ASSESSMENT OF LAST-MILE TRANSPORTATION CHALLENGES FACED BY AIR TRAVELERS IN NIGERIA

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Abstract
The study set out to identify the key challenges affecting last-mile connectivity for Nigerian air travelers and examine the effect of inefficient last-mile transport on passenger experience. Questionnaire survey was carried out on 230 traveler-samples drawn from both local and international flights. Data were analyzed using descriptive statistics and Pearson's correlation to measure the effects. Findings revealed that airport regulations and restrictions limit last-mile transit options to air travelers, and that poor last mile connectivity leads to delays, higher travel costs and passenger dissatisfaction. The study concluded that coordinated efforts by governments, airport authorities and transport service providers are necessary to create efficient last-mile solutions.
Keywords: Air travelers, Last-Mile transit, Passenger experience, Transportation challenges

1.0 Introduction

Road Transportation plays a pivotal role in the overall travel experience, especially in air travel, where passengers rely heavily on seamless connectivity before and after their flights. One of the most critical components of the air travel journey is the "last-mile"—the beginning and final leg of a traveler's journey from the airport to their ultimate destination or vice versa. In Nigeria, despite improvements in aviation infrastructure and the growing demand for air travel, last-mile transportation remains a significant challenge for many passengers.

The concept of last-mile transportation refers to the final segment of a journey that connects travelers from a transportation hub, such as an airport, to their final destinations. According to Rodrigue (2020), last-mile connectivity is a critical determinant of the overall transport system efficiency, especially with the influence of time, cost, and convenience parameters, mode choice and passenger satisfaction shape the demand for last-mile transit. In the context of air travel, last-mile challenges are particularly important because air travelers often require reliable and timely ground connections to meet tight schedules and avoid disruptions (Zhang et al., 2018).

In developing countries like Nigeria, the problem is more pronounced due to infrastructural limitations, weak coordination between transport agencies, and the dominance of informal transport systems (Aderamo, 2010). Airports are often located at the periphery of cities, and poor integration with public transport systems leads to increased reliance on private cars, taxis, and ride-hailing services, which may be costly or unreliable (Oyesiku & Odufuwa, 2002). Additionally, security policies and access restrictions at airports can further limit available transport modes, exacerbating the last-mile challenge.

Several studies have emphasized the consequences of inefficient last-mile connectivity. For instance, Rajé (2007) found that inadequate last-mile transport leads to increased travel time, reduced passenger satisfaction, and limits access to air travel, particularly for low-income passengers. Similarly, research by Adeniran and Akinleye (2019) in Nigeria highlighted that inadequate transport services around airports contribute to travel stress and discourage air travel

usage.

Poor last-mile connectivity is often characterized by delays, limited transport options, inadequate infrastructure, and increased travel costs, all of which impact the convenience and satisfaction of air travelers. For both domestic and international passengers, the inefficiencies in accessing or exiting airports can result in missed flights, fatigue, and overall travel dissatisfaction. These challenges are compounded by airport regulations, traffic congestion, urban planning constraints, and the limited integration between air transport hubs and ground transportation networks.

Given the increasing reliance on air travel for business, tourism, and personal mobility within Nigeria, it becomes crucial to assess the extent and impact of last-mile transportation challenges. This study aims to identify the key barriers affecting last-mile connectivity for air travelers and to examine how these barriers influence overall passenger experiences. The findings are intended to inform transport planning and policy interventions toward enhancing multimodal transport integration, particularly around the airport environment.

2.0 **Methodology**

This study focuses on domestic and international air travelers from Muritala Muhammed international airport in Lagos (MM 1 and 2). The choice of the airport is based on high volume of passenger traffic, which is induced by the population and economic activities of Lagos State. Lagos is located in the southwest, Nigeria on the latitude of 6.5244ºN, and longitude of 3.3792ºE bordering the Atlantic ocean in the south, Benin Republic in the west and Ogun State in the east of the border.

The study adopted purposive sampling method in the selection of 230 respondents to a structured questionnaire. Background information, travel information, transport options and challenges were the major information sought from the respondents. Data were organized into frequency tables, and percentages were used to analyze background and travel information, while Pearson's correlation statistics was used to measure the relationship between the challenges and passenger experience.

