

Research Paper

Study on the Application of “RECSA” Model to Evaluate the Customer Satisfaction towards Call Taxi Services Offered

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ABSTRACT

It's very difficult to measure services than goods due to characteristics of services like intangibility, heterogeneity, and inseparability. There is always demand for travel service since mobility is one of the important aspects for public. In the present economic situations one of the industries that has went through several changes is taxi services. The competition in taxi services is mainly between the local taxi providers and taxi aggregators. Apart from competition, the service providers face fluctuations in prices and other new challenges. In order to this, local taxi service providers are facing threats with the competitors like UBER, OLA, red taxi etc. Nowadays, customers are smart enough that they need high quality products as well as excellent service from them. They are used to practice with famous brands with good status as well as decent services. Hence service quality of taxi services becomes a vital criterion to be analyzed in order to satisfy the customers. In this study the researcher has identified five factors of service quality, and the impact of five factors on customer satisfaction. The primary data was collected in Coimbatore city by using convenient sampling method, at important places in the city like theatre, malls, railway station, airport, hospitals etc. Using path analysis, it was found out that, out of the five factors three factors namely comfort, safety and affordability impacts customer satisfaction significantly.

HIGHLIGHTS

- ① The researcher aims to find out the key factors that influence the customer satisfaction of taxi services.
- ② The study aims to find out the reason for preference of a particular taxi service so that the taxi providers can modify their strategies to attract customers.
- ③ It also helps out to find out entrepreneurial opportunities.

Keywords: Customer satisfaction, OLA, red taxi, regression, taxi service, service quality, and UBER

Consumer satisfaction is one of the key components that has gained huge attention in recent days in taxi services. Every organization considers customer satisfaction as a vital component. There are several reasons that the companies are focusing on customer satisfaction. One is that when the company needs to be successful it focuses on customer satisfaction. To become successful, they need to overcome the competitors, to compete with all rivals and become top in market position they are focused on customer satisfaction. Other reason is that they are

focused on identifying the needs of the customers to manufacture the products to satisfy the customers. Finally, to incur profits it needs to cut down all unnecessary expenses (Shukla *et al.* 2017).

In the context of customer satisfaction offered by service providers, there are various features that determine the quality of the service rendered. These

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features contribute to the service quality in the way highly satisfying, satisfying or dissatisfying the expectations of the customers. Each of these factors may contribute in varying ways and differing degrees to the improvement or deprivation of service quality eventually resulting in customer satisfaction. In this research various parameters of the service quality model for online taxi services are used like timely service, value, billing, neatness of the driver and cab, courtesy by the driver etc. This will benefit the cab companies to find their target group of customers and generate a market penetration strategy before venturing into new markets in India (Sharma and Das, 2017).

Service Quality: The concept of service quality has gain massive interest and also it is in debate in the research literature, the reason is that it is difficult to define and measure service quality (Rexi, 2016). Due to the nature of service quality, there are various views about it by different researchers. Service quality is measure of the degree to which the customer expectations are meet by the particular service as per one of the definitions by Wisniewski and Donnelly, 1996. It can also be defined as the deviation between what the customer expects from a service and what the customer perceives about the service (Parasuraman *et al.* (1985); Anderson, (1994); Wojuade and Badior, (2017)).

Customer dissatisfaction occurs in two situations one in which expectations of the customers are more than performance and the second situation where the perceived quality of service is low when compared to satisfaction from the service. Always there occurs an important question which says that the need for service quality to be measured (Khan *et al.* 2016). Measurement of a service is the difference between before the service is performed and after the service brought out. By using the five factors responsiveness, reliability, tangibles, assurance and empathy the perceptions and expectations of a customer can be analyzed. These five factors are adopted for taxi service as reliability, comfort, extent of service, affordability and safety. With this background objective of the study is (i) to study the demographic profile of the selected customers who use taxi service, (ii) to study the factors that influences the customer satisfaction of taxi service providers and (iii) to study impact of service quality on customer satisfaction of taxi services.

