

# Variables of Service Quality Facilitating Client Contentment in Indian Bike Industries

Mohd Talha Khan



**Abstract:** Clients of automotive service industries are always anxious for after sales service. The objective of this research is to determine the association of variables of service quality and client contentment in bike industries. The information was gathered using convenience sampling technique from 150 users of bike industries in the form of questionnaire developed using SERVQUAL model. The important variables were extracted utilizing exploratory factor analysis. Hypothesis of the research was analyzed using multiple regression analysis and ANOVA. The results of the research revealed that the variables reliability, empathy, responsiveness, assurance, accessibility and convenience are found statistically significant to determine customer contentment whereas tangibility is not found significant to determine customer contentment and findings indicate that management have to focus on attributes like interest in solving clients' problem, clients' question to be answered timely by staff, trust in you to be inculcated by staff, individual consideration by staff and stopping region.

**Keywords:** Bike Industries, Client Contentment, Factor Analysis, Regression Analysis, Service Quality .

## I. INTRODUCTION

Today in the realm of worldwide rivalry in the market, offering quality in service is a key achievement in any organisation. 1980s onwards service quality is connected with increment in organization's pay and it is viewed as giving a significant upper hand by producing rehash deals, positive verbal correspondence [1]. The size of service division has been expanded in practically all economies around the globe. There are tremendous universal organizations working in ventures, for example, banking, lodgings, aircrafts, media communications and protections and privately claimed, worked independent ventures, for example, eateries, automotive service centers and so on. The service division is experiencing progressive change and service overwhelmed economy has occurred with time according to capita salary rises [2]. The most significant characteristic that separates contenders is the nature of service delivered to the customers which is by limiting the gap between the clients' desires and observations. The initial phase in conveying quality service to the customers is that the service organisations should be versatile to the client needs [3].

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## A. Service Quality Model

The service quality in service divisions is normally estimated utilizing a SERVQUAL model created by [4], [5]. which contains 22 items for assessing client's desires and observations about the nature of service. The SERVQUAL model depends on five service quality measurements: **Tangibles** (physical offices, gear and staff appearance), **Reliability** (capacity to play out the guaranteed service constantly and precisely), **Responsiveness** (readiness to support clients and offer brief assistance), **Assurance** (information and obligingness of workers and their capacity to pick up trust and certainty) and **Empathy** (giving individualized thoughtfulness regarding the clients). These items can be modified according to the researchers' choice of measuring service quality in a particular service sector [6].

## B. Problem Statement

Analysts have done examinations in regards to support service quality estimation in a wide assortment of businesses such as hotel, health, public transport, telecommunication, banking, information system, higher education, and restaurant industry [2], [7].

These constrained examines infer that there are a larger number of inquiries than answers on service quality and client contentment in automotive service division. Today, the Indian automotive industry is one of the biggest modern divisions in India's monetary improvement with a yearly creation of complete 30,915,420 vehicles during April-March 2019. Besides, it utilizes in excess of 19 million individuals legitimately and in a roundabout way [8].

The Indian automotive clients are very much aware of worldwide markets and items today and consequently anticipate similar degrees of value in items and administrations. The wide scope of models and variations in offer, with little separation among items and inside a similar cost urges clients to change starting with one brand then onto the next effectively [9].

Due to serious rivalry in the vehicle business, guarded systems to hold existing clients and to fabricate long haul relationship with them have become normal business strategies. The intensity, globalization and quest for separation have called for more consideration towards client contentment [10].

This study aims at determining the relation between variables of service quality and client contentment in bike industries. This will expand the information and comprehension about the service quality that is being given by bike industries these days.



## C. Research Objectives

To achieve the association between variables of service quality and client contentment, investigation is intended to address the accompanying goals:

- Extracting the important variables using exploratory factor analysis technique for bike industries on the basis of responses obtained from the clients.
- Obtain regression model for bike industries to examine the association between extracted variables and client contentment.
- Hypothesis developed in the research to be tested which are as follows:

H1: Significant connection between client contentment and reliability in bike industries.

H2: Significant connection between client contentment and empathy in bike industries.

H3: Significant connection between client contentment and responsiveness in bike industries.

H4: Significant connection between client contentment and tangibility in bike industries.

