

A STUDY AND MEASUREMENT OF SATISFACTION LEVEL OF PASSENGER'S OF BARODA BUS TERMINAL IN THE CONTEXT OF GUJARAT STATE ROAD TRANSPORT CORPORATION (GSRTC).

DR. RASIKBHAI ISHVARBHAI PRAJAPATI

Assistant Professor and Head of Department (HOD)
Smt.S.S.Patel Nootan Science and Commerce College
Sankalchand Patel University, Visnagar, Mehsana, Gujarat.

ABSTRACT: Public Transportation play a very vital role as far as the movement of people is concerned. Since long back various means of transport are used for passengers transfer like railway, roadways, waterways and airways. Among this one of the frequently used is transportation by roadway. Generally people prefer to make travelling in public transportation as GSRTC, AMTS, BRTS as these ways are reliable, secure, safe and compensating in case of accidents. So here the researcher has tries to measure the behaviour of passengers especially Vadodara towards ST transports in various factors related to its services.

KEY WORDS: Passengers, ST bus, Reliability, Mobility, Satisfaction.

1.1 INTRODUCTION:

Vadodara gets a State of the Art Bus Terminal. This is one of the modern bus stand started in Vadodara with all amenities for passengers. Shri Narendra Modi inaugurated this unique bus station named as Sardar Vallabhbhai Patel Bus Station in Vadodara. The station is built on PPP (Public Private Partnership) model and encapsulates the history of Vadodara depicted through Photographs and Paintings around the walls of the Bus Station.

1.2 BASIC INFORMATION OF VADODARA BUS PORT/TERMINAL

Sr. no	Particular	Remarks
1.	Total Bus available at this Bus Stand	1524
2.	Passengers /per day travelled	App. 60000 to 70000.
3.	Total Employees	400
4.	Service Area	Gujarat & Neighboring state.
5.	Buses condition	70% new Express buses are allotted.
6.	Training	Training for Drivers only.
7.	Complaint Cell	Online passengers can register complaint.
8.	Clean criteria for Bus	Regular Cleaning of all Bus.
9.	Breakdown Facilities	24 hours Breakdown Facilities available.
10.	Status of Volvo buses	A/C Volvo (Volvo) buses are on private basis.
11.	Users	All rural & Urban passengers uses ST bus.
12.	Parcel Facilities	Private Contract
13.	Security Facilities	Private Contract
14.	Canteen Facilities	Private Contract
15.	Sanitation Facilities	Private Contract
16.	Students Pass	Student pass is available. Free pass is for Girls and Concessional pass for Boys.

17.	Monitoring Facilities	24 hours continuous automatic facilities for checking of all passengers.
18.	Parking Facilities	Separate Parking Facilities for Four wheeler, Two wheeler and Auto.
19.	Inquiry Counter	Passengers Information centre.
20.	Passengers Lounge Facilities	In case of emergency separate facilities for passengers.
21.	Reservation	Advance Reservation Facilities at separate Counter.
22.	T.V Contract	SAMBHAV Media Pvt Limited. Ahmedabad.
23.	Limitations	No controlling on private Contractor. So sometimes passengers has to suffer.
24.	Toll free Number	1800 233 666666
25.	Special Services	<ul style="list-style-type: none"> ✓ Festival Services. ✓ Services connecting to Industrial Zone. ✓ Services connecting to Schools and Colleges. ✓ Services connecting to Pilgrim Places.
26.	Public Entertainment System	Display of LCD TV at different places in ST stand.

1.3 Problem Statement:

The researcher plan to study the impact of service quality on customer satisfaction on Public Transport at Baroda Bus port/terminal.

1.4 Originality of the Study:

The research area that is public transport has been discussed by many times but especially the problems related to passengers have never been discussed before. There is a gap in the body of knowledge and the present researcher will try to figure out this gap.

1.5 Applied Aspects:

For every sector whether it would be public or private customer satisfaction is considered to the most important factor. With the help of this research some key points would be driven which could be given to the people who have authority to govern this sector to improve service quality of transport in public sector.

Rationale of the Study:

The researcher traveled himself in public transport which made him to conduct a research in this sector and to suggest how they could overcome the problems faced by such as:

1. Non availability of seats
2. Time Problems
3. Mental Harassment.
4. Less security. Page 1001 of 14

1.6 OBJECTIVES OF THE STUDY:

Following are the objectives of the study

1. To study the impact of service quality in public transport sector at Vadodara Bus Port.
2. To study the level of passengers satisfaction in the same area.
3. To study there any relationship between the two variables i.e. Service Quality (independent) and customer satisfaction (dependent).

1.7 :- HYPOTHESIS OF THE STUDY:

1.	H₀:	There is no significance impact of reliability on passengers' satisfaction.
	H₁:	There is significance impact of reliability on passengers' satisfaction.
2.	H₀:	There is no significance impact of responsiveness on passengers' satisfaction.
	H₂:	There is significance impact of responsiveness on passengers' satisfaction.
3.	H₀:	There is no significance impact of tangibles on passengers' satisfaction.
	H₃:	There is significance impact of tangibles on passengers' satisfaction.
4.	H₀:	There is no significance impact of assurance on passengers' satisfaction.
	H₄:	There is significance impact of assurance on passengers' satisfaction.
5.	H₀:	There is no significance impact of empathy on passengers' satisfaction.
	H₅:	There is significance impact of empathy on passengers' satisfaction.

