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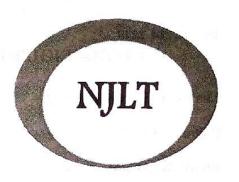
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#### TABLE OF CONTENTS

#### Volume 1, 2018

A study of Noise Induced Pollution from Road Transport Operations in Akure South LGA, Ondo State	
Odesanya, J. F., Okoko, E. E. & Stephens, M. S	1-12
Bystanders and Pre-Hospital Care of Injured Road Crash Victims in Ibadan, Nigeria Ipingbemi, O. & Omojola, O	13-24
An Assessment of Road Traffic Rules and Regulations Compliance level by Motorists in SabonGari Local Government Area of Kaduna State, Nigeria Farah B.S. & Aliyu, A.M	25-35
Economic Impact of Lagos Metropolitan Area Transport Authority (LAMATA) Declared Road Network (DRN) Asenime, C	36-48
Urban Transportation Challenges in The Commercial City of Aba, Abia State Amamilo, C. A., Nwankwo, C. O. & Okoror, N. B	49-57
An Analysis of the influence of Household Characteristics on Car Ownership in Zaria Metropolis, Kaduna State Farah B.S. & Salami, A	58-70
An Analysis of Logistics and Distribution Channel of Dried Fish Production in Ondo State  Ajao, O. S. & Ameen, A. A	71-81
Evaluating Customers' Satisfaction of Service Quality of Kano State Transport Authority, Nigeria	7. 01
Owoeye, A. S., Ajiboye, A. O., Wokili-Yakubu, H. & Ibrahim, S. D	82-97
Tricycle: As a Means of Mobility for Low-Income Households in Lagos Metropolis Abdul-Azeez, I. F. & Ojo, T. K	Nigeria 98-107





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# EVALUATING CUSTOMERS' SATISFACTION OF SERVICE QUALITY OF KANO STATE TRANSPORT AUTHORITY, NIGERIA

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#### ABSTRACT

This study assessed the service quality and customer satisfaction of the Kano State Transport Authority. Customer satisfaction is considered to be the most important factor whether it is meant for a product or a service. In case of failure to satisfy customers, company may be replaced by others because there is a special attitude which plays an important role in attracting and retaining customers. 210 questionnaire were distributed using simple random sampling technique among passengers for data collection while, 197 questionnaire were validly returned. Cronbach's alpha was used to measure the internal consistency in order to evaluate whether the scale used was reliable. The data were analyzed using descriptive and correlation analyses. A finding reveals that passengers are satisfied with the transport services provided by Kano line with mean average of 2.42, 2.33, 2.43, 2.20, 2.17 and 2.64 respectively. Regarding relationship between customer satisfaction and all service dimensions (i.e. reliability, responsiveness, assurance, empathy and tangible). Correlation analysis shows a positive significant relationship with satisfaction, reliability, responsiveness, assurance, empathy and tangible (i.e. r=0.704, p < 0.01; r = 0.755, p < 0.01; r = 0.732, p < 0.01; r = 0.634, p < 0.01; r = 0.678, p < 0.01). The study therefore recommends that the reliability of the service should be improved; there should be consistent maintenance of the buses and readily obtainable replacement equipment and parts. Vehicle tracking system should be introduced to control vehicles routes and timings. There should be better interface between service providers and potential customers in order to meet customer needs and satisfy them. Finally, effective vehicle replacement policy should be designed so that newer vehicles with better comfort can be purchased and used for operation.

Keywords: Customer; Service Quality; Passenger; Satisfaction; Reliability and Assurance

#### 1. Introduction

transportation defined Public "transportation by conveyance that provides continuing general or special transportation to the public excluding school buses"(Tran

& Kleiner, 2005). Transport service industry comprises of several modes which range from air, water, railways, pipelines and road transport. Pipelines are used to transport items which are liquid and gaseous in nature while air, water and road are used to transport goods and passengers. Passenger transport service can be intra-city, inter-city or rural transport operations.