H5: Significant connection between client contentment and assurance in bike industries.

H6: Significant connection between client contentment and accessibility and convenience in bike industries.

## II. RESEARCH METHODOLOGY

### A. Research Procedure

In this study, the deductive approach will be used as the research problem comes from the existing theories. The study focuses on quantitative analysis since it is suitable to address the exploration questions. The information is gathered in significant urban areas of Uttar Pradesh by method for organized survey. Altogether 150 users were chosen for the examination. Both essential and auxiliary information sources will be utilized to respond to explore questions. Essential information will fundamentally be acquired through directing of polls while auxiliary information sources will be obtained from various journals as discussed in literature review.

### B. Design of Questionnaire

The questionnaire for the survey will comprise of two parts: The initial segment of the survey looks to gauge segment profile of the respondents which incorporates age, level of instruction and calling of respondents. The second piece of the survey is the fundamental part that involves 25 inquiries where initial 24 inquiries are planned for finding the respondents' conclusions relating to the impression of service quality and last inquiries get to the general client contentment in bike industry.

### C. Measures

The SERVQUAL scale developed by [4], [5] is adapted for deciding the association between variables of service quality and client contentment in bike industries. The SERVQUAL model is changed and two additional characteristics (stopping

region and suitable location) are included in the model to cover different parts of bike industries and this further approved the examination instrument. The changed SERVQUAL model includes 24 traits for estimating the real impression of service quality gave by bike industries.

### D. Reliability of Data

The present investigation applied internal consistency strategy on the grounds that different things are utilized for all builds. The Cronbach alpha estimation of at any rate 0.60 is the premise of dependability [11], [12]. A pre-test for reliability is directed by dispersing polls to 15 clients. The cronbach alpha incentive for this test is seen as 0.885 which is well over the cut-off worth.

### E. Statistical Tools for Data Analysis

For extracting the important variables of service quality in bike industry, a 5-point Likert scale is utilized that is a numerical and all the more explicitly, interim scaled information. The information is dissected utilizing SPSS 16 and multiple regression analysis is done to distinguish the critical factors of service quality towards client contentment in bike industries.

## III. RESULTS AND DISCUSSION

### A. Factor Analysis for the Perception Ratings

The system of factor analysis is utilized for the most part for information reduction reasons and is performed by analyzing the example of correlations between the watched measures. Right now, exploratory factor investigation is utilized because interest is in extracting number of factors for given number of attributes. Moreover, to check the adequacy of sample size taken for factor analysis, KMO test is conducted and to see whether there is correlation between two variables or not, Bartlett's test of sphericity is conducted [13].

**Table-I: KMO and Bartlett's test**

<b>Kaiser-Meyer-Olkin measure of sampling adequacy</b>	0.856
<b>Bartlett's test of sphericity</b>	
<b>Sig.</b>	0.000

From Table I, the value of KMO is 0.856 which indicates that sample size for factor examination is important for the investigation and Bartlett's test of sphericity is noteworthy which implies that there is atleast one critical connection between's two factors [14].

Factor loadings acquired by utilizing varimax pivot technique with Kaiser Normalization [13].

Table II reveals the extracted factors, factor loadings of each item, Cronbach's alpha value and average variance extracted in relation to the various factors.