Data and Methodology

The study was done based on descriptive research design method. The primary data was collected from the customers with the help of structured questionnaire. Researcher used five-point Likert scale and of both open-ended questions and closed ended questions were used in the questionnaire. The customers who use taxi services were selected using convenient sampling. The research was conducted within the Coimbatore city, one of the districts of Tamil Nadu, India. The corporation limit of the Coimbatore city was used to collect data. To collect the data important places in the city like Coimbatore airport, Coimbatore railway station, hospitals, malls, theatres are selected. Customers who use all the taxi services are considered for study. The population size is unlimited, because every day there is a change in the number of customers. A pre-defined technique was adopted. The following formula has been used for sample size calculation when estimating proportions;

$$n = Z^2 p q / e^2$$

Where, n = Sample Size; p = The probability value for p is not known, if past information is not available it can be simply set the value of p to 0.5. $q = (1-p) = 0.5$. Z = Confidence level of 90%, with Z value of 95% is 1.645 e = Tolerance level of error is 0.03, i.e., 3% of error is estimated. $n = (1.645)^2 (0.5) (1-0.5) (0.03)^2 = 751$. The total questionnaire of 850 was collected from the respondents out of which 810 is taken for study.

RESULTS AND DISCUSSION

Service Quality Dimensions

The service dimension's reliability, comfort, affordability, safety and extent of service from the model proposed by Goode *et al.* (2005) and Emmanuel Nondzor Horsu (2015) have been taken for the study along with the RATER service quality model.

(A) "RATER" Model and Service Quality Gaps

RATER model helps to analyze the customer expectations from a service and perception about service quality, followed by this the actual gap

between expected performance and perceived performance is sort out. The customer needs and expectations are to be identified by the service provider to reasonably perform the service, followed by this the companies need to deliver and transfer the actual expectation by the customer into the product or service in the entire process. There should be a high degree of inclination between customer’s expectations and provider’s communication as well as by other external factors, which include previous experiences (Khuong and Dai, 2016).

There are several during service delivery which are to be addressed. One of such gaps is that the service provider lacks the understanding of customer expectations. Though the expectations are identified, the provider may lack in the process of converting the needs in requirements of the customer. Even if the service quality characteristics are adequate, the firm may lack in translating it into the product or service. Also, there arises a mismatch between what the firm is able to accomplish and what it is communicated to the customer. The combined gaps in any of these steps will lead to creation of a gap between customer expectations and how they perceive the firm performance.

(B) The Gap in Management Perception

The gap between what a customer expects and understanding of those expectations by management can rise due to inadequate market research or management that is too far detached from front line customer communication.

(C) The Gap in Quality Specification

The gap between knowledge of customer expectations by the management and the service quality specifications of the firm can arise due to a lack of standardization, inadequate planning or a absence of commitment to service quality.

(D) The Gap in Service Delivery

There are several reasons like deficiency in teamwork and cooperation, low empowerment, inability to meet the demand there arises a gap between service delivery and service quality standards.

(E) The Gap in Marketing Communication

Lack of proper communication between service

delivery and sales and inability to bridge the gap between service delivery and customer expectations can eventually lead to low service quality

(F) The Gap in Perceived Service Quality

Along with all the four gaps another aspect which is previous experience by the customer about the service can rise to the overall gap between perceived level of service and expectation about the service

Percentage analysis

Table 1: Personal details of the Respondents

Variables	Options	Respondents	Percentage
Gender	Male	415	51.2
	Female	387	47.8
	Transgender	8	1
Age	Below 20 years	125	15.4
	21-30 years	166	20.5
	31-40 years	123	15.2
	41-50 years	136	16.8
	51-60 years	117	14.4
Marital status	Above 60 years	143	17.7
	Married	532	65.6
	Unmarried	278	34.3

From the table 1 it is interpreted that out of 810 respondents, 51% of the respondents are male and 48% of them are female and 1% of the respondents are transgender, 15% of the respondents come under the age group below 20 years, 20% of them belong to 20-30 years, 15 % of belong to 31-40 years, 17% of the them belong to 41-50 years and 14% of the respondents come under the age group between 51-60 years and 17% of the respondents fall between the age group above 60 years. Out of these respondents 66% are married and 34% are unmarried. It is clear from the table greater number of respondents fall between of 20 years to 30 years of age group when compared to other age group

The table 2 showcased the occupation of the respondents. Salaried persons contributing to 39% of the total, followed by business persons with 20% and 12% of the respondents are students. It is clear from the table that a greater number of the passengers are salaried persons when compared to other occupation. The salaried persons include both government and private sectors.

