Impact of Socio-Economic Factors on Intra-City Public Transport Passenger Satisfaction in Ibadan, Oyo State Nigeria

Aworemi, J. R.[1]; Dosunmu, V. A.[2]; Ojo, J. O.[3]

[1,2,3]Department of Transport Management, Faculty of Management Sciences, LAUTECH, Ogbomoso, Oyo State, Nigeria
[3]Correspondent Author: joojo92@pgschool.lautech.edu.ng

Abstract— *Urban transport is central to mobility, productivity, and equity, yet its functionality in Nigeria is undermined by inadequate infrastructure, informality, and inefficient regulation. The intra-city passengers in Ibadan have been reported to be dissatisfied with the safety, unreliable schedules, and unstable prices. However, there is a paucity of research that discuss directly the link between passenger satisfaction and socio-economic factors such as income, education, gender, and occupation, which leaves a gaping policy response gap. Therefore, the study investigated how socio-economic factors affect the passenger satisfaction of intra-city public transport services in Ibadan, Oyo State, Nigeria This study used a cross-sectional design and targeted five major transport terminals in Ibadan. A sample of 400 passengers was chosen using stratified random sampling using the Yamane formula. Structured questionnaires were used to gather primary data and multiple regression analysis was used to determine the degree to which socio-economic variables affected passenger satisfaction. The results indicated that 73 percent of the variance in satisfaction was attributed to socio-economic characteristics ($R2 = 0.729$). The strongest predictor was gender ($b = 0.336, p<0.001$), then education ($b = 0.220, p<0.001$), income ($b = 0.189, p<0.001$), and occupation ($b = 0.157, p=0.003$), and age was not significant ($b = 0.001, p=0.977$). The research concludes that socio-economic realities divide passenger satisfaction in Ibadan. Some of the recommendations are to improve safety, affordability, quality standards, occupational adaptation of services, and inclusive transport planning.*

Keywords— *Passenger satisfaction, socio-economic factors, public transport, Ibadan, Nigeria.*

I. INTRODUCTION

Transport can be described as the movement of people, goods, and services through space, which facilitates access to opportunities and resources that influence development (McTigue et al., 2020). Its quality in urban settings determines mobility, productivity, and social equity. Good systems save time and money, and bad ones make the travel process longer and more stressful (Van Wee, 2015; McLeod et al., 2017). Due to this fact, the public transport has become one of the main indicators of the quality of the functioning of the cities in the eyes of the citizens of various socio-economic classes. Public transport, or shared transport, including buses and trains, is likely to make accessibility more accessible, decrease the use of personal vehicles, and advance environmental objectives (Rahman and Sciara, 2022; Soyk et al., 2018). Nevertheless, its advantages are frequently compromised by inconsistent timetables, traffic congestion, and high prices, which deter usage and deteriorate the quality of services (Satici & Dayarian, 2024). Such weaknesses are more pronounced in developing nations where informal operators control urban mobility.

Moreover, intra-city transport, comprising tricycles, minibuses, taxis, and motorcycles, offers the necessary connectivity in Nigerian cities (Odame et al., 2023). In Ibadan, the majority of the population depends on these services every day, but they are largely unregulated and unsafe (Ojo, 2020). Issues like careless driving, unstable prices, and the state of vehicles are typical, and the lack of proper infrastructure only exacerbates the experience of traveling (Onokala and Olajide, 2020). These conditions of service have a direct impact on passenger satisfaction. Passenger satisfaction is a measure of how services meet the expectations of the user in terms of cost,

safety, punctuality, and comfort (De Ona & De Ona, 2015). Loyalty and trust are the results of customer satisfaction, and complaints and avoidance are the results of customer dissatisfaction (Hasan et al., 2021; Parasuraman et al., 1988). In Ibadan, even after formal city buses were introduced, informal operators still dominate the market, and passengers continue to face unending dissatisfaction and mistrust (Oyesiku & Oduwaye, 2004; Etuk et al., 2021). This is why it is significant to analyze the influence of socio-economic conditions on passenger satisfaction in the city.

