

Challenges of Rail Transportation in South West Nigeria

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Abstract— This study was designed to investigate the problems faced by the south west Nigeria trains both at the railway stations and in transit onboard train. In order to ascertain the reason behind the observed declining customer patronage, revenue and insignificant contribution of the rail mode in land transport. The purposeful random sampling technique was used in administering 384 Likert scale questionnaires to respondents. Data from 380 valid questionnaires was analysed using statistical package for social Research (SPSS) software. Descriptive statistics and the Friedman Test results show that passengers faced problems both at the railway stations and in transit onboard train during travels. The major problems in descending order identified were late arrival of train, issues of theft, poor sanitary conditions and long queue in the reservation counters at railway stations and in transit onboard train. Poor maintenance of toilet, Menace of overcrowding, Menace of roof ridders, and entry of unauthorized vendors. The study concludes that improvement of service quality in the identified areas will enhance customer satisfaction and patronage.

Keywords— Problems faced by passengers, railway stations, on-board train.

I. INTRODUCTION

Transportation is significant in the movement of people and goods from one location to another and forms the basis of socio-economic interactions. It is a catalyst for economic development all over the various nations of the world. Efficient rail transport amongst other modes of transport is even more significant for economic development because of its rare ability to carry large numbers of passengers and haul large volumes of cargo at very low cost. The railway is thus a vital national infrastructure for the economic development of Nigeria having a total land mass of 351,649 square miles (910,770 square kilometres) and a current population of about 209- million (Worldometer 2021). Nigeria has two major cape-gauge rail lines constructed by the colonial administration, the western line connecting Lagos on the Bight of Benin to Nguru in the northern state of Yobe, over a distance of 1,126 kilometers (700 mi). The Eastern Line connecting Port Harcourt in the Niger Delta to Maiduguri in the north eastern state of Borno, near the border with Chad". (Rail transport in Nigeria 2020). Interstate passenger services are offered by the Nigerian Railway corporation (NRC) in the South Western States of Lagos, Ogun, Oyo, Osun States through the Lagos-Ijoko, Lagos-Ilorin and Osun State Government sponsored free passenger train service from Lagos to Osogbo on the cape gauge rail network and the recently commissioned Lagos- Ibadan mass Transit Train service standard gauge rail network. The Lagos -Ijoko Mass Transit train has been the most consistent operational rail line in Nigeria between 2016

and 2017, surpassing all the other national rail networks in Nigeria and constituted 72% of the total movement in the country during the period (Adepoju, 2019).

The Nigerian railway corporation, the sole authority responsible for managing the Nigerian railway was created by an act of parliament in (1955), as amended in 1990. Specifically, the act was created with the objective of "carriage of passengers and goods in a manner that will offer full value for money, meet cost of operations, improve market share and quality of service, ensure safety of operations and maximum efficiency, meet social responsibility in a manner that will meet the requirements of rail users, trade, commerce, industry, government and the general public (Nigerian Railway Corporation, 2018). However, Odeleye (2000) observed a downward trend in passenger volumes and revenue of the Nigerian Railway corporation between 1983-1993. Passenger volume and revenue had declined from 15.11 million passengers generating above #29 million in 1983 to 1.5 million passengers, generating less than #15 million in 1993.

The National Bureau of Statistics, Rail Transport Data (2021), indicated that a total of 424,460 passengers travelled via the rail transport system in Q1 2021 as against 647,055 passengers recorded in Q1 2020 and 134,817 in Q4 2020 representing 34.40% decline in passenger volume. Similarly, a total of 10,511 tons of freight travelled via the transport rail system in Q1 2021 as against 18,484 tons recorded in Q1 2020 and 35,736 tons in Q4 2020 representing 43.13% decline in freight volume. Revenue generated from passengers in Q1 2021

was put at N892,467,526 as against N398,999,290 in Q4 2020. Similarly, revenue generated from freight in Q1 2021 was put at N26,195,160 as against N82,572,300 in Q4 2020. To ameliorate this situation, the Federal Government of Nigeria through the NRC had made concerted efforts through the contract with Rail India Technical and Economic Services (RITES) 1978-82 and the China Civil Engineering Construction Corporation(CCECC) 1995-99 to rehabilitate the existing cape gauge rail network, recover and maintain obsolete and disabled rolling stock, supply locomotives, coaches, wagons, rail buses and render technical training for the NRC staff. This effort resulted in the resumption of rail services on the Lagos-Ogun Mass Transit Train, Lagos-Ilorin express train and the Lagos-Osoybo train services- the 3 functional cape gauge rail services currently serving South West Nigeria amongst the 11 functional rail lines developed nationwide. (Odeleye, 2000; National Bureau of Statistics, Rail Transport Data, 2021). Improved operational results due to Government efforts had been negligible and short-lived.

