

# Customer Service Delivery and Operational Efficiency of Public Transport Services in Ibadan Metropolis, Oyo State, Nigeria

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**Abstract-** *The presence of an adequate, reliable and efficient transport system is a critical factor in local economic development. Public transport includes bus transit which is one of the most common forms of public transportation globally, offering flexibility and accessibility to passengers. Studies have shown that well-designed bus transit networks can enhance connectivity and efficiency in urban areas, making them a key focus for sustainable transport planning (Smith 2023). This study employed a survey method with descriptive design to assess operational efficiency of public transport services using the Omituntun of the Pacesetter Transport Service (PTS), along the Gate-Iwo road route. 840 passengers and 32 drivers were sampled using random sample techniques and convenience sample techniques, yielding a total sample size of 300 respondents, representing 98% and 93% response rate respectively. Questionnaires were used to collect data measured on a five-point Likert scale. The use of descriptive, multiple regression and Pearson Product Moment Correlation (PPMC) were employed to analyse data. Findings from the result of multiple regression analysis on the impact of customer service delivery on the operational efficiency of public transport service showed that all the six (6) explanatory variables were statistically significant in explaining the variation of operational efficiency of public transport service. These variables were service quality ( $\beta = .141, p < .008$ ), cleanliness and sanitization ( $\beta = .272, p < .000$ ), service reliability ( $\beta = .156, p < .019$ ), frequency of service ( $\beta = .264, p < .000$ ), comfortability ( $\beta = .424, p < .000$ ), safety features ( $\beta = .351, p < .000$ ), reliability ( $\beta = .156, p < .019$ ) and friendliness of customer service ( $\beta = .141, p < .008$ ). The study concluded that customer service delivery enhances operational efficiency of public transport services in Ibadan*

*metropolis. And also recommended that public transport operators should enhance customer service, leverage technological innovations, invest in infrastructure development, and enforce regulatory policies to enhance operational efficiency and profitability.*

**Indexed Terms-** *Customer service, Operational efficiency, Public transport, Gate-Iwo-road route.*

## I. INTRODUCTION

Public transportation plays a vital role in the economic and social development of cities. It is any form of transport available for hire and reward, and as well accessible for use by the general public. Public transportation systems are vital components of urban infrastructure, providing essential mobility services to residents and visitors alike. It encompasses both passenger and freight services, excluding own-account freight services. Public transport systems can vary in terms of cost and capacity ranging from low-capacity options like taxis and mini-micro buses to higher cost variants such as demand responsive transport (DRT) and personal rapid transit (PRT) systems. Medium-capacity public transport systems include buses, trams and light rapid transit (LRT) systems. High-capacity public transport system are typically associated with heavy rail technology, with distinctions made between urban, suburban and inter-urban services (Rob & Nigel, 2019). Various investments are being made to improve the operational efficiency of public transport from government consisting of federal government and the state government. The federal government and the state government have been playing tremendous role in providing bus services to commuters, part of which are the Public Mass Transit Revolving Fund (PMTF) Scheme, Abuja Mass Transit, Bus Rapid

Transit (BRT) in Lagos, Kano mass transit scheme, Edo line in Edo state, Pacesetter Transport Service (PTS) in Oyo state among others. The Pacesetter Transport Service (PTS) is a transport company owned by the Oyo State government which oversee the activities of the state-owned transport shuttle named Omituntun buses as part of palliative measures to cushion the effects of fuel scarcity (FeedbackOYSG, 2023). The mission of the Pacesetter Transport Service is to develop world class transportation with standard infrastructure, efficient and reliable services for the people of the state (Ayoade, 2013). The shuttles were distributed to major cities in Oyo state and designated to specific routes both inter-city and intra-city. They offer three main services which are Haulage, hiring and routing. Haulage service refers to the transportation of goods over long distances using trucks, lorries, trailers, or other specialized vehicles. This service involves the movement of goods from one location to another, typically between manufacturers, suppliers, warehouses, distribution centers, and retailers. Haulage services are crucial for the logistics industry, facilitating the efficient and timely delivery of goods to their intended destinations. Hiring in transport service encompasses various arrangements, including hiring taxis, car rentals, charter buses, limousines, and freight transport services. This practice enables customers to procure transportation solutions that match their specific requirements, such as passenger capacity, cargo volume, delivery timelines, and route preferences.

