka is the goal of this research. With three transit stations serving as the case study, the study focuses on a Mirpur. There is a gap in the geographic context between this study with Raj and Naem's (2022) study, which focuses on areas outside of the Federal Capital Territory of Abuja. This difference in location results in differences in the research variables, environments, cultural elements, and regulatory frameworks that this study examines.

#### **2.4. Summary of Gaps in Literature**

The studies reviewed, conducted by CUTA (2019), Lee (2019), Adewale (2019), Akanmu, Umar Obafemi. Simeon, Sekinat, Oluwatobi, Adebimpe (2020) Nwankwo , Fawohunre & Obasanjo (2016), American Public Transportation Association (APTA) (2020), Raj and Naem (2022) provide valuable insights into various aspects of Urban Mass Transit and Socio-Economy Development. However, there are several common gaps and limitations that should be considered in relation to this research on Urban Mass Transit and Socio-Economy Development in FCT Abuja. Firstly, there is a gap in the geographic context, as most of the reviewed studies (Akanmu et al, 2020; Raj and Naem 2022), focus on specific regions or outside of FCT Abuja. This difference in location leads to variations in environments, cultural factors, and regulatory framework, which could affect the applicability of findings to this study area .Secondly, while the studies conducted by Nwankwo et al (2016), Lee (2019), CUTA (2019), Raj and Naem (2022), examine Abuja Urban Mass Transit or specific outcomes, they did not fully address the broader role of Employment opportunities in FCT Abuja. Thus, there is a gap in the specific focus of the research objective. Thirdly, the methodologies employed in the studies, such as quantitative surveys or qualitative interviews, did not fully capture the unique aspects of Urban Mass Transit and Socio- Economy Development in Abuja Municipal Area Council.

Therefore, there is a gap in the consideration of methodologies tailored to the context of this study. Additionally, some studies focus on specific aspects of Urban Mass Transit, such as Transportation Problem, Social Sustainability etc, without addressing other important factors or practices relevant to



socio-economy development in Abuja. This gap in the consideration of comprehensive Urban Mass Transit system limits the applicability of findings to the research objectives. Addressing these gaps allowed the study to provide tailored insights into the impact of Urban Mass Transit on Socio-Economy Development in Abuja, considering the unique employment opportunities of the FCT Abuja.

### **3.0. MATERIALS AND METHODS**

This study adopted a quantitative method to examine the impact of Urban Mass Transit on Socio-Economy Development in Abuja.

#### **3.1. Research Design**

Survey research design was used to investigate the impact of Urban Mass Transit on Socio-Economy Development in Abuja. The survey design was chosen to enable the systematic collection of numerical data from a large group of respondents, thereby facilitating the analysis of patterns and relationships between variables relevant to the study.

#### **3.2. Population and Sample size of the Study**

The research encompassed a total of 1,406,239 (National Population Census, 2006) individuals comprising residents, civil servant, business owners, managers, and employees actively engaged daily activities in FCT Abuja. Utilising Raosoft, a sample size of 385 was calculated with a 95% confidence level and a 5 percent margin of error.

#### **3.3. Sampling Technique**

From the pool of eligible respondents meeting these criteria, stratified random sampling was used to ensure proportional representation.

#### **3.4. Source of Data**

The sources of data collection in this research are both the primary and secondary sources of data collection. The primary source of data collection consist of questionnaires, and secondary source of data collection consists of online publications, journals etc.

#### **3.5. Research Instrument**

Data were gathered through a structured questionnaire specifically developed for this study. A 5-point Likert scale ranging from “strongly disagree” to “strongly agree” was used to measure respondents’ levels of agreement with various statements related to their experience with the Urban Mass Transit and employment opportunities in FCT, Abuja.

#### **3.6. Reliability of the Research Instrument**

Prior to full deployment, the questionnaire was subjected to a pilot test with 60 respondents from Suleja Local government Area of Cross River state to assess its reliability and clarity. The reliability of the instrument content validity index (CVI), at 0.7. To ascertain reliability, the Cronbach alpha coefficient was computed using SPSS.