An intercity bus carries passengers in significant distances between different cities, towns, or other populated areas. Unlike a municipal bus, which has frequent stops throughout a city or town, an intercity bus generally has a single stop at a centralized location within the city, and travels long distances without stopping at all. Intercity buses exist all over the world which is operated by government or private industry. While also serving populated urban areas, intercity bus services are of prime importance in lightly populated rural areas that often have little or no public transportation. The buses are one of four common transport means between cities, not all of which are available in all places.

Quality has been a captivating trendy expression in the hierarchical world for the past few decades of the twentieth century. One of the reasons quality has gained such importance is on the grounds that associations have picked comprehension of the expense of poor quality. It is presently a verifiable truth that quality influences all parts of an association and has genuine cost consequences. The most unfavorable impact of poor quality is customer's satisfaction and therefore lack of patronage (Gabriella and Laura, 2006).

The idea of globalization has prompted the crumpling of local and national exchange boundaries whereby markets that were beforehand controlled by monopolist have opened up to rivalry. In a mission for a piece

of the pie, firms have understood that consumer loyalty is vital. Organizations that cannot devise means and management strategies that can consistently fulfill client's desire will not survive for a long time in a competitive business environment. The need for business survival has therefore made many organizations to embrace service quality as a basic goal for survival. It has been discovered that service quality has a positive relationship with fulfillment and builds customer loyalty (Storbacka, Strandvik & Gronros, 1994). Service quality measurement is one of the most important practical themes for service providers and regulatory agencies, but it also continues to be a challenging research theme. For these reasons, it is important to identify service quality attributes and to establish their importance and influence on customer behavior (Gabriella &Laura, 2006).

In the focused business world, a large number of public transport operators attempt to enhance their service quality with aim of improving consumer satisfaction so as to make them loyal and faithful to their organizations. Consequently, public transportation utilizes its very own procedure to enhance its service quality. This can distinguish the p iblic from different contenders. transportation The search for explanation to the quality of service rendered by public transport system in the urban centres has long attracted the attention of researchers in the field of public transportation system.

Since the early 1970's researchers have changed their focus away from the traditional studies of purpose and mode of intra-urban transport system to those that

effectively capture the developments fundamental to service quality in the light of the existing technology and current planning procedures (Barabino et al 2012). Moreover, competition among the organizations involved in public transport system services becomes a kind of survival in business. In this competitive world, the become more demanding and expect to be served better by the service organizations. Hence, the public transportation industry faces the challenge of providing high quality services for the customers.

Therefore, failure to provide this key quality service may put the service provider at a disadvantage to those that can provide a superior service. This necessitates the research in order to provide explicit information that would unravel the main aspects of transport services that impact significantly on the customer satisfaction of public transport operating company. This study therefore focuses on investigating overall customer satisfaction with service quality of the inter-city transport service of

Kano State Transport Authority (Kano Line), Nigeria.

#### 2. The Study Area

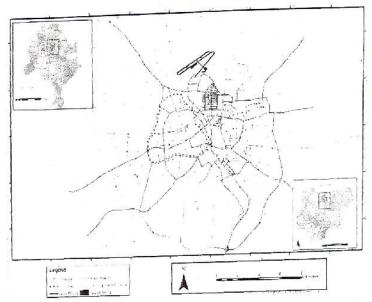
Kano is the state capital of Kano State in North West, Nigeria. It is situated in the Sahel geographic region, south of the Sahara. Kano is the commercial nerve center of Northern Nigeria and is the second largest city in Nigeria. The Kano metropolis initially covered 137 square kilometers (53 square miles ), and comprised six local government areas (LGAs) - Kano Municipal, Fagge, Dala, Gwale, Tarauni and Nasarawa; However, it now covers additional LGAs - Ungogo and Kumbotso . The total area of Metropolitan Kano is now 499 square kilometers (193 square miles), with a population of 2,828,861 as of the 2006 Nigerian census. It is located between 12°00'N 8°31'E/ 12.000°N 8.517°E. The principa! inhabitants of the city are the Hausa and Fulani people that are largely Muslims. As in most parts of northern Nigeria, the Hausa language is widely spoken in Kano.



