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DETERMINANTS OF INTER-CITY TRAIN SERVICE QUALITY ALONG LAGOS-KANO RAIL LINE IN NIGERIA

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Abstract: One of the serious challenges of rail transport service in Nigeria, is the poor quality of service. Improving the current service quality of rail transport requires among other things, that we understand the critical factors that influence the service quality. This study therefore examines determinants of rail passenger service quality along Lagos-Kano route in Nigeria. Convenience sampling technique was used to administer questionnaire to 361 respondents on board from each of the journey origin that is Lagos and Kano railway station. Also, number of passengers moved by the rail for both in-bound and out-bound was extracted from Nigerian Railway Corporation Passenger manifest. Data were analyzed using descriptive statistics, correlation analysis, Principal Component Analysis (PCA) and t-test inferential statistics with aid of Statistical Package for Social Science (SPSS) version 20 and Microsoft Excel. The results of correlation analysis show that correlation coefficients of the service quality variables are mostly positively related, with their 'r' values ranging from 0.006 to 0.809. The result of PCA of the determinants of rail service quality revealed that only four components have eigenvalues greater than 1. The cumulative percentage of variance reveals that the four components (comfortability, coaches and station cleanness, safety, service coverage and security of luggage) accounts for 71.61% of the total variation of factors that affect train service quality. The study recommends that Nigerian Railway Cooperation should install inside the trains walk-through metal detector with closed-circuit television in order to further maintain the perceived good in-train safety and security standard.

1 Introduction

Rail transport plays a significant role in the development and overall growth of any economy, it is often regarded as the wheels of economic activity, because of the crucial role it plays in providing the pillar upon which production and distribution stand. It opens up regions, hinterlands and rural areas by facilitating agricultural development as well as the growth of cottage and largescale industries (Apanisile and Akinlo, 2013). According to Robinson, Smith and Clare (1961), Nigerian railways played a very active role in land transport in the early years after 1960, to the extent that it accounted for approximately one-third of freight traffic. At some point in time, the Nigerian railways played a key role in enhancing colonial administration, by maintaining links between the central seat of colonial government in Lagos and other parts of Nigeria (Elechi, 1998).

However, Nigerian rail transport is faced with a lot of challenges which include poor productivity (and its negative effect on staff morale), retention and maintenance of non-remunerative routes, huge wage and pension bills - despite the reduction in staff strength of the Nigerian Railway Corporation (NRC) from about 45,000 in the 1970s to about 7,000 as at 2004, and poor quality service (Elechi, 1998, Odeleye, 2000 and Adesanya, 2002). Agwu and Emeti (n.d) posited that poor quality rail service made

the NRC to lose the patronage of most of its passengers as well as its principal clients like: Nigerian National Petroleum Corporation (NNPC), Lafarge Cement PLC, Peugeot Automobile of Nigeria (PAN) and Nigerian Flour Mills Limited. These problems have combined to weaken the railway transport system in Nigeria and the railway system today is a complete shadow of itself during her hey days (Agbaeze and Onwuka, 2014).

Service quality is of increasing importance to all businesses, including public transport organizations. It influences customer satisfaction, passenger demand, investment decisions and revenue. According to Litman (2008) conventional planning practices tend to overlook and undervalue service quality impacts. Service quality is a concept that has aroused considerable interest and debate in the research literature because of the difficulties in both defining and measuring it with no overall consensus emerging (Wisniewski, 2001). Lewis and Mitchel (1990) stated that service quality is the extent to which a service meets passengers' needs or expectations. It is the difference between passengers' expectations of service and perceived service. If expectations are greater than performance, then perceived quality is less than satisfactory and hence passengers' dissatisfaction occurs. The overall railway service is interdependent on the service attributes. The quality of those service attributes dominates the satisfaction of overall service of rail passengers (Rahaman and Rahaman, 2009). Cullingworth (1974) stated that the train quality of service attributes are safety of service, cost of service, accessibility of service, reliability of service, efficiency of service and the comfortability of service while Fadare and Omole (1991) observed that, the variables that determine the quality of rail passengers services are smoothness of the ride, cleanliness of the train, and train's time of arrival at stations.