Hiring in transport service plays a vital role in meeting diverse transportation needs, whether for personal travel, corporate events, logistical operations, or supply chain management. Through hiring services, individuals and businesses can optimize their transportation logistics, streamline operations, and enhance efficiency in moving people and goods from one location to another (Jones et al., 2021). Routing is providing passengers transport service or goods from one location to another determining the most efficient and effective paths. This crucial aspect of transport management involves optimizing routes based on factors such as distance, traffic conditions, delivery schedules, vehicle capacity, and customer preferences. The Pacesetter Transport Services (PTS) has five types of fleet, the long bus which can convey up to fifty-six (56) passengers with air condition and luggage space,

bus that can convey up to forty-three (43) passengers with air condition and luggage space, mini-bus of up to eighteen (18) passengers with air condition and high speed, mini-van that convey up to seven (7) passengers with air condition and high speed and a haulage truck with large space of up to three hundred (300) cubic meters heavy duty. The company also employ technological tools like Omituntun card for e-payment of transport services, online booking and feedback services through their website.

Customer or passenger satisfaction is a crucial aspect of this study which bridge the gap between operational efficiency and efficient public transport. It involves how products and services can fulfil customers expectation (Zarifah et al., 2020). Customer or passenger satisfaction in public transport service is a critical measure of the quality and effectiveness of transportation systems in meeting the needs and expectations of users. Satisfaction levels are influenced by various factors, including service reliability, accessibility, affordability, comfort, safety, cleanliness, information provision, and overall customer experience. Research indicates that high levels of customer satisfaction lead to increased ridership, improved public perception of transport services, and enhanced loyalty among passengers.

To enhance customer satisfaction in public transport, operators must focus on addressing key areas that impact passenger experience and perception of service quality (Brown et al., 2021). Organizations need to continuously measure and improved their service, establish business goals to deliver good customer service and identify potential issues that can affect customer satisfaction. Through customer relationship management, organization can measure customer satisfaction and track their business operation to achieve their target audience and market segment for customer satisfaction (Nguyen et al., 2018).

A lot of factors contribute to customer satisfaction in public transport. They include reliable and frequent service schedules, well-maintained vehicles, courteous and helpful staff, convenient payment options, real-time information on schedules and delays, accessibility features for individuals with disabilities, and safety measures to ensure passenger well-being during travel. By prioritizing passenger

satisfaction and actively seeking feedback from customers, public transport operators can identify areas for improvement, implement service enhancements, and foster a positive relationship with users. Engaging in continuous quality monitoring and service evaluation helps transport providers tailor their offerings to meet the diverse needs of passengers and create a more pleasant and efficient travel experience (Garcia et al., 2021). Hence, achieving customer satisfaction is essential for company reputation and business success.

## II. STATEMENT OF THE PROBLEM

Public transport provides a way for people who do not have access to private motorised transport, a way to access essential services as well as employment, entertainment and social activities. It is of no surprise that public transport is far better option for the environment than private and single occupancy vehicles.

As a result of poor information, lack of real-time service information such as route updates and delays, hinder passengers ability to plan their journeys effectively, resulting in frustration and dissatisfaction (Adeleke & Balogun, 2022). Smith & Lee study provides valuable insights into the benefits of real-time passenger information systems on operational efficiency within bus services. However, there is a lack of research that examines the implementation and effectiveness of similar systems in the transport network of Ibadan Metropolis.

Moreover, inadequate integration between different modes of public transport in Ibadan leads to disjoint travel experiences for passengers, emphasizing the need for seamless interconnectivity (Ogunleye & Fashina, 2023).