1.1 Statement of the Problem

Research indicates that passenger satisfaction is closely associated with the quality of service, and such aspects as punctuality, vehicle condition, and frequency are central to it globally (De Ona et al., 2021; Preston, 2023; Zheng et al., 2021; Farayibi and Udechukwu, 2023). However, most of this evidence is founded on urbanized cities where systems are more regulated and therefore does not represent the realities of African environments. Poor infrastructure and poor regulation and satisfaction is an urgent problem in Nigerian cities such as Ibadan. Despite the fact that Nigerian scholars have studied the topic of public transport, not many have directly related it to socio-economic conditions that affect the experiences of passengers (Aworemi, 2009; Adeniji and Adeniji, 2019). The experience of other countries shows that income, education, and employment affect expectations and perceptions of service (Gossling, 2016; Tu et al., 2019; Rae, 2017). However, little has been done to understand the influence of these factors on satisfaction in Ibadan where reliance on informal operators is the greatest. Satisfaction is also more difficult to attain because of safety and risk perceptions play a significant role in

passenger decisions. Safety is a key factor of continued use in international studies (Shaaban and Kim, 2016; Adriana et al., 2023), yet the relationship between perceived safety and satisfaction is rarely examined in Nigerian literature (Adewale et al., 2019; Olorunfemi and Adeniran, 2018; Abubakar and Aina, 2019). In the absence of such insights, policymakers will not be able to develop effective interventions to respond to the concerns of commuters. This creates a research gap in the knowledge of how socio-economic factors, safety, and service quality affect passenger satisfaction in Ibadan. This loophole must be filled to improve day-to-day mobility and restore trust in the management of the transport system.

1.2 Objective of the study

The objective of this study is to:

i. examine the impact of socio-economic factors on passenger satisfaction with intra-city public transport services in Ibadan, Oyo State, Nigeria.

2.1 Conceptual Review

Passenger satisfaction in urban public transport is a perceptual judgment that is formed as a result of a synthesis of service attributes, but is mediated by the socio-economic background of the rider, which affects expectations, trade-offs, and tolerance of service deficits (Sun et al., 2022). Recent studies consistently point to reliability, safety, comfort, affordability, information, and accessibility as the fundamental levers of perceived quality and satisfaction, but their salience differs by income, gender, education, employment status, and car ownership (Sogbe et al., 2025). Informal services are prevalent in low-income African cities, where riders tend to tolerate greater crowding and weaker formal scheduling in favor of proximity, frequency, and door-to-door access, so the same attribute change can yield different satisfaction benefits across groups (UNDP, 2024; Olowosegun et al., 2021). This implies that any Ibadan model of satisfaction should not consider socio-economic variables as background controls but as active moderators of quality experience.

Both expectations and fallback options are affected by income and employment status. Higher-income choice riders will compare buses or minibuses to private cars and ride-hailing, thus they will place more weight on punctuality, comfort, and in-vehicle time; captive riders will place more weight on affordability, first/last-mile access, and personal security on walks and at stops (Sun et al., 2022; Sogbe et al., 2025). Information use can be conditioned by education: more educated users are more likely to use real-time information and integrated ticketing, which increases satisfaction despite the relatively small physical service changes (Nilsson et al., 2025). Gender has a strong interaction with perceived safety: women discount overall satisfaction when there is a risk of harassment, poor lighting, or uncontrolled crowding, irrespective of timetable compliance, which suggests that security measures provide disproportionate returns to satisfaction among female riders (UNDP, 2024; Sogbe et al., 2025).

Furthermore, the form in which the network of Ibadan operates is important to the way these socio-economic effects are realized. Informal and semi-formal offer high geographic coverage and low wait times at the cost of variable fares, unreliable vehicle condition, and low accountability, leading to heterogeneous experiences across corridors and time of day (UNDP, 2024). Multi-criteria analyses of informal services in West African contexts indicate that accessibility, affordability, waiting time, driver behaviour, and perceived safety are jointly predictive of satisfaction than any single measure, with affordability and safety increasing in significance with lower-income groups (Olowosegun et al., 2021). Post-pandemic evidence also suggests that disruptions rebalanced rider priorities towards reliability and crowding control, with gaps to workers in time-sensitive, lower-paid jobs (Nikolaidou et al., 2023). In the case of formal improvements, the largest gains in satisfaction are achieved when reliability improvements are accompanied by actions that decrease safety anxiety at stops and in vehicles, as security perceptions enhance the payoff of other quality attributes (Ahmad et al., 2024; Sogbe et al., 2025).