This paper seeks to identify the problems faced by passengers of the South West mass transit Trains, Nigeria during service encounters at the rail platforms and in transit onboard train. The study advances relevant suggestions for improvement on the basis of problems identified.

Improved operational results due to huge Government investments to develop the railway in South West Nigeria has been negligible and very short-lived and not able to meet the service need of commuters. Hence the already dwindling customers' patronage of the South west mass transit trains is yet abated. Thus the contribution of rail mode in land transport in this region has remained insignificant (Oni & Okalanwon, 2011). This could be as a result of numerous problems arising from key rail service quality attributes examined in this study. The consequence has been overbearing pressure on the road transport infrastructure, thus over-stretching it and responsible for the multiple road accidents, traffic gridlocks, increase in travel times and worsening environmental pollution currently witnessed in south western states of Nigeria (Oyekami, 2016).

Past studies unexpectedly have concentrated on the entrenched rail networks, subsequently very little attention has been paid to the service problems encountered by passengers for which this study explores. It is against this backdrop that this study aims to analyse the problems faced at rail way stations and on board train. And the following hypotheses was utilized for the study:

H₀₁: There is no statistically significant difference between the problems faced by passengers of the South West Nigeria Trains at the railway stations during travels.

H₀₂: There is no statistically significant difference between the problems faced by passengers of the South West Nigeria trains in transit on-board train during travels.

LITERATURE REVIEW

Service is defined by Edvardsson (2005) as "The service encounter and/or service process that creates the customer's cognitive, emotional and behavioural responses which result in a mental mark, a memory. Some of the service experiences are especially favourable and others particularly unfavourable" The unfavorable experiences constitute problems to customers. These experiences, favorable or not determine customers' perception or judgement of the quality of service rendered by the service provider.

Rahman, Chowdhury, Haque, Rahman and Islam (2017) examined overall customer perception of public bus transport in Dhaka city, Sierra Leone. The discrete choice logit model was used to analyse survey data. Findings show that more than half of the respondents had poor perception of the bus services in Dhaka due to very uncomfortable boarding and seating arrangement, unsafe driving practices, poor boarding and alighting facilities, lack of law enforcement agencies surveillance. irregular service provided by buses, regular overcrowding, lack of good standard buses and lack of cleanliness.

Oluwaseyi and Olaniyi (2018) conducted an assessment of passenger's perception of public transport system in Akure-Owo axis, Nigeria. Gap analysis and descriptive statistics were used to analyse data. The study outlined the problems that passengers face which impacted negatively on their service quality perception. They include; incompetence of drivers, poor condition of vehicles, overloading and over-speeding, poor attitude of drivers, driver's noncompliance with road safety rules and order, and travel cost.

Sheeba and Kumuthadevi (2013) reviewed passenger's perceptions of services of the Indian Railways in the train. A total of 16 key rail service quality attributes which if not given adequate attention could constitute passenger problems and dissatisfaction were considered for this study namely; availability of seats, drinking water, power supply, sanitation quality, neatness of compartment, presence of creatures & insects, self-safety, safety of belongings, affordability, quality of

medical service, availability of doctors, right-time service, information accessibility, behaviour of staff, and behaviour of co-passengers. Findings indicate that the most important of the service attributes in order of rank are basic facilities, hygiene, safety & security, catering, health care service, punctuality of train and behaviour of staff towards passengers.

De Ona, Eboli and Mazzulla (2014) examined key service quality factors that impact customer perception of rail services provided in Northern Italy, with emphasis on the regional and suburban lines connecting different towns of the hinterland of Milan city and Malpensa airport. Service quality attributes studied include safety, cleanliness, comfort, information and personnel. Result of the investigation showed that the most important rail service attribute that significantly impact on customer satisfaction include; 'Windows and Doors Working', 'Courtesy and Competence in Station' 'Courtesy and Competence on Board', 'Information at Stations', 'Punctuality of Runs', and 'Regularity of Runs'