Complex and outdated ticketing systems in public transport network contribute to long queues, payment errors and overall inconvenience for passengers, hampering their user experience (Oladipo & Adegbite, 2023). Insufficient and irregular funding for public transport infrastructure and operations in Ibadan hinder service improvements, highlighting the importance of stable financial support mechanisms (Ogundijo et al., 2022). Patel R., et al. (2019) study

provides valuable insights into optimization of bus scheduling for enhanced operational efficiency in urban areas, there is need to explore how optimizing service delivery can enhance operational performance, customer satisfaction and overall service quality for Pacesetter Transport Service (PTS) in Ibadan metropolis.

Kelvin (2020) stated that access to transportation is a fundamental right for people in modern society to access essential services as well as employment, entertainment and social activities. Lack of access to adequate public transportation becomes a huge employment barrier especially for individuals who do not have access to private vehicles (World Bank, 2019)

## III. CONCEPTUAL REVIEW

This section reviewed concepts related to customer service delivery and operational efficiency analysis of public transport services including the key performance indicators used to assess public transport effectiveness and efficiency.

Operational efficiency in public transport also refers to the ability of transportation systems to deliver services in a cost-effective, timely, and sustainable manner while maximizing output and minimizing resource wastage. Achieving operational efficiency is essential for enhancing service quality, optimizing resource utilization, reducing environmental impact, and meeting the evolving needs of passengers and stakeholders in the transport sector (Adams et al., 2020).

Key Concepts and Factors Influencing Operational Efficiency

Technological Innovations: Technological advancements, such as real-time monitoring systems, predictive analytics, and route optimization software, in improving operational efficiency in public transport services. These technologies enable operators to enhance scheduling, fleet management, and passenger information dissemination, leading to smoother operations and better service delivery (Smith et al., 2020).

**Intermodal Integration:** Intermodal integration plays a significant role in enhancing operational efficiency by facilitating seamless connections between different modes of transport. Integrating various transportation options, such as buses, trains, and bike-sharing systems, improves accessibility, reduces transfer times, and enhances the overall efficiency of public transport networks (Brown et al., 2019).

**Sustainable Practices:** The importance of incorporating sustainable practices, such as energy-efficient vehicles, eco-friendly fuels, and emission reduction strategies is to enhance operational efficiency and reduce carbon emissions in public transport services. Adopting sustainable initiatives not only improves environmental performance but also contributes to cost savings and long-term operational viability (Johnson et al., 2021).

**Customer-Centric Approaches:** The significance of adopting customer-centric approaches to enhance operational efficiency in public transport. By focusing on passenger needs, preferences, and feedback, transport operators can tailor services, improve service quality, and increase passenger satisfaction, leading to higher ridership and improved operational performance (Lee et al., 2018).

**Regulatory Frameworks:** The role of regulatory frameworks and policy interventions in promoting operational efficiency in public transport services. Effective regulations, incentives for performance improvement, and public-private partnerships can create an enabling environment for innovation, investment, and continuous improvement in transport operations (Adams et al., 2020).

**Government Efforts to Promote Operational Efficiency in Public Transport**

**Investment in Infrastructure:** Government investment in infrastructure is a key strategy to promote operational efficiency in public transport services. By funding the development of modern transit networks, expanding transport hubs, and improving connectivity, governments can enhance service quality, reduce travel times, and increase the overall efficiency of transport systems (Smith et al., 2019).

**Regulatory Reforms and Policy Frameworks:** The role of regulatory reforms and policy frameworks in driving operational efficiency in public transport by governments is to introduce regulations that promote integration between different modes of transport, encourage innovation in service delivery, and establish performance standards to ensure high-quality and reliable public transport services for passengers (Lee et al., 2021).

**Funding and Financial Support:** The importance of government funding and financial support in promoting operational efficiency in public transport is to provide Subsidies, grants, and public-private partnerships that can help transport operators invest in fleet modernization, technology upgrades, and infrastructure improvements, enhancing service reliability and sustainability (Kim et al., 2023).

**Stakeholder Collaboration and Engagement:** The importance of stakeholder collaboration and engagement in promoting operational efficiency in public transport services is to facilitate partnerships between transport operators, local communities, advocacy groups, and industry stakeholders to foster innovation, address challenges, and improve the overall performance of transport networks (Johnson et al., 2022).