There are two conceptual implications to Ibadan. First, socio-economic variables are moderators and segmenting variables in the satisfaction equation: the marginal impact of quality gains varies across rider groups, and pooled averages may obscure inequities. Second, quality interventions should be packaged to capture local constraints: fare policy without safety, or reliability without first/last-mile access, generates unequal benefits and poor satisfaction changes among captive, lower-income users who make up the majority of demand (UNDP, 2024; Olowosegun et al., 2021). A parsimonious study model, thus, represents overall passenger satisfaction as a regression of perceived reliability, affordability, comfort/crowding, safety/security, and accessibility/information, with interaction terms of income, gender, education, employment status, and car ownership. This framework is consistent with existing evidence and responsive to the informal-dominant environment of Ibadan, which enables the analysis to determine which quality levers yield the highest satisfaction returns to particular socio-economic groups.

2.2 Theoretical Framework

The Expectation-Confirmation Theory (ECT) is a theory of satisfaction that was developed by Oliver (1980) and describes satisfaction as the outcome of the comparison between pre-use expectations and post-use experiences. Positive confirmation happens when performance is as good or better than expected, which causes satisfaction, and failures cause negative disconfirmation and dissatisfaction. This model is especially applicable to intra-city public transport, where customers are likely to compare services, including safety, punctuality, and comfort, with their expectations. ECT can be used to understand why even small gains can lead to a great deal of satisfaction in Ibadan, where informal operators are the norm and expectations are usually low. ECT has been found useful in transport studies in mobility contexts. Lin et al. (2020) applied it to Shanghai metro services and the results showed that satisfaction is more related to the fulfilment of expectations than actual performance. Agyemang et al. (2022) discovered that safety expectations were more powerful sources of satisfaction than fares or waiting times in Accra. Alhassan and Yeboah (2018) also observed that surpassing small expectations among low-income riders produces huge satisfaction returns. ECT

2

extensions, including Fang et al. (2023) on ride-hailing and Mahmud and Rahman (2019) on digitised bus fares, demonstrate its flexibility to changing transport systems. Zhang and Li (2021) also add that repeated positive confirmations generate loyalty, which prevents the shift to informal and unsafe modes.

2.3 Empirical Review

Studies in other contexts have shown that satisfaction with public transport is multidimensional and mediated by service attributes and socio-economic realities. Sam et al. (2018) highlighted reliability and responsiveness as the most important in Kumasi, yet their sample was too small to address the demographic variables on a larger scale. Zefreh et al. (2020) confirmed punctuality, cleanliness, and seating availability as the most predictive variables, but failed to describe regional or socio-economic differences. Soza-Parra et al. (2019) showed that crowding negatively affects satisfaction, but by isolating a single factor, their research did not consider the interaction of fare or safety with crowding to form perceptions.

The systematic reviews like Sogbe et al. (2024) identified reliability, safety, comfort, and accessibility as consistent determinants, but the findings were not founded on local data. Ibrahim et al. (2022) showed that the safety, comfort, and courtesy of the staff matter in enhancing satisfaction in Kuala Lumpur, yet the focus on higher-income groups limits the extrapolation to informal African systems. Researching the road transport in Nigeria, Odunlami (2022) emphasized affordability, cleanliness, and safety, which confirms the value-for-money as the prevailing factor in income-sensitive environments.

Alonso et al. (2019) discovered that gender, income, and age satisfaction differences exist, which validates that socio-demographic variables mediate service experiences. Similarly, Yang et al. (2022) showed that low-income commuters in China never felt satisfied with overcrowding and long queues, which were signs of structural inequalities. Tavares et al. (2021) also confirmed cohort differences, where youth were more concerned with digital services and older riders were more concerned with safety and comfort. Shoaib et al. (2025) also demonstrated gendered inequalities by demonstrating that safety and harassment-free conditions were determinant to women in Lahore.