1.8 RESEARCH METHODOLOGY:

For the purpose of being concise and also because of the reason that the researcher have selected a domain of Baroda Bus Port for this research. However different proportion of male, female, students has been selected to measure their level of satisfaction and to formulate new strategy.

1.9 SAMPLING PROCEDURE:

Sample of 100 respondents was drawn from Baroda Bus Port.

1.10 TOOLS FOR DATA COLLECTION:

SERVQUAL Model for the measurement of customer satisfaction was developed from the Questionnaire about service quality. Likert scale was used for the investigation.

1.11 RELIABILITY OF THE INSTRUMENTS:

SPSS version 16.0 was used for data analysis.

1.12 DATA ANALYSIS AND INTERPRETATION:

The data, after collection has to be processed and analysed in accordance with the outline laid down for the purpose at the time of developing the research plan. This is essential for a scientific study and for measuring that all relevant data for making analysis. Technically speaking processing implies editing, coding, classification and tabulation of collected data so that they are amenable to analysis. Thus in the process of analysis relationship or differences supporting or conflicting with original or new hypothesis should be subjected to statistical tests of significance to determine with what validity data can be said to indicate any conclusions

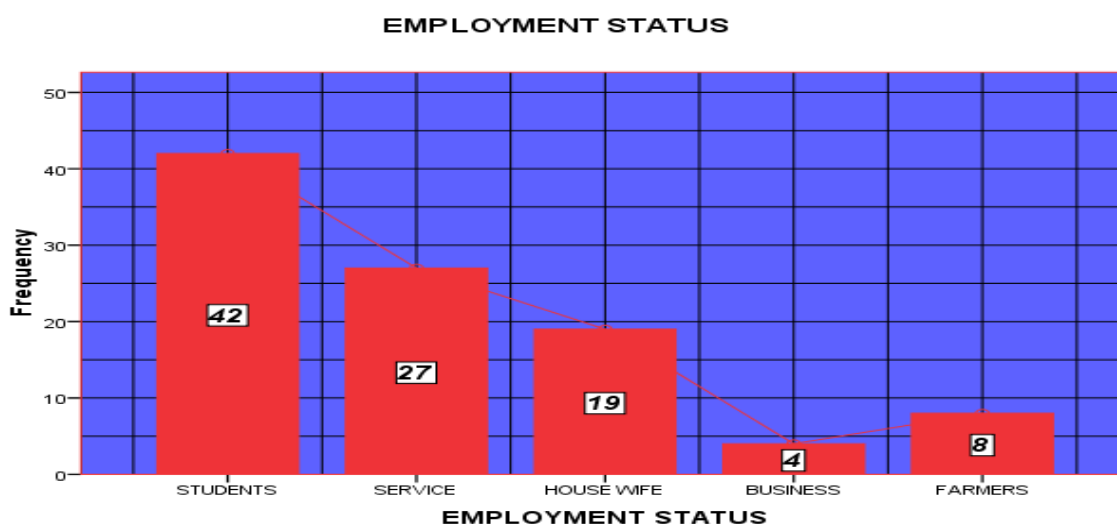
To collect the information regarding passengers' opinion and their satisfaction about government transport service provider, 100 responses were collected from Baroda Bus Port.

DEMOGRAPHIC PROFILE ANALYSIS:

Table-1.1 **Employment Status**

	Frequency	Valid Percent	Cumulative Percent
Valid STUDENTS	42	42.0	42.0
SERVICE	27	27.0	69.0
HOUSEWIFE	19	19.0	88.0
BUSINESS	4	4.0	92.0
FARMERS	8	8.0	100.0
TOTAL	100	100.0	

Graph-1.1



Interpretation: The above table-1.1 and graph-1.1 indicates the users' pattern of GSRTC different services. The researcher has tried to collect the opinion from different categories so that the output becomes representative. So 42 students, 27 service people, 19 housewife, 4 small traders, and remaining category is of farmers. The prime reason behind contacting these entire groups is to collect some information regarding their satisfaction level.

CLASSIFICATION OF DIFFERENT SERVICES USED BY PASSENGERS:

Cross tabulation-also called crosstabs- bivariate tables and two variable tables are used to determine whether a given variable is associated with another variable, usually with categorical data. They are often used in

hypothesis testing. The Cross tabulation table shows the spread of the responses across the two variables. Note that the Cross tabulation interpretation cannot tell us the reason for any differences we find, only tells us that the differences exist.

Table: 1.2 Gender * Mention Types of services: Cross-tabulation

Count		Mention Types of services						Total	
		Ordinary Bus Services	Express Bus Services	Gurjar Nagri Bus Services	Luxury Bus Services	Intercity Services	Interstate Services		Parcel Services
Gender	Male	21	16	5	4	4	3	5	58
	Female	11	8	7	6	4	4	2	42
Total		32	24	12	10	8	7	7	100

Interpretation: The above table-1.2 describes the cross tabulation relationship between different services provided by GSRTC like Ordinary Bus Services, Express Bus Services, Gurjarnagri Bus Services, Luxury Bus Services, Intercity Bus Services, Interstate Bus Services and Parcel services. So from the table it can be stated that majority of passengers’ that is total 32 (21 Male and 11 Female) uses Ordinary Bus Services in their transport requirement, second preference goes to Express Bus Services total 24 (16 Male and 8 Female), in case of other remaining categories the utilization pattern is very less or the researcher can say that only selected target audience uses the Intercity and Interstate services.