Figure 1 Map of Nigeria in the Context of Kano State



Figure 2 Map of Kano State in the context of Kano City



Source: International Journal of Innovative Environmental Studies Research 4(1):1 -8, Jan.-Mar. 2016 Figure 3. Road Map of Kano Metropolis - Showing Nodes Distribution

# 3. Conceptual Framework and Literature Review

#### The MORI Model of Customer Satisfaction

One of the important models of customer satisfaction is MORI Model, according to this model, there are five principles—that drive customer satisfaction in the public service, these are; 'Delivery', 'Timeliness', 'Information', 'Professionalism' and 'Staff Attitude'. Delivery implies that the service is given to customers while dealing with any down to earth issues that may emerge. Timeliness implies that the service

is quickly given to the customers. Information measures adequacy, accuracy, currency and the reliability of information given to the customers regarding service being provided. Professionalism refers to the competence and skillfulness of staff in

giving the service.

Finally, staff dispositions allude to the degree to which frontline staff are willing to provide friendly, obliging and empathetic service to customers. Figure 4 shows the diagrammatic representation of MORI's Model of customers' satisfaction.

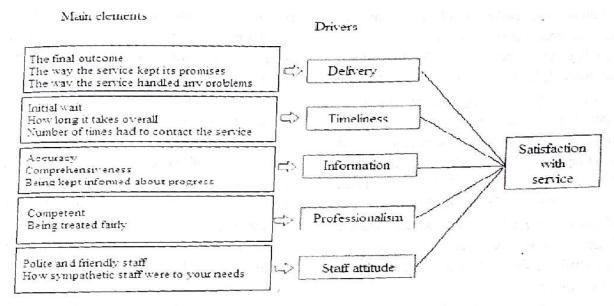


Figure 4 Conceptual Framework Source: MORI (2002)

Another important concept in explaining customer satisfaction and service quality is represents SERVQUAL. SERVQUAL service quality as the difference between customer's expectation for a service offered and the customers view of the service 1988). al. (Parasuraman et received Servqual is concerned about identifying the difference between customer's expectation and perception of service quality received the use of perceived as opposed to real the SERVQUAL service gotten makes that measure mentality measure identified with, however not the equivalent as, satisfaction (Parasuraman et. al., 1988). expectation and hetween The contrast perception is known as the gap which is the determinant of customers view of service (1988),quality. etal., Parasuraman developed the SERVQUAL model which is a scale created to evaluate customers view of service quality of retail organizations. The scale breaks down the thought of service quality into five construct as follows:

Tangibility, Reliability, Responsiveness, Assurance and Empathy.

Generally, transit agencies have given too much importance to saving money at the expense of service quality levels; therefore, they have essentially focused on cost efficiency and cost effectiveness. A measure of cost efficiency is typically defined as produced services (e.g. vehicle kilometers), while a measure of service effectiveness is defined as consumed service (e.g. passenger However, transit kilometers). actually have an interest in obtaining a high service quality level, taking into account passengers priorities and requirements (El-Geneidy, et al 2007). For this reason, there is necessity of using techniques to identify the importance of service quality attributes on global customers' satisfaction and to assess service quality. In the literature there are many techniques for measuring service quality and customer satisfaction, for public transport as in other service industries. These techniques are based on customer

evaluation. The evaluation of service quality and customer satisfaction can be obtained according to different methods: by asking customers their perception or satisfaction on service quality, by asking the expectation or importance, or by asking both perception and expectation. In addition, perception can be compared with the zone of tolerance of expectations; which is defined as the range between the maximum desired level and minimum acceptable level of expectations (Figini, 2003). A rating or ranking of individual service attributes can be asked from customers.