Rajeshwari and Elangovan (2014) examined service quality problems faced by the passengers during ticket reservation, on-boarding and while travelling in the train in Salem Division of Southern Railway Zone, India. Service quality factors considered under problems faced by passengers during ticket reservation were; Long queue in the reservation counters, less number of booking counters, Bulk booking by travel agencies, Tickets are booked immediately when the website is opened especially during festive occasions, transfer of tickets to another date is not permitted, Frequent failure of server, Slow issue of tickets in the counters. Service quality factors considered under problems faced by passengers during train on-boarding include; Heavy crowd in the platform, Frequent change of platform, less space to walk in the platform, Less halting time due to late arrival of trains, Vendor movement. And service quality factors considered under problems faced by passengers while travelling in the train include; Unauthorized entry in the reserved compartments, Disturbance due to beggars, Nuisance of co-passengers, Problems of theft. Findings reveal that the major service quality problems impacting customer satisfaction of the Indian railway include; bulk ticket booking by agencies during ticket reservation, heavy crowd in the platform during on-boarding the train and problems of theft.

Anbupriya and Subadra (2017) reviewed service quality problems that impact rail passenger satisfaction while travelling in train and at train stations with special reference to Erode city. Service quality problems examined regarding passengers at the railway stations

include- Late arrival of train, problems due to beggars and vendors, poor sanitary conditions,, poor response to enquiry, poor catering facility, poor lighting facility, Inadequate announcement, theft, non-availability of tickets, long queue, Poor response of staff members, slow issue of tickets, frequent repairs in the computer, inadequate staff members, inadequate water facilities and bulk booking by travel agents. While service quality problems examined regarding passengers travelling in train include- Behaviour of the staff, poor maintenance of toilet, transgender menace, beggars menace, poor condition of electrical appliances, inadequate security, inadequate service personnel in the compartments, insect menace. The findings revealed that passengers were faced with problems at the railway station but the most significant of the problem is late arrival of train. The study also revealed that passengers face a number of problems while travelling in train of which poor maintenance of toilet is the most significant.

Banu (2018) reviewed passenger perception regarding services provided by the southern railways with emphasis on Salem division India. The following rail service quality attributes were used to collect data for the study: Responsibility of railway officers, Basic Facilities, Hygiene factors, Safety & Security, Catering, Punctuality, Behaviour of staffs and Facilities inside the Trains. Findings reveal that the passengers were grossly dissatisfied owing to poor on-line booking portals, poor first aid and medical services, poor power supply and quality of water of the trains, poor handling of theft cases that happens in the train and occupancy of coach toilets by unauthorized vendors. The study concluded that improving on these service quality dimensions will enhance passenger satisfaction in southern railways India

Zhen, Cao and Tang (2018) examined the correlates of passenger satisfaction and service quality improvement priorities of the Shanghai-Nanjing high speed rail China. Findings reveal that the most important correlates of passenger satisfaction were staff attitudes, convenience of ticket purchase, and ease of the access trip. The study concluded that passengers were generally satisfied with the service quality of Shanghai-Nanjing high speed rail services. However, improvement is needed regarding toilet sanitation and seat comfort dimensions of rail service quality.

METHODOLOGY

This study employed the descriptive and cross-sectional survey design method. A study sample of 384 Likert scale questionnaire rated as, Strongly Disagree (1), Disagree (2), Moderately agree (3) Agree (4) and

Strongly Agree (5) were administered to respondents using the purposeful random sampling method. Data generated was analysed using the Statistical Package for Social Science research (SPSS) software. Descriptive statistics was used to analyse the sample profile and present the distribution of responses on problems faced by passengers with simple tables, percentages, frequency distribution, mean and standard deviation. The Friedman test was used to identify the problems faced by passengers and test the hypotheses.

RESULTS AND ANALYSIS

The four most significant problems identified in descending order of magnitude that passengers face at the railway stations during travels (table 1) are; late arrival of train (mean rank 15.45), issue of theft (mean rank 14.63), poor sanitary conditions (mean rank 12.46) and long queue in the reservation counters (mean rank 11.68).

Table 1: Problems faced by passengers at railway stations in descending order of magnitude.