Table: 1.3 Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.535^a	6	.477
Likelihood Ratio	5.535	6	.477
Linear-by-Linear Association	.990	1	.320
N of Valid Cases	100		

a. 7 cells (50.0%) have expected count less than 5. The minimum expected count is 2.94.

Interpretation: When reading above table-1.3 the researcher is interested in the results of “Pearson Chi-Square” row. We can see here than $\chi^2(1) = 5.535, P = 0.477$. This tells us there is no statistically significant association between Gender and types of Bus services.

Table:1.4 Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.235	.477
	Cramer's V	.235	.477
N of Valid Cases		100	

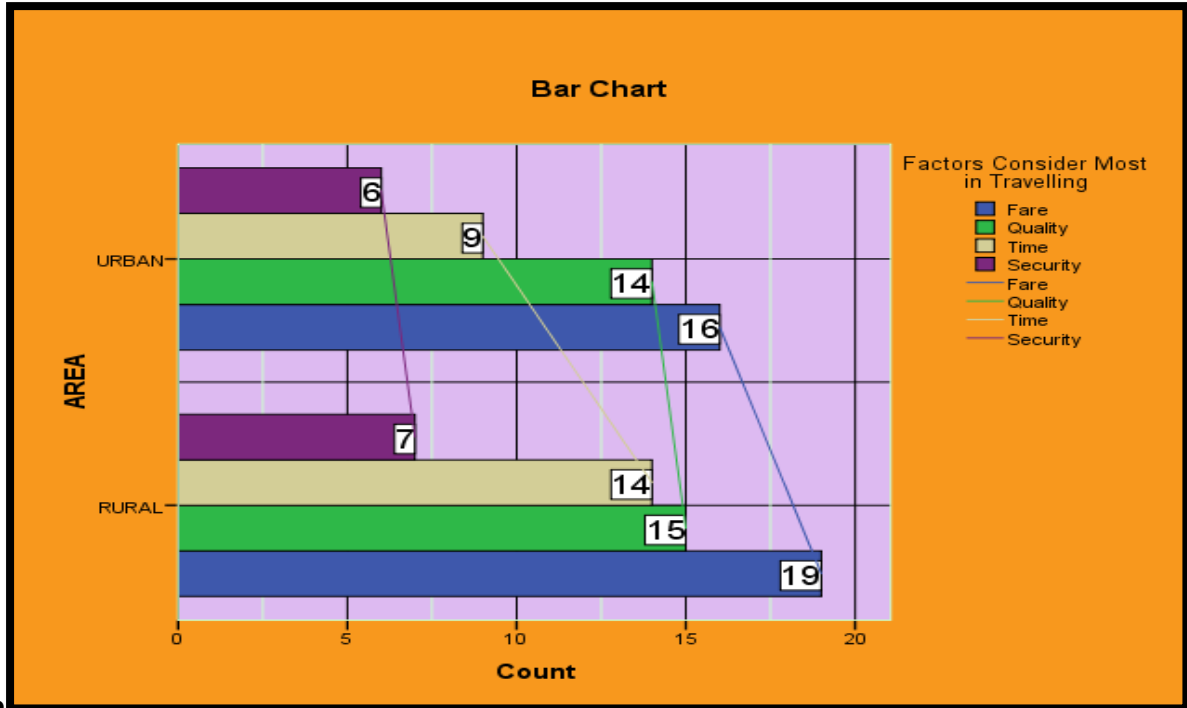
Interpretation: In the above table 1.4 of Symmetric Measures, a Phi value is .235 and .477 respectively. And the Cramer’s V value is .235 and .477. Moreover Phi and Cramer’s V are both tests of the strength of association. We can see that the strength of association between the variables is moderate.

FACTORS CONSIDERED MOST WHILE TRAVELLING IN ST BUS (PRIORITY TO VARIOUS FACTORS).

Table:1.5 Area * Factors Consider Most in Travelling Cross- tabulation

		Factors Consider Most in Travelling				Total	
		Fare	Quality	Time	Security		
RURAL	Count	19	15	14	7	55	
	Expected Count	19.2	16.0	12.6	7.2	55.0	
	% within AREA	34.5%	27.3%	25.5%	12.7%	100.0%	
	% within Factors Consider Most in Travelling	54.3%	51.7%	60.9%	53.8%	55.0%	
	% of Total	19.0%	15.0%	14.0%	7.0%	55.0%	
AREA	URBAN	Count	16	14	9	6	45
	Expected Count	15.8	13.0	10.4	5.8	45.0	

	% within AREA	35.6%	31.1%	20.0%	13.3%	100.0%
	% within Factors Consider Most in Travelling	45.7%	48.3%	39.1%	46.2%	45.0%
	% of Total	16.0%	14.0%	9.0%	6.0%	45.0%
Total	Count	35	29	23	13	100
	Expected Count	35.0	29.0	23.0	13.0	100.0
	% within AREA	35.0%	29.0%	23.0%	13.0%	100.0%
	% within Factors Consider Most in Travelling	100.0%	100.0%	100.0%	100.0%	100.0%
	% of Total	35.0%	29.0%	23.0%	13.0%	100.0%



Graph-1.2

Interpretation: The above graph-1.2 indicates the cross tabulation between different factors consideration and area. So the researcher has gathered some vital information in this regard. Here four factors are taken into consideration like Fare, Quality, Time and Security. Out of total population of 100 respondents, 35 (19 rural and 16 urban) passenger’s have given the preference to fare(price) and said while travelling generally they consider fare because there is a difference between fare of Ordinary Bus fare, Express Bus fare, Intercity Bus fare, Gujarnagri Bus fare. Secondly Quality in terms of other factors. In that case, 29 (15 rural and 14 urban) shows preference to this. Third is time management, so as different users want that they reach at their destination on time. So time is a very critical factor for all passengers, 23 (14 rural and 9 urban) give priority to this factor. The last but not least important variable is Security provided to passengers’ while travelling. So total 13 (7 rural and 6 urban) given preference to this.