Originally, Parasuraman, Zeitmal and Berry (1985) identified ten components of service quality; reliability, responsiveness, competence, access, courtesy, communication, credibility, security, understanding/knowing the customer and tangibles. However, there is general agreement among researchers that SERVQUAL dimensions can be modified to suit different service sectors and as such, it is the model that has been widely used. Svensson (2004) in his study laid the importance of customizing a particular model to match the study context. This study therefore examines the service quality of train service along Lagos- Kano rail line in Nigeria. The objective is to determine the major service quality attributes that influence train service patronage, which help the train operators in meeting customers' expectation.

As observed above, this study used modified SERVQUAL dimension which the data gathered includes actual and perceived service quality and the attributes used include, short travel time, convenience, trains interior/exterior cleanness, seat comfort, protection of cargo, reliability, timely arrival/departure, regularity, safety of trips, easy access to train, good train coverage, station cleanness, easy to carry items and polite behaviors of train attendants.

2. Literature Review

2.1 Concept of service quality

Quality is one of the key parameters used to measure the performance of a products or services and even it is one primary indicator to organizational performance (Syed, Daisy and Saman, 2012). Service quality is a subject that has aroused considerable interest both in academic research and in public and private sectors, where managers are inclined towards customer-focused service and continuous performance improvement. Specifically in public transport, service quality is a matter of greatest importance because an improvement of quality levels can attract further users (Eboli and Mazzulla, 2008). Many techniques for measuring service quality and defining the importance of service quality attributes on global satisfaction have been proposed in literature. These techniques are more often not based on customer evaluation.

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2.2 **Service Quality and Customer Satisfaction**

In recent years, there has been a proliferation of work on the topic of customer satisfaction and its close cousin service quality (Rust et al., 2000). The concepts of service quality and customer satisfaction are indeed closely related, although the exact nature of these customer judgments and the relationship between them remains fuzzy (DeRuyter et al., 1997). Some scholars point out to the considerable overlap between the two concepts to the extent of conceiving the terms as synonymous and interchangeable (Gronroos, 1982; Boulding et al., 1993; Rust and Zahorik, 1993). However, researchers have often debated the sequential order of quality and satisfaction in services." A number of researchers have pointed out that service quality leads to customer satisfaction (de Oña & de Oña, 2015; dell'Olio et al., 2010). Oliver's (1993) model integrates the two constructs, and suggests, among other things, that perceived service quality is an antecedent to satisfaction.

Spreng and Mackoy (1996) while studying the relationship between service quality and satisfaction, tested Oliver's model and concluded that service quality leads to customer satisfaction. Similarly Eboli and Mazulla (2011) posited that the quality of services provided can be evaluated by the perceptions and expectations of customers whereas Schiefelbusch and Dienel (2009) stated that the customer is the ultimate judge of service quality. The first comprehensive service quality model was developed by (Parasuraman, Zeithaml and Berry, 1985) and later it was refined by (Parasuraman, Zeithaml and Berry (1988). This model got considerable attention since it was first introduced to measure the service quality based on customer expectations as indicated in Figure 1.