**Smart Technology Integration:** Smart technology integration is a key government initiative to enhance operational efficiency in public transport services. By investing in technologies such as real-time tracking systems, automated fare collection, and passenger information apps, governments can improve service reliability, optimize route planning, and enhance the overall passenger experience (Smith et al., 2020).

**Public-Private Partnerships (PPPs):** The role of public-private partnerships in enhancing operational efficiency in public transport services involves collaborations between government agencies and private operators can leverage expertise, resources, and innovation to drive service improvements, optimize operations, and deliver cost-effective solutions for passengers (Patel et al., 2023).

#### IV. CUSTOMER SERVICE DELIVERY

Customer service delivery in public transport services refers to the process of providing passengers with high-quality, reliable, and responsive services that meet their needs and expectations throughout their journey. This includes aspects such as ensuring safety, comfort, accessibility, and timely service to enhance the overall passenger experience and satisfaction levels (Smith & Johnson, 2018).

##### Key Factors Enhancing Customer Service Delivery in Public Transport Services

**Service quality:** Service quality in public transport refers to the overall excellence and adequacy of services provided to passengers, encompassing various dimensions such as reliability, safety, comfort, accessibility, responsiveness, and affordability. It involves meeting or exceeding passenger expectations across these dimensions to ensure a positive customer experience, enhance satisfaction levels, and foster passenger loyalty towards the transport service provider (Johnson & Smith, 2017).

**Service Reliability:** Reliability refers to the consistent and punctuality of public transportation services (Batra, 2017). Unreliable services lead to passenger frustration and dissatisfaction, driving passengers away from public transportation. Reliable public transportation services build trust and confidence among passengers, encouraging them to rely on the system.

**Service Frequency:** This is the number of trips operated by the public transportation vehicles within a given time period (Ceder, 2007). Higher frequencies reduce waiting times, making public transportation a more attractive option for passengers. Increased frequencies also lead to increased passenger capacity, thereby reducing congestion and decreasing travel times.

**Comfortability** refers to the level of comfort and convenience experienced by passengers during their journey. It includes factors such as seating arrangements, interior ambiance, cleanliness, temperature control, and noise levels that contribute to a pleasant and enjoyable travel experience for passengers (Adams & Brown, 2019).

Accessibility refers to the ease with which passenger can access public transportation services including the proximity of stops to their origins and destinations (Levinson, 2008). Accessible public transport service promotes social equity, providing equal access to opportunity and services for all members of the society. Accessible services also reduce the burden of private vehicle ownership, promoting sustainable transportation and reducing congestion.

Service safety in public transport refers to the measures and protocols implemented to ensure the well-being and security of passengers throughout their journey. It encompasses various aspects such as vehicle maintenance, adherence to safety regulations, emergency preparedness, surveillance systems, and passenger information to minimize risks and respond effectively to any incidents that may occur during transit (Smith & Johnson, 2018).

By focusing on service delivery in the operational efficiency analysis of public transport services in Ibadan Metropolis, the project can identify areas for improvement, optimize service quality, enhance passenger satisfaction, and ultimately contribute to the development of a more efficient, reliable, accessible, and customer-centric public transport system that meets the diverse needs of passengers in the city. By evaluating service quality, frequency, reliability, accessibility, safety and security, comfort and convenience, customer service and passenger experience, this study aims to provide insights into the strength and weakness of public transport services in Ibadan, untimely informing strategies to enhance operational efficiency, passenger satisfaction and sustainable transportation.

#### V. EMPIRICAL REVIEW

The review aims to identify the gaps in the current literature and understand the practical applications of the theoretical frameworks. The empirical review provides an in-depth analysis of existing research and studies related to the operational efficiency of public transport in Ibadan metropolis.

Lee et al., (2020) research the customer-oriented service design for operational efficiency in public transport. The methodology used in research of this

study are Service design workshops, passenger feedback analysis, and service quality assessments. Findings show that Customer-oriented service design led to improved user experience, increased ridership, and enhanced operational efficiency in public transport services.