By face to face interaction with the passengers’ at various ST stands the researcher found that they feel higher level of security in ST as compared to private travelers. Moreover GSRTC also provides some compensatory benefits to all those passengers who have become the victim of any particular incidents. In private no such additional facilities are given to users.

EMPLOYMENT STATUS V/S ADDITIONAL FACILITIES EXPECTATION. Table-1.6

EMPLOYMENT STATUS *

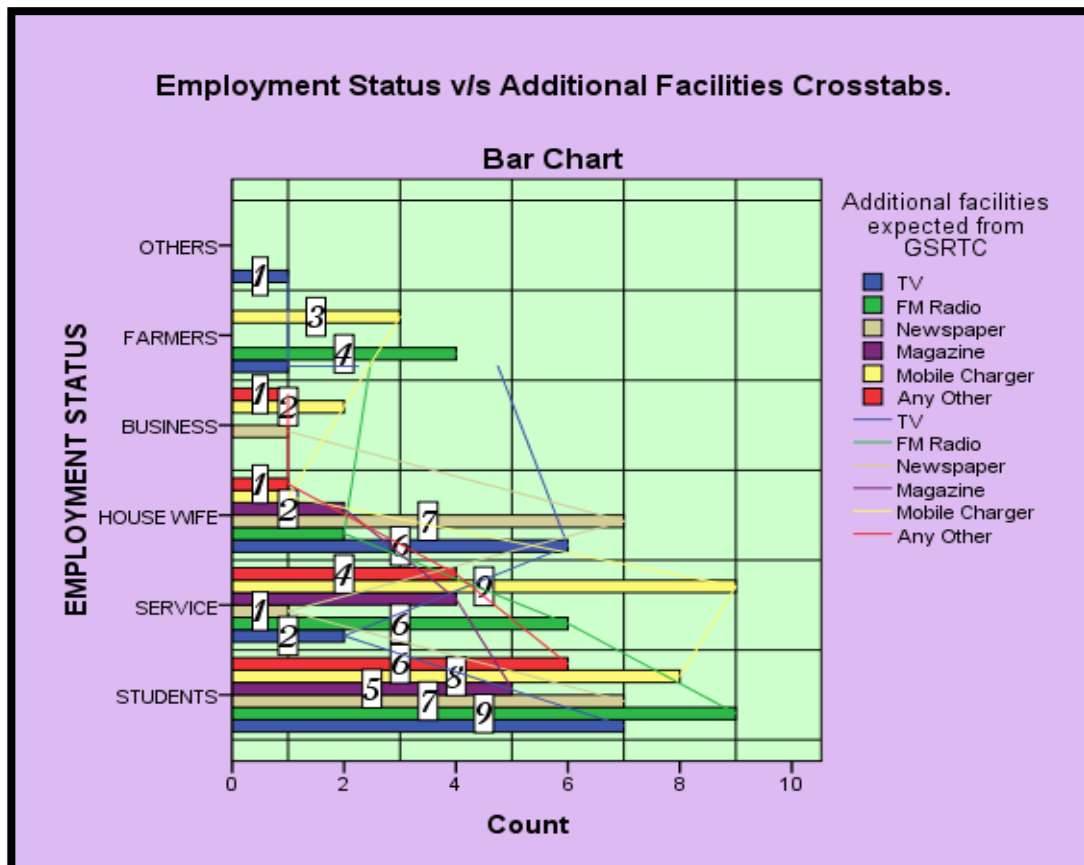
Additional facilities expected from GSRTC : Cross-tabulation