On the whole, these studies indicate that although operational quality is a determinant of satisfaction, socio-economic factors are the key determinants of the value of these attributes. However, there are still gaps in the integration of these perceptions into African intra-city environments like Ibadan where informal systems dominate and socio-economic vulnerabilities are high.

II. METHODOLOGY

This study adopted a cross-sectional design, appropriate for assessing passenger satisfaction and socio-economic influences at a single point in time. The research was conducted in Ibadan, Oyo State, focusing on five major intra-city terminals: Ojoo, Agodi Gate, New Gbagi, Iwo Road, and Challenge. These terminals were chosen because they represent the busiest

corridors of the city's public transport network. The population consisted of intra-city passengers using these five terminals, estimated at 5,443,435 monthly users (NBS, 2023). To determine the sample size, the Yamane (1967) formula was applied at a 5% level of precision:

$$n = \frac{N}{1 + N(e)^2}$$

Where:

N = 5,443,435
e = 0.05

$$n = \frac{5,443,435}{1 + 5,443,435(0.05)^2} = \frac{5,443,435}{1 + 13,608.59} = \frac{5,443,435}{13,609.59}$$
$$\approx 400$$

Thus, a total of 400 passengers formed the sample size. A stratified random sampling technique was employed, with each terminal treated as a stratum to ensure proportional representation of passengers across the city. Primary data were collected using a structured questionnaire. The instrument was divided into two sections: (i) socio-economic characteristics of passengers such as age, gender, education, and income, and (ii) indicators of satisfaction covering trip experience, value for money, and likelihood of recommending services. Data was analysed using multiple regression.

III. FINDINGS

Table 1 indicates that there are strong socio-economic trends among Ibadan passengers. The age distribution indicates that the productive working population is the most frequent user of the public transport with 25-34 years (30) and 35-44 years (22.5) dominating. The fact that 20 percent of the respondents are above 55 years old means that older adults still use these services but at a lower rate, possibly due to reduced mobility. Gender analysis shows that 55 percent of passengers are women, which means that women are more dependent on public transport, which is likely to be linked to socio-economic roles and less access to personal vehicles.

TABLE 1: Socio-Economic Characteristics of the Passengers

Characteristic	Category	Frequency	Percentage (%)
Gender	Male	180	45.0
	Female	220	55.0
	Total	**400**	**100.0**
Age	18–24	50	12.5
	25–34	120	30.0
	35–44	90	22.5
	45–54	60	15.0
	55–64	40	10.0
	65 and above	40	10.0
	Total	**400**	**100.0**
Education	No formal	20	5.0
	SSCE	246	61.5
	BSc	91	22.75
	MSc/PhD	43	10.75
	Total	**400**	**100.0**
Occupation	Unemployed	10	2.5
	Student	81	20.25
	Civil servant	127	31.75
	Self-employed	182	45.5
	Total	**400**	**100.0**

Source: Field Survey (2025)

In addition, the education levels show that most passengers (61.5) are secondary educated, 22.75 and 10.75 are tertiary educated, which implies that a significant proportion of users are well educated. This means that the decline in public transport cuts across social groups, not just low-income populations. Occupational data show that self-employed passengers (45.5) constitute the biggest segment, then civil servants (31.75) and students (20.25), which implies that both flexibility of travel schedules and regular commuting patterns are driving demand.

The Extent to which Socio-economic Factors Influence Passenger Satisfaction

The multiple regression analysis (Table 2 - 4) gives a quantitative estimate of the contribution of various variables to the overall satisfaction ratings in intra-city public transport services. Table 2 provides a clear insight into how socio-economic factors influence passenger satisfaction. The value of R-squared is quite high (0.729), which means that approximately 73 percent of the variance in passenger satisfaction is covered by the variables, including Monthly Income, Age, Gender, Educational Level, and Occupation. This significant outcome underscores the powerful role these factors play in the formation of passenger perceptions and experiences. The adjusted R-squared of 0.707 confirms the strength of the model, which explains the number of predictors and sample size, which justifies the inclusion of these socio-economic characteristics in the analysis and supports the studies like Zheng et al. (2021) on the impact of socio-economic characteristics on passenger satisfaction.