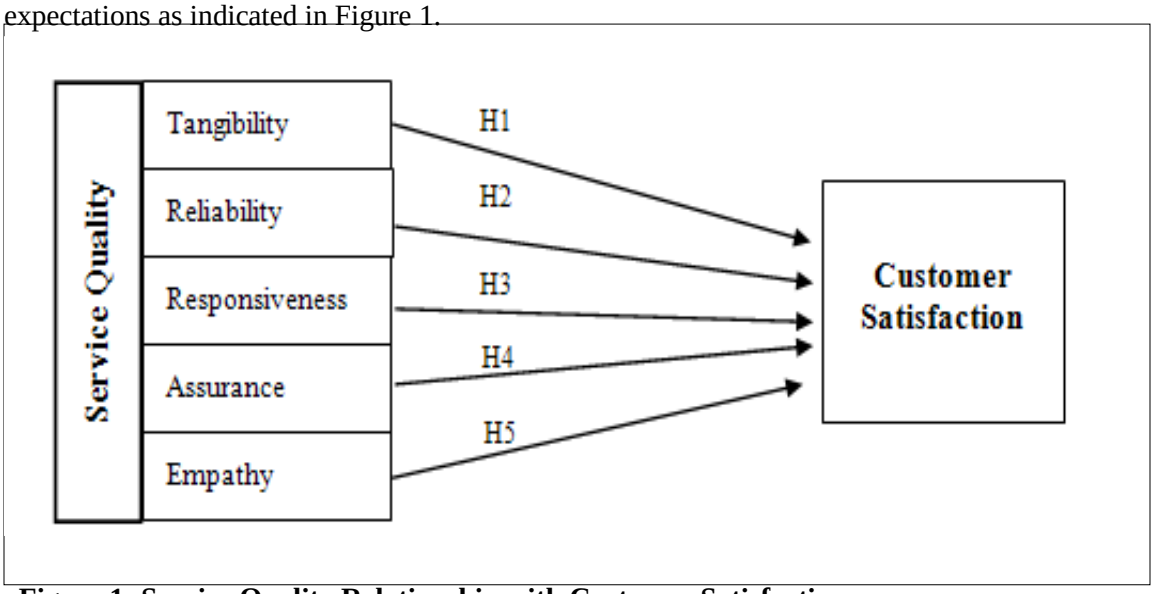

Figure 1: Service Quality Relationship with Customer Satisfaction
Source: Adopted from Loke, Taiwo, Salim, and Downe, 2011

Empirical Review of Relevant Studies

Eboli and Mazzulla (2007) measured customer satisfaction in the context of bus service on various factors including availability of shelter and benches at bus stops, cleanliness, overcrowding, information system, safety, personnel security, helpfulness of personnel, and physical condition of bus stops. Transit Cooperative Research Plan (TCRP) Report 100 identifies the following elements at bus stations for efficient service: shelters, waiting rooms and seating, doorways, stairways, escalators, signage and information

displays, public address systems, and passenger amenities (including shelters, benches, vending machines, trash receptacles, lighting, phone booths, art, and landscaping).

Vanniarajan and Stephen (2008) identified the attributes that passengers use to evaluate the service quality of Indian Railways as reliability, assurance, empathy, tangibles, and responsiveness. It was found that passengers were "moderately satisfied" to "satisfied" on these dimensions. Agrawal (2008) identified employee behaviour as most important determinant of customer (passenger) satisfaction with Indian Railway services. Yilmaz and Ari (2017) examined the relationships among service quality, image, satisfaction, complaints, and passenger reuse intention, and the results found significant effect of service quality and corporate image on customer satisfaction, which lead to the loyalty of passengers.

Adesanya (2002) examined the declining fortune of rail transport in Nigeria response and direction of policy. The study has identified the contributory factors to the poor performance of the Nigerian railway system as well as some of the remedial steps taken to deal with existing problems. Beyond the recent efforts at addressing the prevailing problems, which are yet the expected dividends, there are other challenges which should equally refocus the direction of rail policy in Nigeria. Okanlawon (2006) studied enhancement of light rail system in efficient transportation of commuters in Lagos state. The findings revealed that in other to maximize the role of railway transport, light rail transport must be integrated within the overall transit system. This can be achieved by developing a joint network with existing railways and bus lines, by using Transport Demand Management (TDM) strategies that encourage park and ride and other links with motor vehicle traffic, and by establishing convenient fare-payment system.

Aba (2008) assessed the economic impact of the decline in Nigerian railway transport system: in the Kaduna-Kafanchan rail route. The study evaluated the effect of the decline in railway transportation on settlement along the railway route. The study concluded that the decline in operations of the railway resulted to the reduction of accessibility and mobility of those settlements and reduced productivity in agricultural production, affected occupational structure, increased unemployment and degenerating environmental quality. Apanisile and Akinlo (2013) examined the link between rail transport and economic growth in Nigeria over the period 1970-2011 using Error Correction (EC) modeling approach. The results show that there is long run relationship among the variables. In addition, the EC models show that the error correction term is correctly signed and significant while there is inverse relationship between rail transport and economic growth in Nigeria. This explains the decadence in the sector due to the neglect of the sector by the government. The study therefore concludes that government should embark on development policies that will aim at strengthening the sub-sector of the economy so that it can operate in its full capacity and neutralize the decadence that is evident in the sector.

Mba and Cletus (2013) assessed the managerial challenges and organizational performance of the Nigerian railway corporation. The data were collected from three categories managerial staff (supervisors, line managers and senior managers) of NRC all over the federation. The three major findings revealed that Nigerian Railway Corporation to a large extent experience managerial challenges (corruption, poor maintenance of equipment, ill-motivated work force and poor signaling/telecommunication equipment) in its organizational performance. Reduced rail transport services are influenced by the managerial challenges of Nigerian Railway Corporation. Poor maintenance of equipment (locomotives and rolling stock) is influenced by the managerial challenges of Nigerian Railway Corporation.