Jeevarathnam & Qi (2011) stated that, the intercity bus system appears to provide safe, comfortable and cost-effective transportation compared to some of the alternative means. However, there is

potential to better serve the needs of its consumers. To this end, paying attention to service quality could prove useful in making this mode of travel the preferred choice to local as well as international travelers. The perceived comfort and convenience of travel conditions has significant direct and indirect impacts. It affects our health, wealth and happiness. (Litman, 2011).

of world are countries Developing characterized by rapid urbanization, high growth rates in traffic and congestion and decreasing regulation of public transport. In addition to these, the majority of people in developing world depend mainly on public transport services for their mobility needs. This further underscore the need for safe, effective and efficient public transport, which is

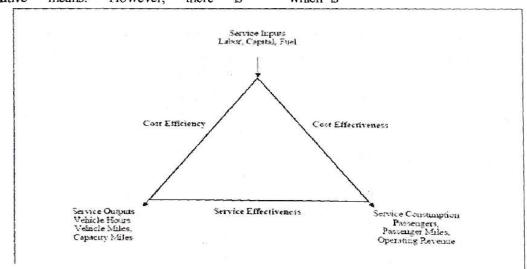


Figure 5 Relationship between efficiency and effectiveness indicators.

Source: Bertini R.L., El-Geneidy A., TRB, 2003.

essential to ensure adequate and affordable accessibility. Moreover, the continuing sustainable development of livelihoods in the rural and urban sectors largely depends on the efficiency of public transport system (Rwebangira et al (1999). The value people place on travel time varies depending on the type of trip, people's preferences, and travel conditions. People are often willing to pay money extra or time for more convenience or comfort. For example, people sometimes pay extra for higher class service, choose slower modes such as walking and cycling because they enjoy the experience, or choose a longer transit route to avoid transfers (Rwebangira et al (1999). An improvement of the supplied service quality can attract further users. For this reason, the development of techniques for customer satisfaction analysis is necessary. These techniques allow the critical aspects of the supplied services to be identified and increased he to satisfaction customer (Nakanishi, 1997). Measuring the reliability of transit service is important because both the transit customer and the transit provider value reliable service. In addition, accurate picture of service performance can give customers valuable information to help them become active participants in the transit policy- and decision making process and give agencies information to identify and investigate service problems (Nakanishi, 1997).

Le-Klahn (2012) found that passengers were profoundly happy with 'punctuality', 'reliability', 'network connection', and service recurrence' in the public transport while they were dissatisfied with 'staff service', 'comfort at bus stops, and the ticket

cost. Antonucci et al. (2014) in Italy found that 'Punctuality', 'regularity', 'waiting time', 'security', 'reliability', 'comfort', 'neatness', 'professionalism' and 'courtesy of staff' were vital elements of passengers satisfaction. Having explored a more extensive scope of service elements in Italy. Barabino et al. (2012), found that 'on-board security', 'bus reliability', 'neatness', 'recurrence' are more vital deciding the service quality. (2009)also Kostakis Pandelis & 'service personnel', uncovered that 'safety', 'time', inside the bus'. and 'service 'availability', 'route precise'. 'route and recurrence' are as important service element or attributes that regulate the customer satisfaction of urban transportation Greece.

Nwachukwu (2014) points out, in Nigeria, that 'comfort' had the utmost effect on overall satisfaction and it was followed by accessibility. The third and fourth factors were 'adequacy' and bus stop facilities'. It was revealed that 'waiting time' and 'comfort level as the primary factors that move passengers from public transport service to private vehicles in Dhaka. Kamaruddin et al., (2012) reveals that customer expectation on public transport services mostly depend on user' vellbeing in the Malaysian setting. However, it could be credited that important service elements generally digress between nations because of the distinctions in social and nation qualities. The priority of quality providing effective transportation is on system rather than insisting on a particular mode of transport. Convenience, travel time, flexibility and cost are the key features of a user -oriented transportation system.

#### 4. Methodology

A field survey approach was used to assess service quality and customer satisfaction of Kano State Transport Authority. Data for through obtained study was this of 210 questionnaire to administration through random sampling passengers technique. The questionnaire survey was carried out at Kano State Transport Authority Loading Terminal. Passengers travelling to and from other cities in the country were the target population. Out of administered. after 210 questionnaire removing the defective ones only 197 were eventually used for the analysis. SERVQUAL model was chosen regarding measurement management the and quality across different service service context. The SERVQUAL model made up of ten dimensions of service quality these tangibility, include: reliability, responsiveness, communication, credibility, security, competence, courtesy, understanding the customer, and access.