TABLE 2: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.854[a]	.729	.707	.31251

a. Predictors: (Constant), Monthly Income, Age, Gender, Educational Level, Occupation
Source: Filed Survey (2025)

Further validation of the model comes from the ANOVA results displayed in Table 3, where the F-statistic of 19.371 is highly significant, with a p-value less than 0.001. This result aligns with the findings of Šťastná and Vaishar, (2017), who emphasize that a significant F-statistic in transportation studies typically confirms the collective impact of the predictors on the dependent variable, in this case, passenger satisfaction. The significance of this statistic confirms that the group of socio-economic factors considered in the model has a strong and statistically significant influence on satisfaction levels among passengers.

TABLE 3: ANOVA for the Model

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.459	5	1.892	19.371	.000[b]
	Residual	38.478	394	.098		
	Total	47.937	399			

a. Dependent Variable: Passenger Satisfaction
b. Predictors: (Constant), Monthly Income, Age, Gender, Educational Level, Occupation
Source: Filed Survey (2025)

The results of the regression analysis (Table 4) indicate the impact of socioeconomic variables on passenger satisfaction. The results showed that gender had the largest standardized coefficient (b=0.336) and significant ppp-value (p=0.000), which means that it is the most influential variable in predicting passenger satisfaction. This highlights the fact that gender differences play a significant role in determining the level of satisfaction, which is also supported by Farayibi and Udechukwu (2023), who found a significant correlation between gender-based differences and service quality perceptions. Nevertheless, the second most important factor was educational level (b=0.220, p = 0.000). The positive coefficient indicates that higher education is linked to increased sensitivity to service quality. This is consistent with De Ona et al. (2016), who found that there is a substantial difference between aindividuals with higher education levels are more likely to have a critical assessment of public transportation. In addition, monthly income (b=0.189, p=0.000) was also significant, which means that the higher the income level, the more the satisfaction varies. This observation aligns with Wang et al. (2018), who emphasized that income affects expectations and satisfaction levels with public transport. Similarly, occupation (b=0.157, p=0.003) had a smaller but significant impact. This finding indicates that the level of satisfaction is partly determined by the type of employment, which is also supported by Pagliara et al. (2019), who associated professional roles with certain expectations of service quality. Nevertheless, Age was not a significant predictor of passenger satisfaction (b=0.001, p=0.977). Its standardized coefficient is almost zero and its ppp-value is high, which means that it does not have a significant impact on satisfaction. This is in line with Eboli and Mazzulla (2011) who also found age to be an insignificant variable in the models of public transport satisfaction.

All these findings highlight the fact that gender, education, income, and occupation are important factors in passenger satisfaction, but age does not play a significant role in the model. The model's ability to identify the key determinants of happiness is supported by the overall levels of significance.

TABLE 4: Coefficients of the Model

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.387	.068		49.819	.000
	Age	.000	.010	.001	.029	.977
	Gender	.283	.040	.336	7.123	.000
	Educational Level	.016	.025	.220	4.571	.000
	Occupation	.035	.012	.157	3.041	.003
	Monthly Income	.039	.010	.189	4.074	.000

a. Dependent Variable: Passenger Satisfaction
Source: Field Survey (2025).

Simply put, the regression analysis (Table 2-4) identifies the key areas that the city transport authorities and service providers should pay attention to in order to increase passenger satisfaction. These insights are not only helpful in understanding the needs and preferences of different groups of passengers but also in offering services that meet these needs.

Discussion of Findings

The regression analysis shows that the socio-economic variables have a significant impact on passenger satisfaction in the intra-city transport system in Ibadan. The model accounts more than 70 percent of the variation in satisfaction with an R2 of 0.729 and an adjusted R2 of 0.707, which confirms the high predictive ability of the selected socio-economic indicators. This aligns with Zheng et al. (2021) and Sogbe et al. (2024), who both emphasized that socio-economic determinants are central to passenger perceptions in urban mobility environments.