**Table-II: Extracted Factors, Factor Loadings, Cronbach's Alpha and Average Variance Extracted**

DIMENSIONS	ITEMS	FACTOR LOADINGS	CRONBACH'S ALPHA	Average Variance Extracted
RELIABILITY	PERFORMING SERVICE IN THE PROMISED TIME	0.827	0.8	11.79
	SERVICE WITHOUT DELAYS	0.739		
	PERFORMING SERVICE RIGHT THE FIRST TIME	0.709		
	ERROR FREE SERVICE	0.616		
	INTEREST IN SOLVING CUSTOMERS' PROBLEMS	0.534		
EMPATHY	GIVE INDIVIDUAL CONSIDERATION	0.712	0.714	10.695
	STAFF PROVIDES PERSONAL CONSIDERATION	0.669		
	UNDERSTANDING CLIENTS' SPECIFIC NEEDS	0.551		
	CLIENTS' BEST INTEREST AT HEART	0.496		
RESPONSIVENESS	WILLINGNESS TO HELP CLIENTS	0.708	0.72	9.825
	SERVICE STAFF PROVIDES PROMPT SERVICE	0.683		
	TELL CLIENTS EXACTLY WHEN SERVICE WILL BE PERFORMED	0.614		
	STAFF HAS TIME TO ANSWER CLIENTS' QUESTIONS	0.57		
TANGIBILITY	MODERN EQUIPMENTS	0.702	0.658	9.144
	Outwardly Appealing Materials	0.702		
	Outwardly Appealing Physical Facilities	0.633		
	Sharp looking And Neat Appearing Reception Desk Staff	0.406		
Assurance	Gracious Service Staff	0.801	0.659	8.758
	Service Staff Has Knowledge To Answer Questions	0.63		
	Have a sense of security And Secure In Your Transaction	0.589		
	Staff Inculcate Confidence In You	0.484		
Accessibility and Convenience	Stopping Region	0.762	0.462	6.252
	Suitable Location	0.687		
	Convenient Opening Hours	0.406		

## Variables of Service Quality Facilitating Client Contentment in Indian Bike Industries

The exploratory factor examination extricated six factors, which represented for 56.465 percent of the variance in the information as appeared in table II. The reliability coefficients for reliability dimension is 0.800, for empathy dimension is 0.714, for responsiveness dimension is 0.720, for tangibility dimension is 0.658, for assurance dimension is 0.659 and for accessibility and convenience dimension is 0.462 which is the only dimension whose worth is underneath the cut off estimation of 0.60. This is due to lesser number of items in this dimension [6]. The other five factors show Cronbach's alpha worth more prominent than 0.60 which recommend great internal consistency of the components.

Additionally, the Cronbach's alpha incentive for the general discernment scale is found to be 0.877, which indicates its high reliability as discussed in section III. The average variance extracted by each factors are 11.790 (reliability), 10.695 (empathy), 9.825 (responsiveness), 9.144 (tangibility), 8.758 (assurance) and 6.252 (accessibility and convenience) respectively.

### B. Testing of the Hypothesis

$H_0$  : Not a significant connection between client contentment and variables of service quality in bike industries.

Null Hypothesis: Test is not significant

$H_A$ : Significant connection between client contentment and variables of service quality in bike industries.

Alternate Hypothesis: Test is significant

### C. Multiple Linear Regression Analysis Based on Components Related to Extracted Factor

The regression models are based on the following equation:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \dots + \beta_n X_n \quad (1)$$

$\beta_i$  = regression coefficient estimated based on information  
 $X_i$  = independent variable obtained from factor analysis

The assumptions of multiple linear regression analysis are as follows:

- The values of the residuals are normally distributed.

- There is no multicollinearity between variables (no relationship between independent variables).
- The linearity between dependent and independent variables [15].

The regression analysis is done by taking 150 observations obtained from clients of bike industry and the findings of the regression analysis are shown from table III to V. The assumptions for regression analysis are also discussed along with the tables.

**Table-III: Model Summary**

Model	R	R Square	Adjusted R	Std. Error of the Estimate
1	0.859	0.739	0.728	0.40107

Table III shows that value of R (coefficient of correlation) is 0.859 which means that there is significant connection between dependent and independent variable and R Square (coefficient of determination) is 0.739 which means that 73.9 % of the variation of client contentment is explained by these six independent variables. The standard error of the estimate has low value of 0.40107 [7].

**Table-IV: ANOVA**

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	64.997	6	10.833	67.345	0.000
Residual	23.003	143	0.161		
Total	88.000	149			

Table-IV shows that ANOVA is factually noteworthy with p value 0.000. It adds dependability to the regression model [7].