The SERVQUAL model is a good scale to utilize when estimating service quality of different particular businesses. However, it is fitting to pick the most vital dimension of this model which fit to that specific service being estimated with the goal guaranteeing dependable and legitimate outcomes. In such manner, this model was utilize since it considers customers

expectation for service and in addition to perception of the service which is most ideal approach to measure service quality in the service sector (Shahin, 2010). Cronbach's alpha was used to measure the internal consistency in order to evaluate whether the scale used was reliable. The reliability was measured by classifying the items based on assurance, responsiveness, reliability, empathy, tangibles and satisfaction. In this study. SERVQUAL was used to measure service quality by using the five constructs of assurance, tangibles, responsiveness, empathy, reliability to determine customer satisfaction.

#### 5. Findings and Discussion

The first aspect of the finding in this study is to find out how customers of Kano State Transport Authority perceive its service quality. In doing this Linker Scale of 1 to 5 was used. In this case, 1 = strongly disagreed, 2 = agreed, 3 = fairly agreed, 4 = disagreed and 5 strongly disagreed. The mean in table is derived from the scale of I to 5. Four items were used to measure reliability. Responsiveness was measured by using two items, The Assurance dimension was measured by three items, Empathy was measured by three items and Tangible dimension is also measured using three items. In assessing customers' satisfaction from the services provided by KSTA Table I below provide the result of analysis.

Table 1: Customers Perceptions on Service Quality

Statement	N	M inimum	Maximum	Mean	Std. Deviation
How clean is the interior of the vehicle?	197	1	5	2.6447	
Are you satisfied with the seating arrangement of the bus?	197	<del>-</del>			0.79259
How comfortable are you sitting in the bus?	197		5	2.7817	0.89675
What is the waiting time of the bus?	197		5	2.7716	0.92229
Is the waiting time acceptable?	197		5	3.6447	1.10916
How convenient is the business time of the service?	197	91	5	2.9137	0.919
What is your opinion on the on-time execution of services by Kano Line	197	1	5	2.9746	0.90032
How modern are the buses?	197	I	5	2.7513	0.8536
How much did you pay for this service?	197	1	5	2.599	0.96711
Are you comfortable with the payment method?	197	I	5	2.3553	0.79259
How do you rate the safety of the transport service?	197	- 1	5	2.2792	0.86202
Drivers have sufficient driving skills		I	5	2.3147	0.79696
How do you rate the handling of Passenger problems?		l	5	2.6904	0.78282
Do they give passengers personal attention?		I	5	2.7208	0.8501
The employees of the company always appear neat?	197	1	5	2.6599	0.76336
Oo personnel in bus station have knowledge of ourtesy ascribed to employee?	197	1	5	2.6548	0.66443
Are employees willing to help/answer ustomer's questions?	197	I	5	2.5431	0.77223
Maintains error free records	197	1	5	2.6396	0.76735
are drivers and conductors consistently polite?	197	1	5	2.7157	0,8271
Compared to private vehicle, are you happy using public transport?		I	5	2.8832	0.92116

Source: Author's Computation (2018)

From Table 1, it is clearly seen that no mean value of the items of perception is less than 2.3 which noticate that the customers of KSTA agreed that the quality of service of the company is very high. The highest mean value 3.65 is recorded by 'the waiting time'. This implies that the waiting time of the passengers is perceived long by the customers. The customers considered that they spend too long time at KSTA bus stations or parks before they start off their journeys.

Table 2 also shows how passengers rate

regarding satisfaction. Satisfaction was also measured on a 5-point Likert scale in six different statements/items which were questionnaire. These the included in statements are how satisfied the respondent is with the price (1 = very satisfied, 2 =Satisfied, 3= average, 4= unsatisfied, 5= very unsatisfied. If he/she feels secured while traveling with Kano line (1= very secure, 2= secure, 3= average, 4= insecure, 5= very insecure). If on the overall he/she is happy with the transport service. If the respondent will travel with Kano line again,

if he/she will recommend Kano line to someone. And if the service provided meets his/her satisfaction level.