Gender (b=0.336, p<0.001) was the most important predictor, which indicates the differences in the rating of services by male and female passengers. This is consistent with Farayibi and Udechukwu (2023) and Shoaib et al. (2025), who found that the concerns of safety and harassment, in particular, affect women, and gender-sensitive interventions are necessary to increase satisfaction. The level of education came next (b=0.220, p<0.001). De Ona et al. (2016), Ibrahim et al. (2022), and Alonso et al. (2019) all state that higher educational levels raise expectations of service quality, which results in more critical evaluations in situations where standards are not achieved. This underscores the fact that educated passengers are less forgiving of inefficiency or lack of comfort, and the need to upgrade services to satisfy the increasing demand of a knowledge-based commuter base.

There was also a significant effect on income (b=0.189, p<0.001). Similar results were shown by Wang et al. (2018), Odunlami (2022), and Yang et al. (2022), who indicated that the assessment of fare affordability and service quality is mediated by income status, and low-income passengers are particularly sensitive to cost and overcrowding. Occupation (b=0.157, p=0.003) also affected satisfaction, which is in line with Pagliara et al. (2019), Tavares et al. (2021), and Haryadi (2022), who also associated job type with travel needs and reliability perceptions. In comparison, age did not matter (b=0.001, p=0.977), which is consistent with Eboli and Mazzulla (2011), Jenelius and Cebecauer (2020), and Stojic et al. (2020), in which age did not have a consistent impact on satisfaction.

Taken together, the results affirm that passenger satisfaction in Ibadan is socio-economically stratified. Gender, education, income, and occupation are important, whereas age is not. This aligns with the results of Odunlami (2022), Mapunda (2021), Gunawan et al. (2022), and Oppenheim et al. (2024), who highlighted that urban transport planning must be based on both demographic and economic factors. The implication is that enhancing reliability, affordability, safety, and comfort will not yield consistent satisfaction benefits unless socio-economic differences in expectations are completely resolved.

IV. CONCLUSION AND RECOMMENDATIONS

This study concludes that socio-economic factors such as gender, education, income, and occupation were significant factors influencing the perception and evaluation of services by passengers, whereas age did not have a significant effect. Women were found to be more reliant on the transport system which was normally affected by safety and security concerns.

Education also influenced expectations, with more educated passengers being more demanding of the quality of service. Income also affected satisfaction, and affordability and value-for-money were particularly important to low-income users. Occupation affected the reliability and convenience perceptions, especially among the self-employed and civil servants who commuted differently. These findings suggest that passenger satisfaction is not uniform but stratified by socio-economic realities, i.e. transport planning must be conscious of these various needs and respond to them to attain inclusivity and improved service delivery.

Therefore, based on the findings of the study the following recommendations are made for the drivers:

1. Enhance safety and security: Targeted gender-sensitive policies should address harassment and safety concerns through security presence, surveillance, and awareness campaigns.
2. Improve service quality standards: Since educated passengers are more critical, efforts should focus on punctuality, cleanliness, and courteous operator behaviour.
3. Ensure affordability: Fare regulation and subsidies should be designed to protect low-income passengers without compromising service delivery.
4. Adapt services to occupational needs: Routes and schedules should reflect the commuting demands of self-employed, students, and civil servants for improved accessibility.
5. Promote inclusivity in planning: Continuous feedback from diverse socio-economic groups should guide reforms, ensuring transport policies serve the needs of all categories of passengers.

REFERENCES

[1]. Abubakar, I. R., & Aina, Y. A. (2019). The prospects and challenges of developing more inclusive, safe, resilient and sustainable cities in Nigeria. *Land Use Policy, 87,* 104105.

[2]. Adriana, M. C., Situmorang, R., & Aji, B. J. (2023). Exploring the transport mode choice of university students in Jakarta: A case study of Universitas Trisakti. *Spatium, (49),* 20–29.

[3]. Adeniji, K., & Adeniji, A. (2019). An investigation into public transport operation and passenger behaviour in Lagos, Nigeria. *Transport and Telecommunication Journal, 20*(4), 315–326.

[4]. Adewale, B. A., Ibem, E. O., Amole, B., & Adeboye, A. B. (2019). Assessment of residential satisfaction in the core area of Ibadan Metropolis, Nigeria. *Journal of Human Behavior in the Social Environment, 29*(2), 206–233.

[5]. Alonso, B., Barreda, R., Feliu, F., & dell'Olio, L. (2019). Intra-urban spatial disparities in user satisfaction with public transport services: The case of Santander, Spain. *Sustainability, 11*(20), 5829.