Agbaeze and Onwuka, (2014) study on boosting railway system infrastructure in Nigeria: the public-private partnership option noted that an inefficient and ineffective rail system in Nigeria could be attributed to many years of

neglect, technical problems, underfunding, government interference with management, inconsistent government policy, falling rolling stocks levels, worn-out and obsolete infrastructure has left a once vibrant sector in a comatose state. The study further showed that the cost of this neglect has been high in terms of growing cost of road transport services, frequent road collapse, and unprecedented carnage on our roads.

European Commission (2011) conducted a survey on passengers' satisfaction with rail services in 25 European Union member states. Data was collected from the questionnaire administered to rail passengers. Frequency tables and charts were used to analyze the data. The study revealed that more than three-quarters of rail passengers were very satisfied with the comfort of seating areas in trains in their country. The cleanliness and maintenance of railway carriages was the aspect that most frequently appeared in countries' top three of features that passengers were the most likely to be dissatisfied with while they were very satisfied with the punctuality and reliability of trains as well as with the availability of staff on board trains.

Agunloye (2008) studied the rail transport service in Lagos metropolis with emphasis on its terminal facilities, operations, patron's perceptions and challenges. The primary data was sourced from questionnaire administered to the patrons. Descriptive statistics was used to analyze the data. The findings showed that the rail track network and track system was a major component influencing the viability efficiency and the strategic relevance of rail system in national development. Also years of neglect and lack of investments were found to have severely hampered the capacity of the rail network to act as a mass transit vehicle.

Ubogu (2011) studied the potentials of rail-road integration for port-hinterland freight transport in Nigeria. The primary source of data was from responses to a structured questionnaire administered systematically to truck drivers while data on the volume of freight traffic and its modal share were obtained from the annual abstract of National Bureau of Statistics. The data was analyzed using descriptive statistics, Geometric Mean Analysis (GMA) and Student's t-test. The study revealed that the potentials of integrating rail-road in port-hinterland freight transportation would be beneficial to the economic development of the country. It is therefore important that efforts should be geared towards sustaining the emergence of a reliable transportation system that is characterized by timely, safe, efficient and cost-effective method of freight distribution.

Agunloye and Oduwaye (2011) examined the user's opinion on the factors influencing the quality of rail service passengers operation in metropolitan Lagos. The study revealed that 80% of train patrons in Lagos metropolis observed that the service was ineffective and inadequate. The result further shows that only the arrival time of trains at stations has a significant relationship with the patrons' trip frequency out of the various determinants.

Agunloye and Ilechukwu, (2011) examined the travel pattern and socio-economic characteristics of rail transport passengers in Lagos metropolis, Nigeria. The findings revealed that majority of the passengers were male, whose average income was ₦42,500 and age was 38 years old. The study further revealed a positive relationship between marital status and age of passengers. Zeybek (2019) studied Service Quality and its Importance for Rail Freight Customers. The results of the research revealed that the widest quality gap relates to "transit time" which is perceived as the most important dimension of the operational quality of the freight services. It was identified that forwarders' service quality perception is lower than that of shippers. Rajeswari and Santa (2014) studied Satisfaction and Service Quality in Indian. however, the results indicate that passengers perceive that quality of services delivered to them is not satisfactory. Wang et. al (2020) investigated The Impact of Service Quality and Customer Satisfaction on Reuse Intention in Urban Rail Transit in Tianjin, China. The results of the study confirmed that service quality can be conceptualized as

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functional service quality, technical service quality, comfort and cleanness, and service planning and reliability. And it has positive effect on reuse intention by enhancing customer satisfaction, as customer satisfaction has intermediary effect on passengers' repurchase intention

3 Methodology

This study relied on questionnaire survey and with the help of Krejcie and Morgan's (1970) sampling formular, the total of 361 questionnaires was administered to the passengers. The authors used convenience sampling to administered 200 questionnaires to departing passenger at Lagos station and 161 questionnaires was shared among departing passenger at Kano station. However, the authors used Both descriptive and inferential statistics (t-test, Kruskal Wallis and Principal Component Analysis) test to analyze the data for this study. All statistical analysis was carried out using SPSS version 20 statistical programme and Microsoft Excel 2007.