3.0 Results and Discussion

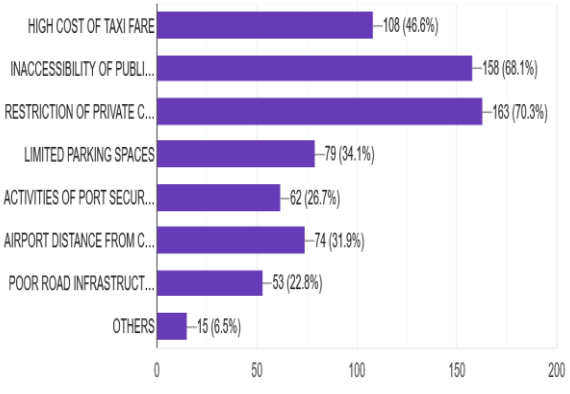
The result is presented in two sections, first the challenges and its effects and second section shows the analysis of correlation between the last-mile transport challenges and the passenger experience.

3.1 Challenges Affecting Last-Mile Connectivity and Passengers' Experience

Analysis of the challenges and passenger experience are presented in Figures 1 and 2. Three major challenges identified by majority of the respondents are restriction of private cars' into airport (70.3%), inaccessibility of public buses to airport (68.1%), and high cost of taxi fare (46.6%). This implies that average of 50 percent of the respondents faced these three challenges in connecting to the airport. Other challenges identified are limited parking space (34.1%), port security intimidation and harassment (26.7%), airport distance from city center (31.9%), and poor road infrastructure (22.8%). Similarly this implies that over 20 percent have experience in addition to the earlier mentioned challenges these other four challenges identified. This study further corroborate the study of Adeniran & Akinleye (2019) and of Oyesiku & Odufuwa (2002) that airport restriction, inaccessibility and high cost of taxis are the major challenges of last mile transport faced by air travelers.

The effects of the challenges on passenger experience show that 64.7 percent are dissatisfy, 58.2 percent

experience delay in traffic while 48.7 percent experience high cost of transport. The study revealed that an average of 50 percent experience dissatisfaction, delay and high cost of transport regularly at the airport. This result is similar to the conclusion of Rajé (2007) and Adeniran and Akinleye (2019) that last mile challenges leads to passenger dissatisfaction among other things.



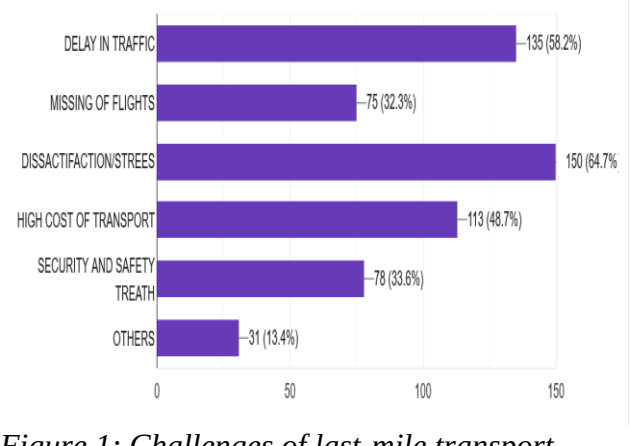


Figure 1: Challenges of last-mile transport
Figure 2: Air passenger experience
Source: Authors' Compilation, 2025
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3.2 Effect of the Challenges on Passengers Experience.

Table 1 revealed the result of Pearson correlation coefficient r (-0.143), this indicated a weak negative correlation between the challenges of last-mile transport and passenger experience. The p-value is 0.372, which is greater than the typical r at 0.05 level of significance. This suggests that the correlation between challenges of last-mile transport and passenger experience is not statistically significant.

Table 1: Summary of Pearson correlation coefficient

variables	Pearson correlation coefficient r	p-value	Sample size	Direction and strength of correlation	Statistical significance
Challenges Experience	-0.143	0.372	41	Weak negative correlation	Not Significant

Source: Authors, 2025

This study reveals a weak negative correlation between challenges and the effects on passenger experience, the more the challenges the better the experience or vice visa. However the challenges have been the restriction of public transport, inaccessibility and high cost of available last-mile transport options such as car hire, and e-hailing taxi. For passenger with high economic capability this is not a problem because they have the ability to either use private car or hired cab, which often give a pleasant experience. However, where there are multiple transit options the traveler has choice and they are not captive rider rather the competitive environment created by multiple options enhance service delivery and better traveler experience.

4.0 Conclusion and Recommendations

This study identified last-mile transportation challenges faced by air travelers in Nigeria, and the various transport experience of the air travelers. The correlation analysis revealed a weak negative relationship between the transit challenges and the passenger experience. However airport regulations and restrictions limit last-mile transit options to air travelers, which further leads to delays, higher travel costs and passenger dissatisfaction. The study concludes that coordinated efforts by governments, airport authorities and transport-service providers are necessary to create efficient last-mile solutions that will give air travelers the needed good users' experience.

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