#### **3.7. Method of Data Analysis**

In order to present and analyze the survey results and test the hypotheses, the study will used both descriptive and inferential statistical techniques of analysis. The data obtained from the research surveys will first be described and summarized using tabulation, frequency distribution, and percentages utilizing descriptive statistical methods. The second approach involved the application of inferential statistical instruments of regression analysis. This will allow the study to draw conclusions about the study's sampled population. Regression analysis forecasts the extent to which the IV, or predictor variable, will affect the DV, or criterion variable. This provided the foundation for this.



Thus, the decision criteria for the regression statistical testing is as follows: the null hypotheses are rejected if the calculated p-value is equal to or less than the specified p-value and the null hypothesis are preserved at  $p < 0.05$  if the calculated p-value is greater than the set p-value.

#### 4.0. PRESENTATION OF RESULTS AND DISCUSSION

##### 4.1. Descriptive Statistics on Employment Opportunities

Table 1 highlights respondents' perceptions regarding the impact of urban mass transit on employment opportunities in FCT, Abuja. The findings indicate mixed perceptions about the role of urban mass transit in job creation and equitable employment distribution. A mean response of 2.06 with a standard deviation of 0.89 on the first question suggests that most respondents agree that urban mass transit enhances employment opportunities in FCT, Abuja. This finding underscores the positive economic impact of the transit system, particularly in creating direct and indirect jobs within the city. However, a mean response of 2.97 with a standard deviation of 1.183 on the second question indicates that most respondents disagree that urban mass transit ensures equitable job distribution between rural and urban areas of FCT, Abuja. This suggests that while urban mass transit may generate employment, these opportunities may be concentrated in urban centers, with rural areas experiencing limited benefits.

**Table 1: Employment Opportunities**

	N	Mini mum	Maxi mum	Mean	Std. Dev.	Decisio n
Urban Mass Transit enhances employment opportunities in FCT	379	1	4	2.06	0.890	Agreed
Urban Mass Transit ensures equitable job distribution between rural and urban areas of FCT	379	1	4	2.97	1.183	Disagreed
Urban Mass Transit creates jobs for the populace of FCT.	379	1	4	2.40	0.958	Agreed
Employment Opportunities	379	1.000	4.000	2.478	0.638	Agreed
Valid N (listwise)	379					

Source: Authors' Field Survey (2025).

A mean response of 2.4 with a standard deviation of 0.958 on the third question indicates that most respondents agree that urban mass transit contributes to job creation within FCT, Abuja. This highlights the role of the transit system in providing employment, particularly in areas such as transport services, maintenance, and administration. The overall mean response of 2.47 with a standard deviation of 0.637 suggests that most respondents agree that urban mass transit enhances employment opportunities in FCT, Abuja. However, the disagreement regarding equitable job distribution indicates a potential gap in employment accessibility between urban and rural populations, which may require policy attention to ensure a more balanced economic impact.

##### 4.2. Test of Hypothesis

There is no significant effect of Urban Mass Transit on Employment opportunities in the Federal Capital Territory Abuja. The hypothesis was tested using a simple regression analysis, the results of which are discussed below:



Table 2: ANOVA<sup>a</sup> Model of Impacts of Mass Transit on Employment Opportunities in Abuja

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	51.247	1	51.247	188.604	0.000 <sup>b</sup>
	Residual	102.438	377	0.272		
	Total	153.685	378			

a. Dependent Variable: Employment Opportunities. b. Predictors: (Constant), Urban Mass Transit  
**Source:** Authors’ Analysis (2025).

The F-statistics, which evaluate the suitability and effectiveness of the regression model in relation to the dataset, was recorded at 188.604, with a p-value of 0.000b. This result is statistically significant at the 5 percent level, indicating that the model is appropriately aligned with the dataset.