4 Results and Discussion

4.1 Socioeconomic Characteristics of the Respondents

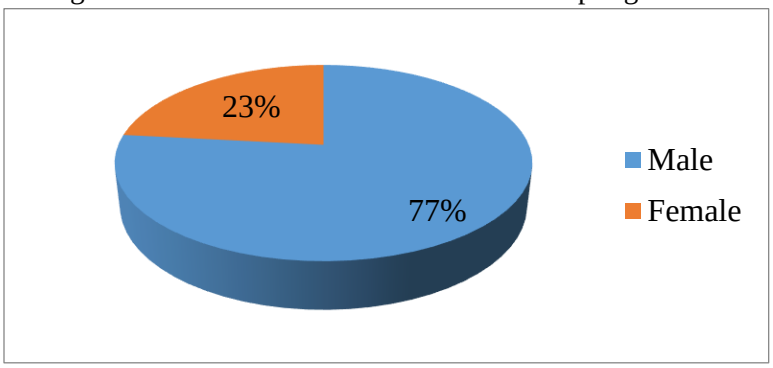

Fig. 2 Gender of the Respondents

Figure 2 above reveals that larger proportion of the respondents were males. This finding is similar to the work of Agunloye and Ilechukwu (2011); and Olayiwola, Okesoto and Akinpelu (2012) which shows that males were the majority of the users of rail transport service in Nigeria. However, this result an indication that majority of the user of rail transport in Nigeria were males.

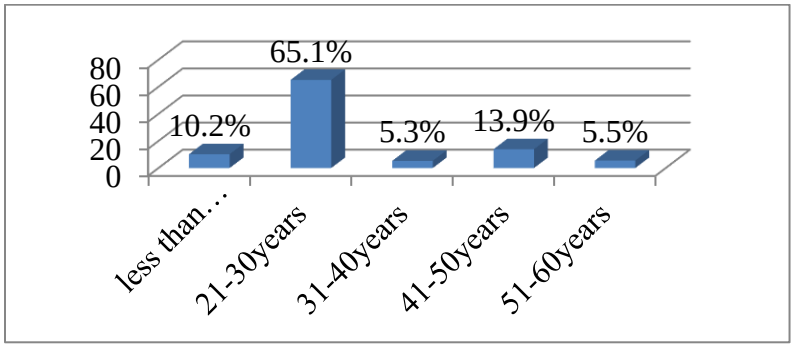

Fig. 3 Age of the Respondents

Figure 3 reveals that majority of railway transport system users in the study route are youths. About 75% of the respondents are in the age ranges of 30 years and below

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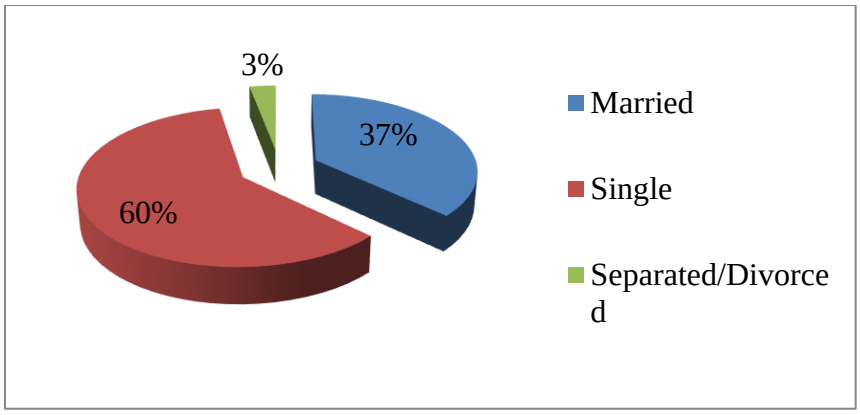

Fig. 4 Marital Status

Figure 4 reveals that majority, (60%) of the rail users were single, while 37% were married and 3% were separated/divorced. The possible explanation for most users in this study being single could be attributed to the young people passing out of NYSC that constituted most of the users' perception on who saw rail transport services as an adventure which they have long desired to explore and experience as youths.