[6]. Aworemi, J. R., Abdul-azeez, I. A., & Olaagun, O. B. (2009). A study of the performance of public transport company in Niger State, Nigeria. *International Journal of Business and Management, 4*(11), 73–80.

[7]. De Oña, J., & De Oña, R. (2015). Quality of service in public transport based on customer satisfaction surveys: A review and assessment of methodological approaches. *Transportation Science, 49*(3), 605–622.

[8]. De Oña, J., De Oña, R., Eboli, L., & Mazzulla, G. (2016). Service quality in public transport based on customer satisfaction surveys: A review and assessment of methodological approaches. *Transportation Science, 49*(3), 605–622.

[9]. Etuk, A., Anyadighibe, J. A., James, E. E., & Mbaka, R. (2021). Service quality and passengers' loyalty of public transportation companies. *British Journal of Management and Marketing Studies, 4*(4), 82–98.

[10]. Eboli, L., & Mazzulla, G. (2011). A methodology for evaluating transit service quality based on subjective and objective measures. *Transport Policy, 18*(1), 172–181.

[11]. Farayibi, A., & Udechukwu, A. C. (2023). Stakeholder perspective on the quality of public bus transport services in Birmingham, United Kingdom. *International Journal of Research and Innovation in Social Science, 7*(3), 1401–1412.

[12]. Gössling, S. (2016). Urban transport justice. *Journal of Transport Geography, 54,* 1–9.

[13]. Hasan, U., Whyte, A., & Jassmi, H. A. (2021). Public bus transport service satisfaction: Understanding its value to urban passengers towards improved uptake. *Transactions on Transport Sciences, 12*(1), 25–37.

[14]. Ibrahim, A. N. H., Borhan, M. N., Osman, M. H., Khairuddin, F. H., & Zakaria, N. M. (2022). An empirical study of passengers' perceived satisfaction with monorail service quality: Case of Kuala Lumpur, Malaysia. *Sustainability, 14*(11), 6496.

[15]. Lin, Y., Li, J., & Wu, F. (2020). Passenger satisfaction evaluation of metro services in Shanghai based on expectation-confirmation theory. *Journal of Public Transportation, 22*(1), 45–59.

[16]. Mahmud, K., & Rahman, M. (2019). Passenger satisfaction with digitised bus fare systems: Evidence from Bangladesh. *Journal of Transport and Supply Chain Management, 13*(1), 1–11.

[17]. Nilsson, J. H., Petersson, F., & Pettersson, F. (2025). Education and the use of information in public transport systems: A comparative study. *Transport Policy, 137,* 54–63.

[18]. Odame, P. K., Sam, E. F., Amoako-Sakyi, R. O., & Arko, B. (2023). State of public transport services to Ghana's disability population: Lessons from public transport operators in the Accra Metropolitan Assembly. *Social Sciences and Humanities Open, 7*(1), 100413.

[19]. Odunlami, S. A. (2022). Road transportation service and passengers' satisfaction: A study of public transport passengers in Ogun and Oyo States, Nigeria. *African Journal of Management Research, 29*(1), 85–98.

[20]. Ojo, A. E. (2020). The socio-economic drivers of public infrastructures development in Nigeria. *International Journal of Critical Infrastructures, 16*(4), 328–341.

[21]. Olorunfemi, A. O., & Adeniran, O. (2018). Safety perceptions and transport satisfaction in Nigerian cities. *Journal of Transport and Land Use, 11*(1), 317–330.

[22]. Oliver, R. L. (1980). A cognitive model of the antecedents and consequences of satisfaction decisions. *Journal of Marketing Research, 17*(4), 460–469.

[23]. Onokala, P. C., & Olajide, C. J. (2020). Problems and challenges facing the Nigerian transportation system which affect their contribution to the economic development of the country in the 21st century. *Transportation Research Procedia, 48,* 2945–2962.

[24]. Oyesiku, K., & Oduwaye, A. O. (2004). Challenges of sustainable physical planning and development in metropolitan Lagos. *Journal of Sustainable Development in Africa, 6*(1), 31–45.