Employment Status		Additional facilities expected from GSRTC						Total	
		TV	FM Radio	Newspaper	Magazine	Mobile Charger	Any Other		
Employment Status	Students	Count	7	9	7	5	8	6	42
		Expected Count	7.1	8.8	6.7	4.6	9.7	5.0	42.0
		% within employment status	16.7%	21.4%	16.7%	11.9%	19.0%	14.3%	100.0%
		% within Additional facilities expected from GSRTC	41.2%	42.9%	43.8%	45.5%	34.8%	50.0%	42.0%
		% of Total	7.0%	9.0%	7.0%	5.0%	8.0%	6.0%	42.0%
	Service	Count	2	6	1	4	9	4	26
		Expected Count	4.4	5.5	4.2	2.9	6.0	3.1	26.0
		% within employment status	7.7%	23.1%	3.8%	15.4%	34.6%	15.4%	100.0%
		% within Additional facilities expected from GSRTC	11.8%	28.6%	6.2%	36.4%	39.1%	33.3%	26.0%
		% of Total	2.0%	6.0%	1.0%	4.0%	9.0%	4.0%	26.0%
	House wife	Count	6	2	7	2	1	1	19
		Expected Count	3.2	4.0	3.0	2.1	4.4	2.3	19.0
% within employment status		31.6%	10.5%	36.8%	10.5%	5.3%	5.3%	100.0%	
% within Additional facilities expected from GSRTC		35.3%	9.5%	43.8%	18.2%	4.3%	8.3%	19.0%	
% of Total		6.0%	2.0%	7.0%	2.0%	1.0%	1.0%	19.0%	
Business	Count	0	0	1	0	2	1	4	
	Expected Count	.7	.8	.6	.4	.9	.5	4.0	
	% within employment status	.0%	.0%	25.0%	.0%	50.0%	25.0%	100.0%	
	% within Additional facilities expected from GSRTC	.0%	.0%	6.2%	.0%	8.7%	8.3%	4.0%	
	% of Total	.0%	.0%	1.0%	.0%	2.0%	1.0%	4.0%	
Farmers	Count	1	4	0	0	3	0	8	
	Expected Count	1.4	1.7	1.3	.9	1.8	1.0	8.0	
	% within employment status	12.5%	50.0%	.0%	.0%	37.5%	.0%	100.0%	
	% within Additional facilities expected from GSRTC	5.9%	19.0%	.0%	.0%	13.0%	.0%	8.0%	
	% of Total	1.0%	4.0%	.0%	.0%	3.0%	.0%	8.0%	
Others	Count	1	0	0	0	0	0	1	
	Expected Count	.2	.2	.2	.1	.2	.1	1.0	
	% within employment status	100.0%	.0%	.0%	.0%	.0%	.0%	100.0%	

Total	% within Additional facilities expected from GSRTC	5.9%	.0%	.0%	.0%	.0%	.0%	1.0%
	% of Total	1.0%	.0%	.0%	.0%	.0%	.0%	1.0%
	Count	17	21	16	11	23	12	100
	Expected Count	17.0	21.0	16.0	11.0	23.0	12.0	100.0
	% within employment status	17.0%	21.0%	16.0%	11.0%	23.0%	12.0%	100.0%
	% within Additional facilities expected from GSRTC	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	% of Total	17.0%	21.0%	16.0%	11.0%	23.0%	12.0%	100.0%



Graph-1.3



Interpretation: The above table-1.6 and Graph-1.3 represent the Cross tabulation between employment status and additional facilities expected by the passengers' while travelling. Here the researcher has tried to know the opinion of various passengers' in the context of Television, FM Radio, Newspaper, Magazines, Mobile Charger and others. So from the analysis it is clear that out of total population of 100 respondents 23 are in favor of Mobile Charger facilities, second highest is FM radio facilities i.e. 21 respondents. Third priority goes to TV i.e. 17 respondents. While remaining is newspaper, magazines and other category. So it can be stated that the management of GSRTC should look into this matter and try to provide all these requirements of passengers'. So satisfaction of all these can be a best strategy to give competition to rivals to some extent.

Analysis of Variance (ANOVA).

The main objective of the study was to assess the level of satisfaction of passengers using GSRTC services particularly from Baroda region. The study adapted the questions for Service Quality Dimensions in the Questionnaire from the work of Park (2007). The study was designed to determine satisfaction with respect to service quality and also to find the difference between demographic factors and satisfaction.

The researcher adopted **Convenience Sampling** which refers to sampling procedures to obtain those units or people most conveniently available (Cooper and Schindler, 2008). The samples were collected from different areas and Baroda bus stand.

For the hypothesis testing, **Multiple Regression** was used to assess the impact of Service Quality dimensions on passengers' satisfaction and **ANOVA was tested for the demographic factors to determine the difference between demographic factor and passengers' satisfaction.** Analysis of variance (abbreviated as ANOVA) is an extremely useful technique concerning researchers in the field of economics, biology, education, sociology, business/industry and in researches of several other disciplines. This technique is used when multiple sample cases are involved. The significance of difference between the mean of two samples can be judged through either Z-test or the T-test, but the difficulty arises when it happens to examine the significance of the difference amongst more than two sample means at the same time. Researchers quite utilize the ANOVA techniques and through it investigate the difference among the means of all the populations simultaneously.

H₀₁: There is no impact of Reliability on passengers' satisfaction:

Reliability		Sum of Squares	df	Mean Square	F	Sig./P Value.
Maintaining Departure Time	Between Groups	3.078	4	.770	.744	.564
	Within Groups	98.232	95	1.034		
	Total	101.310	99			
Maintaining Arrival Time	Between Groups	7.361	4	1.840	3.577	.009
	Within Groups	48.879	95	.515		
	Total	56.240	99			
Operating Regular Bus Services	Between Groups	3.219	4	.805	.912	.460
	Within Groups	83.821	95	.882		
	Total	87.040	99			
Capacity of employees to handle problems like breakdown during journey	Between Groups	4.225	4	1.056	1.478	.215
	Within Groups	67.885	95	.715		
	Total	72.110	99			
Interest shown by GSRTC in solving passengers' problems.	Between Groups	8.079	4	2.020	1.829	.130
	Within Groups	104.921	95	1.104		
	Total	113.000	99			
Maintaining Journey Time	Between Groups	3.609	4	.902	.730	.574
	Within Groups	117.431	95	1.236		
	Total	121.040	99			

Interpretation: Reliability ANOVA tests.