Table 1: Highest Level of Education and Occupation Type of the Respondents

Educational Status	**Frequency**	**Percent**
Primary school	9	2.5
Secondary school	82	22.7
Tertiary	261	72.3
Others	9	2.5
Total	**361**	**100.0**
Occupation		
Civil Service	55	15.2
Trader/Business	58	16.1
Student/NYSC	165	45.7
Organized private company employee	9	2.5
Unemployed	49	13.6
Others	25	6.9
Total	**361**	**100.0**

Source: Field Survey (2022)

The result as shown in Table 1 revealed that most (72.3%) of the rail users have tertiary education, while 25.2% have either primary or secondary education and 2.5% have other forms of education like quaranic. This is a reflection that rail users possess relatively high educational attainment hence proper perception and assessment of rail service quality is expected. In terms of occupation distribution, majority (59.3%) of the respondents are either students/NYSC or unemployed, while 16.1% are either traders or business people and the least were organized private company employees with 2.5%. The unemployed characteristics of the passengers depicts that they are economically dependent. Consequently, they might not

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always afford to pay for rail transport services invariably having a negative impact on the patronage of rail transport services along the study route.

Table 2: Monthly Income Level of the Respondents

Income Level	Frequency	Percent
No Fixed Income	195	54.0
Below ₦20000	74	20.5
₦20,000 - ₦39,999	35	9.7
₦40,000 - ₦59,999	10	2.8
₦60,000 - ₦79,999	5	1.4
₦80,000 - ₦99,999	5	1.4
₦100,000 - ₦119,999	20	5.5
Above ₦120,000	14	3.9
Total	**361**	**100.0**

Source: Field Survey (2022)

The Table 2 shows that most of the train users (54%) have no fixed income, while 20.5% earn below ₦20,000 and the least were those that earn between ₦60,000 - ₦99,999 with 1.4%. The result suggests that low-income earners dominated rail passengers and this could be an indication that, rail passengers services was considered cheap and affordable by the users.

4.2: Service Quality Factors Responsible for Train Service Patronage

Table 3 shows the service quality factors influencing the patronage of rail services in the study area. To examine the bivariate relationship among the independent train service quality variables, a Pearson correlation analysis was carried out which is precondition for Principal Component Analysis (PCA). According to (Norman and Streiner cited in Tabachnick and Fidell, 2001) that if there are few correlations above 0.30 it is inappropriate using PCA which most correlation coefficient matrix of the rail service quality met. Reliability test using KMO and Bartlett's Test of sampling adequacy was carried out to determine the strength of the correlated variables to allow for the PCA which varies between 0 and 1. The values closer to 1 are better and the value of 0.60 is the suggested minimum. The approximate Chi-square is 1679.621 with 91 degrees of freedom, which is significant at 0.05 Level of significance and KMO statistic of 0.717, hence the appropriateness of PCA for the data.

The variables are denoted as X_1 (short travel time), X_2 (convenience), X_3 (trains interior/exterior cleanness), X_4 (seat comfort), X_5 (protection of cargo), X_6 (reliability), X_7 (timely arrival/departure), X_8 (regularity), X_9 (safety of trips), X_{10} (easy access to train), X_{11} (good train coverage), X_{12} (station cleanness), X_{13} (easy to carry items) and X_{14} (polite behaviors of attendants). Table 3 shows correlation coefficients of the service quality variables which are positively ranging from 0.006 to 0.809. The result indicates a positive relationship among the rail service quality variables with exception of X_{13} and X_8 on one hand and X_{13} and X_7 on the other hand. This implies that most of the variables rise and fall together, while those few exceptions go in the opposite direction, as one falls the other rises. The highest positive correlations ($r = 0.809$) were between convenience (X_2) and seat comfort (X_8). This is closely followed by correlation coefficient ($r = 0.806$), which exists between trains interior/exterior cleanness and timely arrival/departure. Similarly, high positive correlation ($r = 0.736$) was found to exist between seat comfort and polite behaviors of attendants. Whereas, the weakest relationship

of (r 006) was observed between ease to carry items (X_{13}) and convenience (X_2).

.This shows the interdependency of the various rail transport service quality variables influence on patronage level.