One of the key areas of operational efficiency in public transport services is the impact of real-time passenger information in developed and developing countries. Smith, J., & Lee, K. (2018) aimed to investigate the Impact of Real-Time Passenger Information Systems on Operational Efficiency in both developed and developing countries: A Case Study of Bus Services. The authors used field observations, passenger surveys, and performance data analysis. The findings of the study revealed that Implementation of real-time passenger information systems led to reduced waiting times, improved service reliability, and increased passenger satisfaction. In obtaining real-time passenger information, customer service design also contributes to this aspect.

Garcia et al., (2018) investigated the energy efficiency analysis of electric bus fleets in urban transport systems. Energy consumption modelling, operational data analysis, and comparative assessments are methodology employed during the course of research. Findings indicate that electric bus fleets demonstrated lower operating costs, reduced emissions, and improved energy efficiency compared to conventional diesel buses.

Chang et al., (2019) research on the impact of route optimization algorithms on operational efficiency of bus networks. Algorithmic modelling, simulation studies, and performance analysis are methodology used. Findings show that route optimization algorithms increased service reliability, reduced travel times, and enhanced operational efficiency in bus networks.

Garcia & Johnson (2018) examine the innovative fleet management strategies for operational efficiency in public bus services. Fleet optimization modelling, maintenance scheduling analysis, and performance tracking are methodology used. Research shows that innovative fleet management strategies optimized

vehicle usage, reduced operating costs, and enhanced operational efficiency in public bus services.

Research investigated the sustainability practices and operational efficiency in public transport: a comparative analysis, which was carried out by Garcia & Chen, (2018). Methodology incurred are environmental audits, performance metrics analysis, and stakeholder interviews. The study found out that implementation of sustainability practices led to cost savings, reduced emissions, and improved operational performance in public transport systems.

## VI. METHODOLOGY

The study is focused on the Gate-Iwo road route located in Ibadan North-East local government, using the Omituntun bus of the Pace-setter Transport Services (PTS) as case study. This area was one of the most populated LGAs in Oyo State, with a total land area of 16,679 km<sup>2</sup>. It was predominantly residential and served as the commercial hub of Ibadan. Ibadan North-East was connected through an interstate highway system that traversed the administrative boundary (the Lagos-Ibadan Expressway), providing the only major access for interstate traffic along numerous hierarchies of roads. It was one of the core LGAs in Oyo State and was believed to be the origin of the city of Ibadan.

The population of the study comprised the government-owned public transport company in the state, Pacesetter Transport Service (PTS), whose services extended within the state, including the study area. It also encompassed the entire population of Ibadan North-East LGA, who used the Gate-Iwo Road route of the city.

This study employed a survey method with descriptive design to assess operational efficiency of public transport services using the Omituntun of PTS, along the Gate-Iwo road route. 840 Passengers and 32 drivers were sampled using random sample techniques and convenience sample techniques, yielding a sample size of 300 respondents in total at 98% and 93% response rate for the passengers and drivers respectively. Questionnaires were used to collect data measured on a five-point Likert scale. The use of

descriptive, multiple regression and PPMC were employed to analyse data.

## VII. RESULTS AND DISCUSSION

Table 1 revealed the analysis of the impact of customer service delivery on the operational efficiency of public transport service in Ibadan Metropolis which highlights both strengths and areas for improvement in achieving efficiency of public transport services.

A larger percentage (i.e. 76%) of the respondents attest to the fact that bus attendants' customer relation is satisfactory, with a significant portion strongly agreed (i.e. 26.2%), 49.8% agreed that attendants are friendly. However, 12% of them were undecided, while 8.6% disagreed, indicating inconsistencies in service delivery. This suggests that while customer service is generally satisfactory, efforts should be made to maintain uniformity across all attendants to ensure consistent, high-quality service. Research conducted by Johnson et al. (2020) supports the notion that consistency in service provision significantly influences customer perceptions and satisfaction levels. Their study found that passengers value uniformity in customer service interactions, as it contributes to a sense of reliability, professionalism, and trust in the public transport system. Inconsistencies in service quality across different attendants can lead to mixed experiences for passengers and may impact their overall satisfaction with the service.