Table-1.8

SR. NO	SERVQUAL variables	Status of Values (Comparison of Sign./P value with 0.05)	Measurement of Significance.	Hypothesis Accepted or Rejected
1	Maintaining Departure Time	0.564>0.05	There is no significance difference between variables.	Accept
2	Maintaining Arrival Time	0.009<0.05	There is significance difference between variables.	Reject
3	Operating Regular Bus Services.	0.460>0.05	There is no significance difference between variables.	Accept
4	Capacity of employees to handle problems like breakdown during journey.	0.215>0.05	There is no significance difference between variables.	Accept
5	Interest shown by GSRTC in solving passengers' problems.	0.130>0.05	There is no significance difference between variables.	Accept
6	Maintaining Journey Time.	0.574>0.05	There is no significance difference between variables.	Accept

The result of the ANOVA are presented in an ANOVA table-1.8, which has column labeled Sum of Square (sometimes referred to as SS), df (Degree of Freedom), Mean Square (sometimes referred to as MS), F (for F-ratio), and Sig. The only column that is critical for interpretation is the last (Sig.). The others are used mainly for intermediate computational purpose. The researcher would most probably first look at the exact significance level value of ".000" located under the "Sig." column.

Of all the information presented in the ANOVA table-1.10, the major interest of the researcher will most likely be focused on the value located in the Sig. if the number (numbers) found in this column is (are) less than the critical value of alpha (α) set by the experimenter, then the effect is said to be significant. Since this value is usually set at 0.05, any value less than this will result in significant effects, while any other value greater than this value will result in non significant effects.

H₀₂: There is no impact of responsiveness on passengers' satisfaction.

F (4, 95) = 1.86 respective in all cases. P = 0.123, respective in all cases

Table- 1.9

ANOVA

Responsiveness		Sum of Squares	df	Mean Square	F	Sig./P Value
Co-operation from drivers and conductor at times of Personal problem during journey	Between Groups	6.618	4	1.655	1.864	.123
	Within Groups	84.342	95	.888		
	Total	90.960	99			
Response of employees to problems of children, women ,seniors and handicapped	Between Groups	19.702	4	4.925	5.139	.001
	Within Groups	91.048	95	.958		
	Total	110.750	99			
Arrangement of alternative made quickly when there is excessive demand	Between Groups	15.462	4	3.865	4.033	.005
	Within Groups	91.048	95	.958		
	Total	106.510	99			
Informs changes in service like timing of arrival, departure and cancellation	Between Groups	11.229	4	2.807	2.195	.075
	Within Groups	121.521	95	1.279		
	Total	132.750	99			
Employee's readiness to serve passengers	Between Groups	40.793	4	10.198	8.093	.000
	Within Groups	119.717	95	1.260		
	Total	160.510	99			
Knowledge of employees regarding information of GSRTC services	Between Groups	5.656	4	1.414	1.508	.206
	Within Groups	89.104	95	.938		
	Total	94.760	99			

Interpretation:The above one way ANOVA test describes the following results.

Table-1.10

SR.No	SERVQUAL variables	Status of Values (Comparison of Sign./P Value V/s 0.05)	Measurement of Significance.	Hypothesis Accepted or Rejected
1.	Co-operation from drivers and conductor at times of Personal problem during journey	0.123>0.05	There is no significance difference between variables.	Accept
2.	Response of employees to problems of children, women ,seniors and handicapped	0.001<0.05	There is significance difference between variables.	Reject
3.	Arrangement of alternative made quickly when there is excessive demand	0.005<0.05	There is significance difference between variables.	Reject
4.	Informs changes in service like timing of arrival, departure and cancellation	0.075>0.05	There is no significance difference between variables.	Accept
5.	Employee's readiness to serve passengers	0.000<0.05	There is significance difference between variables.	Reject
6.	Knowledge of employees regarding information of GSRTC services	0.206>0.05	There is no significance difference between variables.	Accept

The above table-1.10 shows the measurement of different responsiveness variables and ANOVA test. So the researcher has analysed different Variables and on the basis of that derived values like Sum of Square, Degree of Freedom, Mean Square, F-Value and lastly significance Value @5 percentages and on the basis of that, the decision has been taken to accept or reject the hypothesis.

M = 4.00, S.D = 1.414 Values of M and SD different in each case of responsiveness. Consider the higher value of Mean