Table 3: Regression of Impacts of Mass Transit on Employment Opportunities in Abuja

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.377 <sup>a</sup>	0.133	0.129	0.5212665	1.823

a. Predictors: (Constant), Urban Mass Transit. b. Dependent Variable: Employment Opportunities  
**Source:** Authors’ Analysis (2025).

Table 3 presents a summary of the simple regression analysis. The empirical results indicate that R, the correlation coefficient, was 0.377, suggesting a somewhat weak relationship between urban mass transit and employment opportunities in FCT, Abuja.

The R<sup>2</sup> value, representing the coefficient of determination, was recorded at 0.133, meaning that 13.3 percent of the total variation in employment opportunities within FCT, Abuja can be attributed to changes in urban mass transit as examined in this study, while the remaining 86.7 percent is influenced by other factors not included in this model. Similarly, the adjusted R<sup>2</sup> value of 0.129 suggests that even with the inclusion of additional variables in the model, urban mass transit would still account for 12.9 percent of the variations in employment opportunities.

Table 4: Partial Regression Model of Impacts of Mass Transit on Employment Opportunities.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error			
1	(Constant)	0.567	0.142		3.999	0.000
	Urban Mass Transit	0.930	0.068	0.377	13.733	0.000

a. Dependent Variable: Employment Opportunities  
**Source:** Authors’ Analysis (2025).

Table 4 presents the results of the analysis on the impact of urban mass transit on employment opportunities in FCT, Abuja. From Table 4, the model is expressed as follows:

$EMPL = 0.567 + 0.93UBMT + \epsilon$  **Where:** EMPL = Employment Opportunities in FCT, Abuja; UBMT = Urban Mass Transit;  $\epsilon$  = Error term

The coefficient for urban mass transit is 0.93, which is positive. This suggests that an increase or maintenance of the current state of urban mass transit would result in more employment opportunities in FCT, Abuja. This reflects the positive contribution of urban mass transit operations to employment growth in the region. However, the significance of this relationship can be assessed using the t-



statistic and its associated p-value. The t-statistic is 13.733, with a p-value of 0.000. Since the p-value is less than 0.05, the relationship shown in the model is significant at the 95% confidence level. This indicates that there is sufficient statistical evidence to reject the null hypothesis ( $H_0$ ) and accept the alternative hypothesis ( $H_1$ ). Based on this analysis, the study rejects the null hypothesis ( $H_0$ ), which claims that urban mass transit does not significantly affect employment opportunities in FCT, Abuja, and accepts the alternative hypothesis ( $H_1$ ), which asserts that urban mass transit has a significant impact on employment opportunities in FCT, Abuja.

### **4.3. Discussion of Findings**

The study investigated the effect of the impact of urban mass transit on employment opportunities, performance of SMEs and internally generated revenue in FCT, Abuja. From the data analysis, the study revealed that urban mass transit has a positive and significant effect on employment opportunities in FCT, Abuja. This finding is in line with the findings of 2019 CUTA and Raj and Naem in 2022 research studies, who states that, urban mass transit has direct impact on employment. Also, Bastiaanssen, Johnson and Lucas (2020) and Lee (2019) studies found out that, Urban mass transit has a positive and significant effect on employment opportunities.

### **5.0. CONCLUSION AND RECOMMENDATIONS**

The study revealed that, urban mass transit has a positive and significant effect on employment opportunities in FCT, Abuja. This study concludes that, the relationship between urban transit and economic development extends beyond transportation itself, influencing employment, investment, and government revenue generation. Efficient mobility strengthens economic integration by making it easier for individuals to participate in the workforce and for businesses to reach their work place. The availability of reliable transit services contributes to business expansion, increased productivity, and overall economic stability that translate to employment opportunities.

The study recommend that to maximize the employment benefits of urban mass transit in Abuja, the government should expand transport networks, create additional transport hubs, adopt PPP approach and invest in training and skill development for transit workers.

### **Conflict of Interest**

The authors declare no conflict of interest.

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