Cleanliness was seen as a priority, with 60.7% agreeing that vehicles are well-cleaned and sanitized. Yet, 21.7% remained undecided, and 14.2% disagreed, indicating variability in cleanliness standards. This emphasizes the need for standardized cleaning practices and stronger enforcement to ensure a consistently clean environment that meets commuter expectations. Research by Smith and Brown (2019) highlights the impact of cleanliness on passenger perceptions and satisfaction in public transport systems. Their study demonstrates that a consistently clean environment positively influences commuter attitudes towards the service, leading to higher levels of satisfaction and loyalty among passengers. By implementing and enforcing consistent cleaning protocols, transport operators can create a more

pleasant and hygienic travel environment for passengers, ultimately improving customer satisfaction and loyalty towards the public transport system.

Reliability was rated highly, with 73% of respondents acknowledging that Pace Setter vehicles are timely, contributing to operational efficiency. However, 11.2% disagreed, and 11.2% were undecided, suggesting occasional delays. Urban areas often experience heavy traffic, especially during peak hours, which can lead to delays in scheduled routes. Maintaining high punctuality is critical to sustaining commuter satisfaction and operational efficiency. A study by Lee et al. (2018) investigated the impact of punctuality on passenger satisfaction and operational performance in urban public transport systems. The research revealed that maintaining high punctuality levels is directly linked to increased commuter satisfaction and improved operational efficiency. The alignment between the analysis result and the findings of Lee et al. underscores the critical role of punctuality in urban public transport services. By prioritizing punctuality and minimizing delays, transport operators can enhance commuter satisfaction, build trust among passengers, and improve the overall efficiency and effectiveness of the public transport system, especially in congested urban areas with heavy traffic.

Majority of the respondents (68.9%) agreed that vehicle operators provide high-frequency service during peak hours, generally from 7:00 AM to 9:00 AM. This is when commuters are traveling to work or school. Typically, from 5:00 PM to 7:00 PM. This period sees a high volume of passengers returning home after work or school, but 17.6% were undecided, and 10.1% disagreed. This highlights the need for improvements in managing passenger flow and service frequency during peak times to avoid overcrowding and ensure smooth operations since transport service cannot be stored.

In terms of comfortability, 68.2% of the respondents found the seating arrangements to be comfortable, while 19.2% were either undecided or disagreed. While the transport service generally meets the comfort needs, continuous improvements in seating design and vehicle capacity are necessary to enhance comfort for all passengers, both young and old, male

or female, agile or sick. Research by Garcia et al. (2020) investigated the impact of seating design and vehicle capacity on passenger comfort in public transport systems. The study revealed that customized seating arrangements and optimized vehicle capacity can significantly enhance the comfort levels of passengers across different demographics and physical conditions. The alignment between the analysis result and the findings of Garcia et al. highlights the importance of continuous improvements in seating design and vehicle capacity to cater to the comfort needs of a diverse passenger population. By implementing design enhancements and capacity adjustments that accommodate various passenger requirements, transport operators can create a more inclusive and comfortable environment for all travellers, ultimately improving the overall quality of service provided in public transport systems.

Safety measures received poor ratings, with only 19.1% agreeing that safety features like first aid kits and emergency exits are provided. A significant 56.2% disagreed, revealing a critical gap in safety protocols. This points to an urgent need for the implementation of comprehensive safety features to enhance both passenger security and operational efficiency. A study conducted by Wong and Smith (2021) delved into the impact of comprehensive safety features on passenger security and operational efficiency in public transport systems. The research findings indicated that the implementation of robust safety measures, such as surveillance systems, emergency response protocols, and passenger information systems, can significantly enhance both passenger safety and operational effectiveness. The alignment between the analysis result and the research findings of Wong and Smith highlights the critical importance of comprehensive safety features in public transport services. By prioritizing the implementation of safety measures that address passenger security concerns and contribute to operational efficiency, transport providers can create a safer and more reliable environment for passengers while also optimizing the overall performance of the transportation system.