Table-1.11 Descriptive

		N	Mean	S.D	Std. Error	95% Confidence Interval for Mean		Min	Max
						Lower Bound	Upper Bound		
Co-operation from drivers and conductor at times of Personal problem during journey	Highly satisfied	2	4.00	1.414	1.000	-8.71	16.71	3	5
	Satisfied	46	2.46	.936	.138	2.18	2.73	1	4
	Neutral	36	2.50	.971	.162	2.17	2.83	1	5
	Dissatisfied	14	2.43	.852	.228	1.94	2.92	1	4
	Highly dissatisfied	2	1.50	.707	.500	-4.85	7.85	1	2
	Total	100	2.48	.959	.096	2.29	2.67	1	5
Response of employees to problems of children, women ,seniors and handicapped	Highly satisfied	2	1.50	.707	.500	-4.85	7.85	1	2
	Satisfied	46	2.26	1.124	.166	1.93	2.59	1	5
	Neutral	36	3.08	.937	.156	2.77	3.40	2	5
	Dissatisfied	14	3.07	.475	.127	2.80	3.35	2	4
	Highly dissatisfied	2	2.00	.000	.000	2.00	2.00	2	2
	Total	100	2.65	1.058	.106	2.44	2.86	1	5
Arrangement of alternative made quickly when there is excessive demand	Highly satisfied	2	3.00	2.828	2.000	-22.41	28.41	1	5
	Satisfied	46	3.26	.743	.110	3.04	3.48	2	5
	Neutral	36	2.42	1.105	.184	2.04	2.79	1	5
	Dissatisfied	14	3.07	1.072	.286	2.45	3.69	1	4
	Highly dissatisfied	2	3.50	.707	.500	-2.85	9.85	3	4
	Total	100	2.93	1.037	.104	2.72	3.14	1	5
Informs changes in service like timing of arrival, departure and cancellation	Highly satisfied	2	2.50	.707	.500	-3.85	8.85	2	3
	Satisfied	46	2.67	1.399	.206	2.26	3.09	1	5
	Neutral	36	3.39	.871	.145	3.09	3.68	2	5
	Dissatisfied	14	2.79	.699	.187	2.38	3.19	2	4
	Highly dissatisfied	2	3.00	.000	.000	3.00	3.00	3	3
	Total	100	2.95	1.158	.116	2.72	3.18	1	5
Employee's readiness to serve passengers	Highly satisfied	2	1.50	.707	.500	-4.85	7.85	1	2
	Satisfied	46	2.37	1.082	.160	2.05	2.69	1	5
	Neutral	36	3.33	1.146	.191	2.95	3.72	1	5
	Dissatisfied	14	4.00	1.109	.296	3.36	4.64	2	5
	Highly dissatisfied	2	2.50	2.121	1.500	-16.56	21.56	1	4
	Total	100	2.93	1.273	.127	2.68	3.18	1	5
Knowledge of employees regarding information of GSRTC services	Highly satisfied	2	1.50	.707	.500	-4.85	7.85	1	2
	Satisfied	46	2.74	.743	.110	2.52	2.96	1	5
	Neutral	36	2.86	1.222	.204	2.45	3.27	1	5
	Dissatisfied	14	3.07	.917	.245	2.54	3.60	2	4
	Highly dissatisfied	2	3.50	.707	.500	-2.85	9.85	3	4
	Total	100	2.82	.978	.098	2.63	3.01	1	5

Passengers' satisfaction differed significantly among the different variables of SERVQUAL which is presented in the above. In case of first variable the M= 4 means the co-operation from drivers and conductors is highly satisfactory. Second variables response of employees to children, women and handicapped M = 3.07 i.e. dissatisfied, Third variable arrangement of alternative made easy when there is excess demand, M = 3.26 i.e. passengers' are satisfied. Fourth variable inform changes like timing of arrival, departure, cancellation M

= 3.00 that is passengers shows highly dissatisfaction, fifth variable employees readiness to serve passengers' M = 4.00 dissatisfied. Lastly knowledge of employees regarding services of GSRTC, M = 3.07 dissatisfied.

“Post hoc comparisons using the Turkey HSD test indicated that the Mean score for the different variables of responsiveness is different.

RELIABILITY TEST (ANALYSIS): Cronbach’s Alpha (a) using SPSS.

Note: Value of 0.7 to 0.8 is an acceptable value for Cronbach’s alpha: values substantially lower indicate an unreliable scale – Dr. Andy Field.

Cronbach’s Alpha is the most common measure of internal consistency (“reliability”). It is most commonly used when you have multiple Likert questions in a survey / questionnaire that form a scale and researcher wish to determine if the scale is reliable.

Here the researcher has calculated the Cronbach’s Alpha in case of assurance factor of SERVQUAL model. The results are shown in the table-5.14.

H₀₄ : There is no significance impact of assurance on passengers’ satisfaction.

RELIABILITY TEST IN CASE OF ASSURANCE:

0.632 < 0.7	The value of Cronbach’s Alpha is nearer to standard value i.e. 0.7 so there is Moderate level of “Internal Consistency”.
-----------------------	--

Table-1.12 Reliability Statistics (Assurance).

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.632	.678	2

Interpretation: we can see that Cronbach’s Alpha is 0.632 in table-1.12 which indicates a good level of internal consistency for our scale with specific sample.

Table-1.13 Inter-Item Correlation Matrix

Assurance	GSRTC ensures safe journey	Consistency in providing services
GSRTC ensures safe journey	1.000	.513
Consistency in providing services	.513	1.000

(Note: Pearson Correlation- these numbers measure the strength and directions of the linear relationship between the two variables. The correlation coefficient can range from -1 to +1, with -1 indicting a perfect negative correlation, +1 indicating a perfect positive correlation, and 0 indicating no correlation at all (a variable correlated with itself will always have a correlation coefficient of 1). From the scatter plot of the above variables, we can see that the points tend along a line going from the bottom left to the upper right, which is the same as saying that the correlation is positive.)

Interpretation: The above Inter Correlation Matrix indicates the value of two important factors of assurance that is 1. GSRTC ensure safe journey. 2. Consistency in providing services. So from above table it can be analysed that in both first case value 1 and second is 0.513 so both values are positive. Moreover with face to face interaction with the passengers’ it is found that/ or majority of GSRTC maintain safe journey for passengers’. And it also provides consistency in providing services. GSRTC is considered as backbone for public transport in the state. With more than 8000 buses it possess highest passengers base.