**Table-V: Regression Coefficients**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	VIF
	B	Std. Error	Beta			
(Constant)	-2.010	.288		-6.975	.000	
RELIABILITY	.332	.072	.241	4.610	.000	1.499
EMPATHY	.308	.080	.223	3.851	.000	1.831
RESPONSIVENESS	.400	.074	.293	5.389	.000	1.621
TANGIBILITY	.158	.084	.097	1.889	.061	1.450
ASSURANCE	.277	.080	.180	3.467	.001	1.478
ACCESSIBILITY AND CONVENIENCE	.266	.077	.166	3.468	.001	1.258

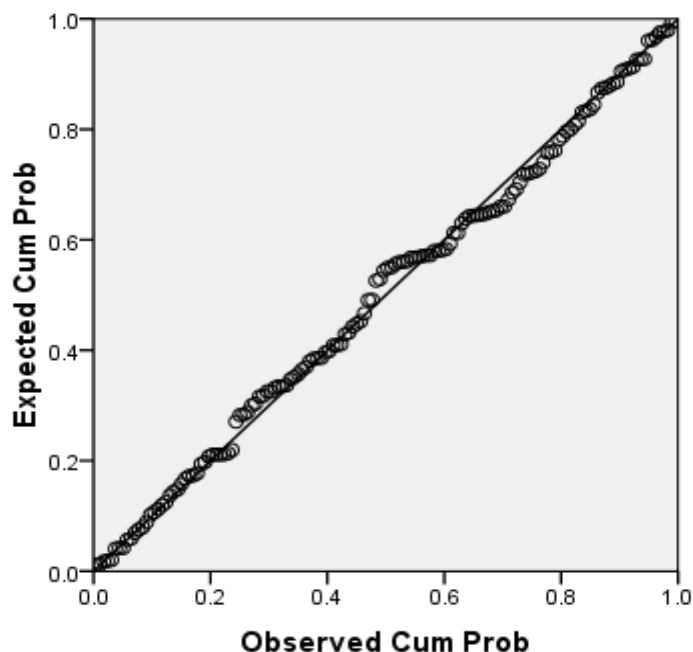
Table-V shows VIF (Variance Inflation Factor) between 1.258 and 1.831 for all the factors which are below 10 [15] and means that there is no problem of multicollinearity. All the factors are found factually significant to determine client contentment aside from the factor named as tangibility with sig. 0.061. The factor responsiveness is the most significant factor to determine customer satisfaction with unstandardised beta value 0.400. The second significant factor is reliability, third significant factor is empathy, fourth significant factor is assurance, fifth significant factor is accessibility and

convenience and least significant factor is tangibility. This shows that hypothesis H1, H2, H3, H5, H6 are accepted whereas hypothesis H4 is rejected.

$$Y \text{ (Client Contentment)} = -2.010 + 0.332 \text{ (Reliability)} + 0.308 \text{ (Empathy)} + 0.400 \text{ (Responsiveness)} + 0.158 \text{ (Tangibility)} + 0.277 \text{ (Assurance)} + 0.266 \text{ (Accessibility and convenience)}$$

The normal P-P plot of regression standardised residual for combined two wheeler industry is shown in Fig. 1.

**Dependent Variable: CUSTOMER SATISFACTION**



**Fig. 1. Normal P-P plot of regression standardised residual for bike industry**

From Fig.1 , it is seen that the data show little deviation from the perfect line and we have a good fit on P-P plot and no major deviations from normality.

**IV. CONCLUSIONS**

The findings of the research showed that dimensions reliability, empathy, responsiveness, assurance and accessibility are found statistically significant to determine customer satisfaction and findings indicate that management have to focus on attributes interest in solving clients’ problem, clients’ question to be answered timely by staff, trust in you to be inculcated by staff, individual consideration by staff and stopping region.

**A. Recommendations**

Following recommendations may be made in the light of conclusion drawn above:

- The problem of spotting region can be reduced either by increasing the space for vehicles parking or by increasing the number of working hours (shifts). Due to space constraint in industries, the problem can be minimised by increasing the shift so that number of customers arriving for service at a time can be reduced.

- The managers and service staffs should be engaged in training courses on regular basis and should be told about the importance of their behavior for the industry to meet their objectives. The performance of managers/service staff should be evaluated and rewards/punishment should be given on the basis of their performance.

- The service centre can acquire the latest technology as and automated plant for washing can be installed which will result in time reduction and quality improvement.

- Moreover, the managers need to optimize the allocation of industry resources by shifting excess resources from the areas of good service quality to the areas of poor service quality.

**B. Directions for Future Research**

- The same research can be done for car industries.
- The results of the study can be used by researchers/investigators and students to conduct similar studies elsewhere.
- The study can be conducted with some other modifications in original SERVQUAL model so as to cover other aspects of the industry.

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