Table 2: Occupation of the Respondents

Variable	Group	Respondents	Percentage
Occupation	Salaried	315	38.9
	Business	158	19.5
	Retired	75	9.3
	Student	96	11.9
	Agriculture	90	11.1
	Home maker	59	7.3
	Others	17	2.1

The table 3 shows the taxi service preferred by the respondents. Out of 810 respondents, 22% of the respondents preferred to use red taxi whereas 21% of them preferred Ola. Out of OLA and UBER, Red Taxi had the major share of the respondents who are willing to ride. Local taxi providers who are willing to use contribute about 14% who prefer to use. It shows that customers are willing to use red taxi equally compared to OLA and UBER in Coimbatore District. It also inferred from the table that 14% of the customers prefer to use taxi service by local taxi service providers, whereby there is opportunity for opportunity for entrepreneurs to start taxi service business.

Table 3: Taxi Service Preferred by the Respondents

Variable	Options	Respondents	Percentage
Taxi Preferences	OLA	172	21.2
	UBER	148	18.3
	Red Taxi	177	21.9
	Fast Track	95	11.7
	Go Taxi	102	12.6
	Local Taxi providers	116	14.3

The table 4 shows the method of booking taxi by the respondents. Out of 810 40.2% of respondents book taxi using app provided by taxi service providers.

Table 4: Method of Booking Taxi by the Respondents

Method of booking	Frequency	Percent
Using taxi company website	47	5.8
Using mobile app	326	40.2
Hail the taxi on the street	19	2.3
Telephone booking	391	48.3
Call the driver directly	23	2.8
Others	4	.5
Total	810	100.0

There are 48.3% of respondents who book the taxi using telephone booking provided by service providers. 2.8% of the respondents call the driver directly to book taxi. There are 0.5% of respondents who book taxi through other means like it may be referring other persons to book taxi for them. It shows that majority of the respondent's book taxi through telephone booking which is 48.3%.

Table 5: Purpose of Booking Taxi by the Respondents

Purpose of booking	Frequency	Percent
Go to office/School or college	129	15.9
Business purpose	146	18.0
To Airport / Railway station	169	20.9
Visit friends/relatives	85	10.5
Holiday travel	84	10.4
Shopping / Theatre	111	13.7
Medical purpose	79	9.8
Others	7	.9
Total	810	100.0

The table 5 shows the purpose of booking taxi by the respondents. Out of 810 samples 15.9% of respondents book taxi for going to office/school or college. For business purposes 18% of the respondent's book taxi. The percentage of respondent's book taxi to go to airport or railway station is 20.9%. To visit friends or relatives 10.5% of respondents book taxi. 10.4% of respondents book taxi for holiday travel. 13.7% of respondents book taxi for shopping. The percentage of respondents who book taxi for medical purpose is 9.8%. For going to school or college 9% of respondents book taxi. 2% of respondents book taxi for other purposes. It shows that majority of respondent's book for moving to railway station or airport which is 20.9%.

Chi square test

Table 6: Association between the Occupation and Preference Taxi Service

	Chi-Square Tests		
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	70.018 ^a	30	.000***
Likelihood Ratio	66.555	30	.000
N of Valid Cases	810		

*Source: Primary Data; ***Significant at 1% level.*

H0 - There is no significant association between occupation and taxi preference

The table 6 shows that the result of chi-square test which was used to identify the association occupation and taxi prefer to use. From the results can be observed that the significant value is .000 which is less than .05 indicating that the results were statistically significant. There is significant association between occupation and taxi preference.

Table 7: Association between Preference of Taxi Service and Purpose of Booking Taxi

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	57.906 ^a	35	.009 ^{***}
Likelihood Ratio	57.962	35	.009
N of Valid Cases	810		

Source: Primary Data; ***Significant at 1% level

H0 - There is no significant association between taxi preference and method of booking taxi.

The table 7 shows that the result of chi-square test which was used to identify the association between taxi preference and the purpose of booking. From the results it can be observed that the significant value is .000 which is less than .05 indicating that the results were statistically significant. There is a significant association between taxi preference and purpose of booking

ANNOVA

Table 8: Frequency of Taxi usage by the Respondents

		Sum of Squares	Df	Mean Square	F	Sig.
Satisfaction	Between Groups	2.581	4	.645	1.105	.353
	Within Groups	470.168	806	.584		

H0 - Mean score of customer satisfaction do not differ significantly with frequency of usage.

From the table 8 it is inferred the significant value is 0.353 which is more than 0.05, hence null hypothesis is rejected. It can be inferred that customer satisfaction differ significantly with frequency of usage of taxi.