RELIABILITY TEST IN CASE OF EMPATHY:

H₀₅ : There is no significance impact of empathy on passengers' satisfaction.

Table-1.14 Reliability Statistics (Empathy)

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.744	.744	3

.744 > 0.7	The value of Cronbach's Alpha is greater than standard value i.e. 0.7 so there is greater level of "Internal Consistency".
----------------------	--

Interpretation: In the above table -1.14 Cronbach's Alpha Value is 0.744, (note that a reliability coefficient of 0.70 or higher is considered "acceptable" in most social science situations) or so as per the opinion of the Dr. Andy Field if the value is more than 0.70, which indicates a higher level on internal consistency for our scale of Empathy factor of SERVQUAL model.

Conclusion: In this research paper the researcher has tries to know the behaviour of various ST user in the context of considering various factors like maintaining departure time, maintaining arrival time, operating regular bus services, Capacity of employees to handle problems like breakdown during journey, Interest shown by GSRTC in solving passengers' problems, Maintaining Journey Time. Moreover various research tools and techniques are applied for the purpose of its measurement and reliability is measured.

Reference:

- 1) Gujarat State Road Transport Corporation. (April 20, 2015) retrieved from <http://www.gsrtc.in/site/aboutus.html>.
- 2) New Districts and Taluka of Gujarat. (April 19, 2015) retrieved from <http://www.updatesmarugujarat.in/2013/new-districts-and-talukas-of-gujarat.html>.
- 3) Only three out of 55 state transport undertakings making profits (July 29,2014) retrieved from <http://timesofindia.indiatimes.com/india/Only-3-out-of-55-state-transport-undertaking-making-profit/articleshow/17880689.cms>
- 4) GSRTC to launch two new services. (June 7, 2014 1.14 PM) retrieved from <http://indianexpress.com/news/gsrct-to-launch-two-new-services>).
- 5) Servqual Model His Advantages And Disadvantages Marketing Essay (November7, 2014, 5.38 PM) retrieved from <http://www.ukessays/marketing/Servqual-model-his-advantages>.
- 6) What is hypothesis? (January 7, 2014 4.52 PM) retrieved from <http://www.businessdictionary.com/definition/hypothesis.html>.
- 7) Types of research hypothesis (January 7, 2014 4.56 PM) retrieved from http://www.ehow.com/info_8659964_types-research-hypotheses.html.
- 8) The Visual Statistics System (January 7, 2014 4.12 PM) retrieved from <http://www.forrest.psych.unc.edu/research/vista-frames/help/lecturenotes>.
- 9) Vadodara Bus Terminal (September 16, 2015) retrieved from http://www.business-standard.com/article/companies/vadodara-bus-terminal-punches-above-its-weight-114021401450_1.html
- 10) 110 crore Bus Terminal to be inaugurated by Narendra Modi (February 13, 2014 14.07IST)<http://ndtv.com/cities/vadodara-110-crore-bus-terminal-to-be-inaugurated-by-narendra-modi-tomorrow-550596>.

- 11) Customer Complaints and Reviews (June 17,2015) retrieved from <http://www.complaintboard.in/complaints-reviews/gstrtc-1104566.html>
- 12) The free Encyclopedia, retrieved from September 19, 2015) http://en.wikipedia.org/wiki/Gujarat_State_Road_Transport_Corporation
- 13) Thakkar, Mitul (July, 2005). "GSRTC to launch online tickets booking" (http://www.business-standard.com/article/Economy-Policy/GSRTC-to-launch-online-ticket-booking-105072001093_1.html). Business Standard, Ahmedabad. Retrieved February 15, 2013.
- 14) "GSRTC bags national award for fuel economy" <http://articles.timesofindia.indiatimes.com/2008-10-20-ahmedabad/27941773>. The times of india. Retrieved February 15, 2003.

- 15) Aleeswari, M. (april 2012). *A study on service quality and passengers attitude towards public transport in dindigul district*. Manonmanam Sundaranar University, department of business management. Shodhganga.inflibnet.ac.in
- 16) Gajendran, A. (11 aug 2015). *A comparative study on passengers satisfaction between public sector and private sector bus transport service industries in Tamilnadu*. Dr.M.G.R Educational and Research Institute, Department of management studies. Shodhganga.inflibnet.ac.in
- 17) R, B. (1april, 1993). *A study of passengers satisfaction with the performance of rural transport services by anna transport corporation salem*. Periyar University, Department of Commerce. Shodhganga.inflibnet.ac.in
- 18) S, A. P. (2001). *Public passengers bus transport industry in Tamilnadu_a performance evaluation*. Manonmaniam Sundaranar University, department of commerce. Shodhganga.inflibnet.ac.in
- 19) More, C. N. (26 april 2012). *Private passenger transport in rural Kolhapur*. department of Economics. Shodhganga.inflibnet.ac.in
- 20) Transport, C. I. (february 2012). *Service Quality Management for RSRTC operations*. Pune: CIRT. Pg-2-85.
- 21) Central Institute of Road Transport (draft final report February, 2012). *Service*
- 22) *Quality Management For RSRTC Operations*, Pune, annexure 3.2. Performa for passenger opinion survey, pp 84-85.
- 23) Indian Journal of Transport Management, (October-December 2013). Volume 37 Number 4, ISSN 0972-5695, pp 247-306.