The results in Table 2 shows that the customers' satisfaction regarding these six items/statements shows the mean value of 2.42, 2.33, 2.43, 2.20, 2.17 and 2.64 respectively. Therefore, the average mean score is 2.37 which according to the scale defined above indicate that customers are satisfied with the transport services provided by Kano line.

is higher, it means the internal consistency of items from the scale is higher (Nunnaly, 1978). Cronbach's alpha can be written as a function of the number of test items and the average inter-correlation among the items. Below, for conceptual purposes, we show the formula for the Cronbach's alpha as follows:

$$\alpha = \frac{N \cdot \tilde{c}}{\tilde{v} + (N-1) \cdot \tilde{c}}$$

Here N is equal to the number of items, cbar is the average inter-item covariance

Table 2: Customer Satisfaction

S/N	Statement	N	Minimum	Maximum	Mean	Std. Deviation
1	Are you satis fied with the price?	197	1	5	2.4264	0.8695
2	Do you feel secured while traveling with Kano line	197	I	5	2.335	0.79504
3 *	Would you travel with Kano line again?	197	1	5	2.4315	0.80915
4	Would you recommend Kano line to someone	197	1	5	2.2081	0.85853
5	Is the waiting time acceptable?	197	1	5	2.1777	0.81059
6	Does the service provided by Kano line meet your satisfaction level	197	1	5	2.6447	0.77961

Source: Author's Computation (2018)

The results in Table 2 shows that the customers' satisfaction regarding these six items/statements shows the mean value of 2.42, 2.33, 2.43, 2.20, 2.17 and 2.64 respectively. Therefore, the average mean score is 2.37 which according to the scale defined above indicate that customers are satisfied with the transport services provided by Kano line.

#### 5.1 Validity and Reliability of the Scale

Cronbach's alpha was used to measure the internal consistency, to evaluate whether the scale was reliable. When Cronbach's alpha

among the items and v-bar equals the average variance. One can see from this formula that if the number of item is increased, the Cronbach's alpha will also increase. Additionally, if the average interitem correlation is low, alpha will be below. As the average inter-item correlation increases, Cronbach's alpha increases as well (holding the number of items constant). The reliability was measured by classifying the items based on reliability, responsiveness, assurance, empathy, tangibles and satisfaction as shown in the tables below.

10

Table 3: Showing Cronbach's Alphaon Reliability

Cronbach's Alpha	Items	No of items	
0.582	* What is the waiting time of the bus?  *Is the waiting time acceptable?  * How convenient is the business time of the service?  * What is your opinion on the ontime execution of services by Kano line?	4	

Source: Author's Computation (2018)

Table 4: Showing Cronbach's Alphaon Responsiveness

Cronbach's Alpha	Items	No of items
0.742	*Are employer willing to help/answer's customers questions? *Are employer willing to maintain error free records	2

Source: Author's Computation (2018)

Table 5: Showing Cronbach's Alphaon Assurance

Cronbach's Alpha	Items	No of items
0.644	* How do you rate the safety of the transport service?  * Drivers have sufficient driving skills  * Personnel in bus station have knowledge and courtesy ascribed to employee's	3

Source: Author's Computation (2018)

Table 6: Showing Cronbach's Alphaon Empathy

Cronbach's Alpha	Items	No of items
0.708	* How do you rate the handling of passenger's problems?  * Do the give passengers personal attention?  * Are drivers and conductors consistently polite?	3

Source: Author's Computation (2018)

Table 7: Showing Cronbach's Alphaon Satisfaction

		No
Cronbach's		of
Alpha	Items	items

0.85
------

Source: Author's Computation (2018)

As can be seen from Tables 3, 4, 5, 6 and 7 Cronbach's alphas are generally high. Only reliability and Assurance attributes have Cronbach Alphas of less than 0.7 which is considered as the standard.

#### 5.2 Relationship between Customer Satisfaction and Service Quality Indicators

In this subsection, we attempt to finding out whether there is any significant relationship between the customers' satisfaction and quality of service of KSTA.