Table 3: Correlation Matrix of Rail Service Quality

	X_1	X_2	X_3	X_4	X_5	X_6	X_7	X_8	X_9	X_{10}	X_{11}	X_{12}	X_{13}	X_{14}
X_1	1.000													
X_2	.318	1.000												
X_3	.554	.686	1.000											
X_4	.283	.809	.684	1.000										
X_5	.244	.386	.290	.169	1.000									
X_6	.407	.573	.394	.488	.281	1.000								
X_7	.469	.583	.806	.610	.140	.292	1.000							
X_8	.147	.630	.502	.619	-.044	.586	.505	1.000						
X_9	.017	.062	.081	.030	.218	-.102	.151	-.106	1.000					
X_{10}	.174	.222	.549	.328	.305	-.205	.545	.142	.158	1.000				
X_{11}	.189	.168	.372	.383	.256	.169	.398	.264	.298	.516	1.000			
X_{12}	.468	.401	.633	.473	.109	.233	.565	.409	.207	.486	.315	1.000		
X_{13}	.049	.006	.205	.033	.434	.040	-.028	-.238	.083	.222	.115	.027	1.000	
X_{14}	.267	.650	.467	.736	.105	.371	.415	.487	.141	.267	.288	.497	.034	1.000

Source: Field Survey (2022)

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The variances of the extracted components from the PCA on service quality are shown in Table 4.

Table 4: Matrix of Service Quality Influencing Rail Service Patronage

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.596	39.969	39.969	5.596	39.969	39.969
2	1.964	14.027	53.996	1.964	14.027	53.996
3	1.408	10.057	64.053	1.408	10.057	64.053
4	1.057	7.552	71.605	1.057	7.552	71.605
5	.922	6.584	78.189			
6	.761	5.437	83.627			
7	.633	4.524	88.150			
8	.502	3.589	91.740			
9	.450	3.212	94.952			
10	.221	1.576	96.528			
11	.176	1.256	97.784			
12	.123	.879	98.663			
13	.112	.801	99.463			
14	.075	.537	100.000			

Extraction Method: Principal Component Analysis.
Source: Author's Computation (2022)

The variances of the extracted components as shown in Table 4 indicates that the percentage of the total variance accounted for by the principal component analysis shows that only four components have eigenvalues greater than 1. The total variance explained indicates that component one, showed an eigenvalue of 5.60 accounting for 39.97% of the total variance explained. Similarly, component two has an eigenvalue of 1.96 with accounting for 14.03% of total variance, whereas component three and component four have eigenvalues of 1.41 and 1.06; and they account for total variance of 14.03% and 7.55% respectively. The significance of these component loadings is that they provide a clear explanation of the important service quality attributes that influence train patronage. These attributes have been reduced to four components; they are variables whose eigenvalues are greater than 1.00. These are considered as the dominant loadings for each component. The cumulative percentage of variance reveals that the four components (comfortability, coaches and station cleanness, safety, service coverage and security of luggage) accounts for 71.61% of the total variation of factors that affect train service quality. Figure 3 shows a scree plot depicting the loadings used to identify the manner in which the unexplained variation is distributed.

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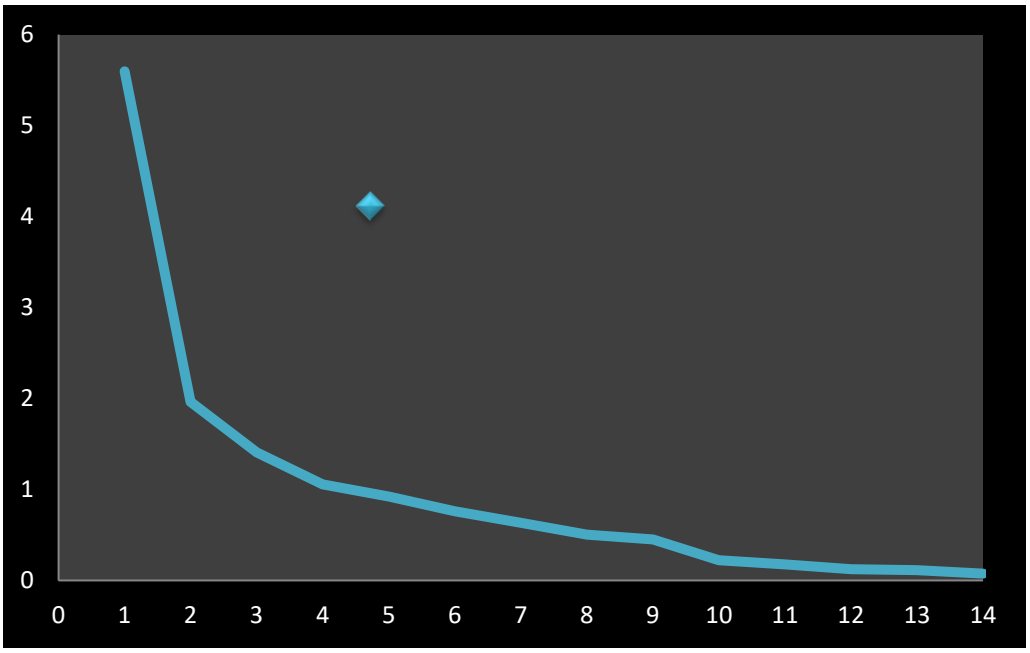