S/N	Description(Variables)	Mean Rank
1	Late arrival of train	15.45
2	Issue of theft is common	14.63
3	Poor sanitary conditions	12.46
4	Long queue in the reservation counters	11.68
5	Inadequate water facilities	9.97
6	Slow issue of tickets in the counters	9.78
7	Poor catering facility	9.05
8	Inadequate announcement	8.66
9	Poor response of staff members	8.53
10	Problems due to beggars and vendors	7.9
11	Inadequate number of ticket booking counters	7.64
12	Poor response to enquiry	7.15
13	Frequent repairs of computers	6.59
14	Non availability of tickets	6.48
15	Poor lighting facility	6.29
16	Inadequate staff members	5.62
17	Bulk ticket booking by traveling agents	5.13

Source: Field data 2021

The chi-square value obtained Table 2 is 2186.3262 and P-value 0.0000. The P-value is less than alpha value of 0.05. Thus the null hypothesis H₀₁ was not accepted. There is statistically significant difference between the

problems faced by passengers of the South West Nigeria Trains at the railway stations.

Table 2: Friedman test for Problems faced by passengers at Railway Stations.

S/ N	Description(Variables)	Mean Rank	Chi-square Value	P-Value
1	Late arrival of train	15.45		
2	Inadequate number of ticket booking counters	7.64		
3	Non availability of tickets	6.48		
4	Slow issue of tickets in the counters	9.78		
5	Long queue in the reservation counters	11.68		
6	Poor response to enquiry	7.15		
7	Issue of theft is common	14.63		
8	Problems due to beggars and vendors	7.9	2186.3262	0
9	Poor catering facility	9.05		
10	Poor lighting facility	6.29		
11	Inadequate announcement	8.66		
12	Poor sanitary conditions	12.46		
13	Inadequate water facilities	9.97		
14	Bulk ticket booking by traveling agents	5.13		
15	Inadequate staff members	5.62		
16	Poor response of staff members	8.53		
17	Frequent repairs of computers	6.59		

The four most significant problems identified in descending order of magnitude faced by passengers in transit on-board train travelling with the South West Nigeria trains (table 3) are; Poor maintenance of toilets (mean rank 10.71), Menace of overcrowding (mean rank 8.92), Menace of roof ridders (mean rank 8.11) and entry of unauthorized vendors (mean rank 7.87).

Table 3: Problems Faced by Passengers of South West Nigeria Trains in Transit On-Board Trains, in Descending Order of Magnitude.

S/N	Descriptions (Variables)	Mean Rank
1	Poor maintenace of toilets	10.71
2	Menace of overcrowding	8.92
3	Menace of roof riders	8.11
4	Entry of unauthorised vendors	7.87
5	Menace of beggars	7.16
6	Poor communication and information system	6.88
7	Theft and insecurity	6.29
8	Transgender menace	5.06

9	Inadequate service personnel in the compartment	4.92
10	Insect menace	4.32
11	Poor condtion of electrical appliances	4.02
12	Poor behavior of staff	3.75

Source: Field data 2021

The chi-square value obtained, Table 4. is 1512.0452 and P-value 0.0000. The P-value is less than alpha value of 0.05. Thus the null hypothesis H_0 was not accepted. There is statistically significant difference between the problems faced by passengers of the South West Nigeria trains in Transit On-board Train.

Table 4: Friedman Test on Response Values of Problems Faced in Transit Onboard Train.

S/N	Descriptions (Variables)	Mean Rank	Chi-square Value	P-value
1	Poor maintenance of toilets	10.71		
2	Poor condition of electrical appliances	4.02		
3	Poor behavior of staff	3.75		
4	Theft and insecurity	6.29		
5	Inadequate service personnel in the compartment	4.92		
6	Entry of unauthorized vendors	7.87	1512.0452	0.0000
7	Transgender menace	5.06		
8	Menace of beggars	7.16		
9	Insect menace	4.32		
10	Menace of overcrowding	8.92		
11	Menace of roof riders	8.11		
12	Poor communication and information system	6.88		

Source: Field data 2021

CONCLUSION AND RECOMMENDATIONS

The dwindling customers' patronage of the South west Nigeria mass transit trains, declining revenue and loss of market share in the land transport sector has majorly been due to Late Arrival of Trains, Issue of Theft, Poor Sanitary Conditions and Long queue in the Reservation Counters at the railway stations and Poor Maintenance of Toilet, Menace of Overcrowding, Menace of Roof – Top riders and Entry of Unauthorized Vendors in transit on-board train. Ameliorating these problems by the railway management will better the quality of service and customer perception of the Railway transport and subsequently increase customer patronage. To ensure security of passengers the provision of maximum security with minimum adverse effects on free flow of traffic should be implemented, through the installation of surveillance equipment like the Closed Circuit Television (CCTV). This will also provide for proactive identification of unauthorized vendors, unscrupulous persons and potential threats during journeys and at stations.

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