Table 8: Pearson Correlation between dependent variable and independent variable

Variable	1	2	3	4	5	6
combine variable for satisfaction	1					
combine variable for reliability	0.704*					
combine variable for responsiveness	0.755*	0.798*	1			
combine variable for assurance	0.731*	0.678*	0.732*	Į		
combine variable for empathy	0.634*	0.632*	0.740*	0.716*	1	
combine variable for tangible	0.678*	0.616*	0.568*	0.649*	0.599*	ı

Correlation is significant at 0.01 level (2-tailed)

Source: Author's Computer Analysis (2018)

From the results of the correlation analysis in Table 8, it is revealed that Customer satisfaction is significantly related to all service quality dimensions (i.e. satisfaction, reliability. responsiveness. assurance. tangible). empathy and Regarding relationship between customer satisfaction and reliability, the results indicate that there is a high positive significant relationship between the two variables (r = 0.704, p<0.01). This means that as you provide services. the more satisfied reliable customers will be with services. Regarding customer relationship between the results responsiveness satisfaction and indicate that there is a high positive significant relationship between them (r = This means that as the 0.755, p<0.01). improves its awareness, company willingness to help and prompt service to passengers, the more satisfied customers will be with services.

significant positive high There is a relationship between customer satisfaction and assurance (r = 0.732, p<0.01) which implies that customer assurance has a great to the customer (positively) impact relationship Regarding the satisfaction. between empathy and customer satisfaction results indicate that there is a positive significant relationship between the two variables (0.634, p<0.01). This means that the more compassionate the staff are to customers the more satisfied customers will be with the service. Also, regarding the tangibility between and relationship customer satisfaction results indicates also a positive relationship significant them (r = 0.678, p<0.01). This means that the more the transport provider improves and maintains tangible things to be in good condition and attractive, the more satisfied customers will be with service.

This study established that three dimensions Assurance Responsiveness, and (i.e. predictors of were good Reliability) McDougall & satisfaction. customer Levesque (2000) have claimed that knowing the relative importance of each dimension help service can quality of service efforts and providers to priorities their them more deploy resources and improve each dimension of effectively to Furthermore, quality. service knowledge allows managers to focus on those dimensions that offer the greatest opportunity to enhance customer satisfaction The results from this and their loyalty. study were consistent with previous results. his study (2011) in Aldehayyat, Perception of Service Quality in Jordanian Hotels, assessed the relationships between the quality of service dimensions and customer satisfaction.

results show a positive statistical significance between the three dimensions quality (Reliability, of service Responsiveness and Assurance) and the customer satisfaction; while no relationship found with empathy and tangible. Akbaba (2006) conducted in the hotel industry confirmed the five-dimensional structure of service quality, but some of the dimensions were also different. All these findings support the claims that the numbers service quality dimensions depending on the particular service being offered, and different measures should be developed for different service context (Carman 1990; Finn & Lamb 1991; Babakus

& Boiler 1992; Bouman &Van der Wiele 1992).

#### 6. Conclusion

The reliable and sustainable communication system amongst service providers and consumers is one of the best means of retaining customer's loyalty and patronage in a competitive business environment. Significant indication is now available that customers' perceptions of service quality performance of precise acts are very predictive of their overall satisfactions and readiness to patronize the service again, if desired.

#### 7. Recommendation

Based on the research findings, the following recommendations were made:

- i. The reliability of the bus service should be improved in three ways: Firstly, a consistently aligned set of factors, processes and standards should be set.
- ii Secondly, there should be consistent maintenance of the buses as well as readily obtainable replacement equipment and parts.

  iii Thirdly, new technologies such as global positioning/tracking system should be introduced to monitor and control vehicles routes and timings.
  - iv. There should be better interaction with current as well as potential customers with a view to understanding their needs and service expectations.
  - v. Staff members need to be mindful of customer feedback as well as complaints so that the required actions can be taken.
  - vi. There is need to use low capacity vehicles for routes with low demand.
  - vii. Operators should adhere strictly to their

journey time table in order to reduce waiting time at bus stations.

viii. Effective vehicle replacement policy should be designed so that newer vehicles with better comfort can be purchased and used for operation.

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