[25]. Pagliara, F., Delaplace, M., & Vassallo, J. M. (2019). Influence of socio-economic characteristics on the perception of railway services: A comparison across countries. *Transportation Research Part A: Policy and Practice, 121,* 138–154.

[26]. Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing, 64*(1), 12–40.

[27]. Preston, J. (2023). All things must pass? Recent changes to competition and ownership in public transport in Great Britain. *Research in Transportation Economics, 99,* 101281.

[28]. Rae, A. (2017). The geography of travel to work in England and Wales: Extracts from the 2011 census. *Applied Spatial Analysis and Policy, 10*(4), 457–473.

[29]. Rahman, M., & Sciara, G. C. (2022). Travel attitudes, the built environment and travel behavior relationships: Causal insights from social psychology theories. *Transport Policy, 123,* 44–54.

[30]. Sam, E. F., Hamidu, O., & Daniels, S. (2018). SERVQUAL analysis of public bus transport services in Kumasi metropolis, Ghana: Core user perspectives. *Case Studies on Transport Policy, 6*(1), 25–31.

[31]. Satici, O., & Dayarian, I. (2024). Tactical and operational planning of express intra-city package services. *Omega, 122,* 102940.

[32]. Shaaban, K., & Kim, I. (2016). The influence of bus service satisfaction on university students' mode choice. *Journal of Advanced Transportation, 50*(6), 935–948.

[33]. Shoaib, A., Asim, S., & Habib, M. A. (2025). Addressing women's mobility challenges in the public transportation system of Lahore, Pakistan. *Journal of Transport Geography, 125,* 103443.

[34]. Sogbe, E., Susilawati, & Pin, T. C. (2025). Scaling up public transport usage: A systematic literature review of service quality, satisfaction, and attitude towards bus transport in developing countries. *Public Transport, 17*(1), 1–44.

[35]. Soza-Parra, J., Raveau, S., Muñoz, J. C., & Cats, O. (2019). The underlying effect of public transport reliability on users' satisfaction. *Transportation Research Part A: Policy and Practice, 126,* 83–93.

[36]. Sun, Y., Liu, Y., & Zhao, X. (2022). Socioeconomic influences on passenger satisfaction in urban public transport. *Journal of Transport Geography, 100,* 103312.

[37]. Šťastná, M., & Vaishar, A. (2017). The relationship between public transport and the progressive development of rural areas. *Land Use Policy, 67,* 107–114.

[38]. Tavares, V. B., Lucchesi, S. T., Larranaga, A. M., & Cybis, H. B. B. (2021). Influence of public transport quality attributes on user satisfaction of different age cohorts. *Sustainability, 13*(13), 7125.

[39]. Tu, Q., Wang, Y., Zhang, X., & Zheng, L. (2019). Intention of travel mode transfer and analysis of influencing factors: A case study in Lhasa. In *CICTP 2019* (pp. 5887–5899).

[40]. Van Wee, B. (2015). *Transport and ethics: Ethics and the evaluation of transport policies and projects.* Cheltenham, UK: Edward Elgar Publishing.

[41]. Wang, J., Yang, H., & Jiang, Z. (2018). Public transport satisfaction evaluation based on different income groups: Evidence from China. *Transportation Research Part A: Policy and Practice, 118,* 163–177.

[42]. Yang, F., Chen, X., & Wang, X. (2022). Satisfaction differences in bus traveling among low-income commuters before and after COVID-19. *Transport Policy, 116,* 199–209.

[43]. Zefreh, M. M., Hussain, B., & Sipos, T. (2020). In-depth analysis and model development of passenger satisfaction with public transportation. *KSCE Journal of Civil Engineering, 24*(8), 3064–3073.

[44]. Zhang, X., Liu, H., Xu, M., Mao, C., Pan, Y., & Wu, J. (2021). Evaluation of passenger satisfaction of urban multi-mode public transport: Ningbo City case study. *PLOS ONE, 15*(10), e0241004.

[45]. Zheng, Y., Kong, H., Petzhold, G., Barcelos, M. M., Zegras, C. P., & Zhao, J. (2021). User satisfaction and service quality in public transport: Evidence from comparative studies. *Transport Policy, 103,* 180–192.