From the table 9 it is inferred the significant value is 0.798 which is more than 0.05, hence null hypothesis is rejected. It is inferred that customer satisfaction differ significantly with purpose of booking taxi.

Table 9: Purpose of Booking Taxi by the Respondents

		Sum of Squares	df	Mean Square	F	Sig.
Satisfaction	Between Groups	1.381	5	.276	.471	.798
	Within Groups	471.369	806	.586		

H0 - Mean score of customer satisfaction do not differ significantly with method of booking taxi.

Path Diagram

Two or more casual models are compared using a path analysis model from the correlation matrix. A square and an arrow depict the model’s direction, indicating causation. The model determines the weight of regression. The goodness of fit metric is then computed to determine how well the model fits.

Path model: The independent, intermediate, and dependent variables are depicted in this diagram. The cause of the independent, intermediate, and dependent variables is shown by a single-headed arrow. The covariance between the two variables is represented by a double-headed arrow.

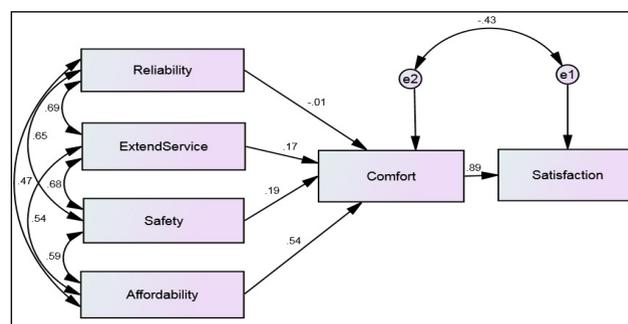


Fig. 1: Path diagram for Service Quality Factors

Dependent variable : Satisfaction

Independent variables: Reliability, Extent of service, Safety and Affordability

Intermediate variable: Comfort

Source: Primary Data

From the path diagram it is inferred that comfort has a direct effect on customer satisfaction. Where as the other variables reliability, extent of service, safety and affordability has an indirect effect on customer satisfaction. Reliability, extent of service, safety and affordability have a direct effect on intermediate variable comfort. The regression coefficients for each factor are positive apart from

reliability which is negative value. Comfort has the maximum coefficient value which is 0.89 hence it has a direct impact on customer satisfaction. Hence all the factors have an impact on customer satisfaction. Other factors affordability, safety, extent of service and reliability has the values 0.54, 0.19, 0.17 and -0.1 respectively. Hence, affordability has more effect on intermediate variable comfort followed by safety. Extent of service has less effect and reliability having negative impact. The double-headed arrows between the factors reliability, extent of service, safety and affordability denote that there is positive covariance among the factors. The covariance among the factors are 0.59, 0.47, 0.54, 0.68, 0.65, 0.69 which indicates there exist a positive correlation among these factors and the correlation is significant. Hence all the factors have an impact on customer satisfaction with comfort having direct impact followed by safety and affordability having indirect impact

Table 10: Goodness of Fit

Model	RMR	GFI	AGFI	PGFI
Default model	.004	.996	.973	.142
Saturated model	.000	1.000		
Independence model	.277	.356	.098	.254

The goodness of fit index value GFI is 0.996 which indicates that the model has good fitness of fit.

CONCLUSION

The impact on customer satisfaction of taxi services in Coimbatore district was carried out with some major findings. The study was framed with the service quality variables with a model named RECSA (Reliability, Extent of service, Comfort, Safety and Affordability). The influence of these variables on customer satisfaction was found out in Coimbatore district. The study reveals that all the five factors have a strong correlation and all of them have an impact on customer satisfaction. Out of the five variables three variables comfort, safety and affordability have a high impact on customer satisfaction and extent of service and reliability have a less impact on customer satisfaction. This is evident by the results of the red taxi having a greater number of users. Red taxi operates on the basis of business class providing more comfort. Whereas Ola operates fleets at affordable rates which is evident

from a greater number of salaried persons using Ola frequently. It is clear that taxi companies can adopt their own strategies to attract more customers. Monthly passes can be provided to customers who use regularly. Discounts can be availed to customers who travel frequently. Finally, it is clear that there is an enormous scope in the taxi market. The taxi market is attractive for new entrepreneurs to start their business or any individual can make their living by purchasing a taxi and attaching to taxi aggregators since it is going to be the booming business in Coimbatore and also in other districts and states. The taxi association and Government can propose guidelines to ensure the safety of the passengers especially women travelers.

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