Hygiene was a mixed concern, with only 32.2% agreeing that bus attendants maintain cleanliness in parks and in vehicles, while 33.3% were undecided and 34.5% dissatisfied. This suggests that hygiene

practices such as putting dustbin in the vehicle for passengers not to litter the floor etc, need immediate attention and standardization to improve passenger experience and operational standards. In a study by Chen and Patel (2019) on the impact of hygiene practices on passenger satisfaction and operational efficiency in public transport systems, it was found that the presence of dustbins in vehicles significantly contributes to a cleaner environment and improved passenger experience. Standardizing hygiene practices, including the provision of adequate waste disposal facilities, not only enhances cleanliness but also boosts operational standards by reducing maintenance costs and enhancing the efficiency of onboard cleaning processes. The alignment between the analysis result and the research findings of Chen and Patel highlights the immediate need to prioritize hygiene practices, such as the provision of dustbins in vehicles, to prevent littering and maintain cleanliness standards. By standardizing these practices, transport providers can create a more pleasant and hygienic environment for passengers, thereby improving the overall passenger experience and operational efficiency of public transport services.

The findings underscore the importance of addressing inconsistencies in service delivery. Key areas such as safety features, cleanliness, and hygiene need improvement to ensure a consistently positive commuter experience. Standardizing cleaning and safety protocols, enhancing punctuality, increasing service frequency during peak hours, and improving comfort and seating arrangements should be prioritized. These improvements will not only boost commuter satisfaction but also enhance the operational efficiency of public transport services in Ibadan Metropolis, contributing to the long-term sustainability of the transport system.

Analysis of The Responses on The Impact of Customer Service Delivery on The Operational Efficiency of Public Transport

Variables	SA	A	UD	D	SD	Total
Bus attendants provide	70 (26.2%)	133 (49.8%)	32 (12.0%)	23 (8.6%)	9 (3.4%)	267 (100%)



friendly custom er service to passeng ers	Vehicle	45	117	58	38	9	267
operato rs	(16. 9%)	(43. 8%)	(21. 7%)	(14. 2%)	(3.4 %)	(10 0%)	
ensure the vehicle is well cleaned and sanitize d often	The Pace Setter	83 (31. 1%)	112 (41. 9%)	30 (11. 2%)	30 (11. 2%)	12 (4.5 %)	267 (10 0%)
transpo rt vehicle s are very reliable in renderi ng their service to commu ters to sustain efficien t and smooth operati on	Vehicle operato rs	72 (27. 0%)	112 (41. 9%)	47 (17. 6%)	27 (10. 1%)	9 (3.4 %)	267 (10 0%)
ensure high frequen cy of service							

especial ly during peak hours to reduce chaos and struggle to get onboar d	The Pace Setter	86 (32. 2%)	96 (36. 0%)	36 (13. 5%)	31 (11. 6%)	18 (6.7 %)	267 (10 0%)
transpo rt service operato rs provide comfort ability with adequat e legroo m and support for passeng ers to ensure comfort ability	Vehicle operato rs	24 (9.0 %)	27 (10. 1%)	66 (24. 7%)	114 (42. 7%)	36 (13. 5%)	267 (10 0%)
provide safety features such as first aid kits, emerge ncy exits for							

commuters to ensure operational efficiency of public transport services in Ibadan metropolis	Bus	30	56	89	60	32	267
attendants	(11.2%)	(21.0%)	(33.3%)	(22.5%)	(12.0%)	(0%)	(10.0%)
ensure hygienic environment for commuters at their parks and in-vehicle to promote operational efficiency of public transport services in Ibadan metropolis							

Source: Author's Field Survey (2024)

The result of multiple regression analysis revealed the impact of customer service delivery on operational

efficiency in public transport within Ibadan metropolis, with a correlation coefficient (R) of 0.656 and an R<sup>2</sup> value of 0.431. This indicates that 43.1% of the variation in operational efficiency of public transport in the study area is explained by customer service delivery using the variables such as safety features, frequency of service, friendliness of customer service, comfortability, cleanliness and sanitization, and punctuality. The adjusted R<sup>2</sup> of 0.418 further supports the model's reliability.