Figure 5: Distribution of Components Loadings
Source: Field Survey (2022)

This plot demonstrates the distribution of the variance among the components graphically. The 'elbow' shape of the curve shows that higher order components contribute a decreasing amount of additional variance with a marked decrease after the fifth component. This implies that the service quality influencing rail patronage can be summarized by the first four components. Furthermore, the analysis of the rotated component matrix loading done for each service quality variable is also presented in Table 5.

Component 1 has significant loadings on 5 variables, namely convenience, seat comfort, reliability, regularity and polite behaviour of attendants accounting for 39.97% variance with an eigenvalue of 5.60. This component is termed "inside train comfort and nature of rail service". Component 2 has significant loadings on 5 variables, namely short travel time, trains interior/exterior cleanness, timely arrival/departure, easy access to train and station cleanness which accounted for 14.03% variance with an eigenvalue of 1.96. Component 2 can be termed as "bus and station cleanness".

Table 5: Rotated Component Matrix[a] Service Quality of Rail Services

Service Quality Variable	Component			
	1	2	3	4
Short travel time	.165	.716*	-.324	.256
Convenience	.850*	.267	.045	.172
Trains interior/exterior cleanness	.476	.765*	.099	.188
Seat comfort	.811*	.338	.202	.011
Protection of cargo	.180	.098	.161	.836*
Reliability	.763*	.072	-.360	.269
Timely arrival/departure	.412	.750*	.191	-.058
Regularity	.791*	.226	-.009	-.287

Safety of trips	.012	-.040	.690*	.172
Easy access to train	-.046	.658*	.572	.107
Good train coverage	.218	.317	.604*	.124
Station cleanness	.300	.710*	.212	-.058
Easy to carry items	-.112	.063	.127	.778*
Polite behaviour of attendants	.720*	.215	.279	-.023

Extraction Method: Principal Component Analysis. i. *__Significant loadings__

Rotation Method: Varimax with Kaiser Normalization.

Source: Author's Computation (2022)

ii. Component 3 has significant loadings on 2 variables, namely safety of trips and good train coverage which accounts for 10.06% variance with an eigenvalue of 1.41. This component is called “safety and service coverage”.

iii. Component 4 has significant loadings on 2 variables, namely protection of cargo and easy to carry items which accounted for 7.55% variance with an eigenvalue of 1.06. Component 4 is “security of luggages”. This indicates that for a rail to be highly patronized, the customers expect more than just cheap train fare but comfort inside the train, timely movement, cleanness of both inside the train and the station, safety and security of passengers and their luggages.

5. Conclusion

The rail transport has been playing important role in the movement of people, goods and services. The study revealed the satisfactory nature of the service quality provided by railway along Lagos-Kano route. However, there is need for further improvement of this rail service so that more passengers may be attracted to use it. The study concludes that sex, short travel time and marital status are the most influencing socio-economic variable of train service patronage whereas, convenience and seat comfort were the most influencing service quality. In summary service quality of rail transport is therefore regarded as critical indicator that would enhance the customer’s satisfaction. Based on the outcomes of this research, the following are recommended:

The cleanliness of the coaches particularly routine cleaning of the toilets must be done regularly. This will improve the rail passenger transport service quality as perceived by the users and as well attract more patrons.

The train’s service travel time table should be reviewed at regular interval by increasing the frequency of service provided along the study route. Also, there should be strict adherence to the train departure time. This will ensure more effective and efficient movement of the trains.

The Nigerian Railway Cooperation should install metal dictator with closed-circuit television inside the train and around the train stations. This will further enhance the perceived good in-train safety and security.

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