The ANOVA results validate the model's overall significance, with an F-value of 32.779 and a p-value of 0.000, confirming that the independent variables collectively influence operational efficiency. From the coefficients table, safety features (B = 0.232, p = 0.000) and comfortability (B = 0.259, p = 0.000) are identified as the most impactful factors, emphasizing the importance of passenger safety and comfort in enhancing operational performance. Cleanliness and sanitization (B = 0.194, p = 0.000), frequency of service (B = 0.185, p = 0.000), and punctuality (B = 0.103, p = 0.019) also significantly contribute, underscoring the necessity for operational consistency and hygiene standards. Lastly, the friendliness of customer service (B = 0.103, p = 0.008) has a notable, though relatively lower influence, suggesting that interpersonal interactions between staff and commuters play a role in overall efficiency. The constant term (B = -0.331, p = 0.153) was not significant, indicating that operational efficiency is predominantly driven by the identified predictors. These findings collectively imply that public transport operators must focus on these critical service dimensions to enhance efficiency, with particular attention to safety by implementing real-time tracking systems to monitor vehicle locations and ensure timely assistance in case of incidents, comfortability by maintaining optimal interior temperature and ventilation to create a comfortable environment, cleanliness by placing visible dustbins in vehicles and at stations to encourage passengers to dispose of waste properly, and service reliability by conducting regular maintenance checks on vehicles and infrastructure to prevent breakdowns and ensure reliable service operations. to meet commuter expectations and improve operational outcomes.

The findings imply that improving key aspects of customer service delivery such as safety, comfort, cleanliness, reliability, and service frequency can significantly enhance the operational efficiency of public transport systems. This aligns with recent research by Afolabi et al. (2023) and Olajide & Adekunle (2022), who emphasize that passenger satisfaction is pivotal to sustainable transport operations. The results suggest that transport providers must prioritize these factors to remain competitive, attract more users, and achieve higher operational performance, particularly in urban settings like Ibadan metropolis.

Table 2: Model Summary

Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Std. Error of the Estimate
1	.656 <sup>a</sup>	.431	.418	.565

Predictors: (Constant), Safety features, Frequency of service, Friendliness of customer service, Comfort of seating arrangement, Cleanliness and sanitization, Punctuality

Table 3: ANOVA<sup>a</sup>

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	62.715	6	10.453	32.779	.000 <sup>b</sup>
Residual	82.909	260	.319		
Total	145.624	266			

a. Dependent Variable: Operational Efficiency of Public Transport

b. Predictors: (Constant), Safety features, Frequency of service, Friendliness of customer service, Comfortability, Cleanliness and sanitization, Reliability.

Table 4: Coefficients<sup>a</sup>

Model	Unstandardized Coefficients		Standardized Coefficients	Sig.
	B	Std. Error	Beta	
1 (Constant)	-.331	.231		-1.433

Friendliness of customer service	.103	.039	.141	2.677	.008
Cleanliness and sanitization	.194	.041	.272	4.742	.000
Reliability	.103	.044	.156	2.368	.019
Frequency of service	.185	.042	.264	4.446	.000
Comfortability	.259	.033	.424	7.910	.000
Safety features	.232	.036	.351	6.401	.000

a. Dependent Variable: Operational Efficiency of Public Transport

Source: Author's Computation (2024)

### CONCLUSIONS AND RECOMMENDATIONS

Based on the findings, the study therefore concluded that Customer service delivery has significant impact on operational efficiency of public transport in Ibadan metropolis. However, it was recommended that public transport operators should prioritize enhancing customer service delivery through passenger safety, comfort, and cleanliness, as these factors significantly influence operational efficiency. Training programs on customer care and safety protocols should be regularly implemented for operators. Operators should adopt real-time feedback mechanisms to gather passenger opinions and promptly address complaints to improve service satisfaction.

Public transport operators must focus on these critical service dimensions to enhance efficiency, with particular attention to safety by implementing real-time tracking systems to monitor vehicle locations and ensure timely assistance in case of incidents, comfortability by maintaining optimal interior temperature and ventilation to create a comfortable environment, cleanliness by placing visible dustbins in vehicles and at stations to encourage passengers to dispose of waste properly, and service reliability by conducting regular maintenance checks on vehicles and infrastructure to prevent breakdowns and ensure reliable service operations. to meet commuter expectations and improve operational outcomes.

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