CABS SERVICE QUALITY INFLUENCE ON CUSTOMER SATISFACTION – A STUDY CONDUCTED ON MAJOR CAB AGGREGATORS IN BENGALURU, INDIA

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Abstract: The aim of the present study is to determine relationship between the quality of service and customer satisfaction for cab services in Bengaluru city in India. For this, six variables were identified, namely comfort, safety, affordability, extent of service, driver's behaviour and reliability. Pearson's correlation test showed that all the variables were positively correlated with customer satisfaction. Six hypotheses were tested to study the effects of these variables on customer satisfaction. Multiple regression showed that the variables exerted a significant effect on customer satisfaction. As much as 97% variance in the customer satisfaction could be explained with the help of six variables that were tested

Keywords: **customer satisfaction, SERVQUAL, service quality, cab services, transportation.**

1.   Introduction

With the ever-burgeoning population, India, a country with 1.2 billion people, is witnessing a rapid migration of people from rural areas, which is contributing significantly to urbanization. Sustained growth over the last two decades, increased job opportunities, higher education opportunities and booming trade & commerce have been the major drivers behind the demand for public transport and personal mobility services. The transportation industry has managed to keep pace and has noticeably evolved with the changing demand and needs of the customers. Many cities in India have undertaken major metro projects that ensure smooth and comfortable rides to commuters. Gone are the days when public buses used to be dingy, creaky and offered nothing but back pain. The bus fleets have been replaced with new and modern coaches in quite a lot of cities and in state transport departments. These buses offer superior comfort, air-conditioning and quieter rides. Major brands of buses that are available in India include Tata, Ashok Leyland, Scania, SML Isuzu, Eicher, Volvo, Force, Mahindra & Mahindra and a few more.

In the last few years, personal and shared mobility has gained immense traction and has found quick acceptance amongst the public. Various services like on-demand cabs, autorickshaws and two-wheelers have made life easier for commuters who wish to be dropped off as near to their location as possible. These on-demand mobility services can be availed via smartphone applications which show the real-time location of the vehicles and the estimated fare that'll be charged.

2.   Literature Review

Ever-increasing expectations from the customers, together with the increasing competition has made the turf a challenging one for the organizations in their quest to increase their share of the pie. (Kandampully, 2010) Another challenge that crops up as the service improves is the substantial increase in customer demand, as they come to trust the organisation and its consistent level of service. (Etorre, 1994) Moreover, as the level of service improves, customers become increasingly critical and pay attention to minutest of the details. (Albrecht, 1985) As the demand for better, refined services and pressure from the growing competition increases, firms are shifting away from their traditional paradigms of customer satisfaction and looking towards adopting proactive tactics that will give them an edge over the competitors.

The concept of quality and quality management is one strategy that has been known to be key in the service sector. According to (Parasuraman, Berry, & Zeithaml, The service quality puzzle, 1988), the quality of service is a great differentiator which makes a firm stand out from the competition. A superior service quality is a fundamental requirement for success (Parasuraman, Berry, & Zeithaml, Servqual: A multiple-item scale for measuring consumer perception, 1988). In their quest to gain customer loyalty, firms strive to maintain a superior service quality (Bitner & Faranda, 1997); thus, the success of the firm depends on its values and its ability to expand and retain a fairly large customer base. A firm's exceptional service may be gauged by the percentage of returning customers, its loyal user base. This is a good measure by which firms can measure the impact of their service quality on the customer retention, and subsequently on their financial performance. (Zeithaml, 1996)

Customer satisfaction, according to an article published by Horsu and Yeboah, is the emotional reaction that is elicited

from the customer upon realizing the difference between the actual service received and the anticipated service. (Horsu, 2015). It has a direct and a proportional relationship with service quality, a parameter that is inherently difficult to measure and has remained a challenge for public transportation companies. (Robinson, 1999) In addition, given the complex and subjective nature of the service and its operations, measuring service quality in transport services is quite difficult. (Govender, 2014)

It is a very intriguing question as to why people prefer one form of transport or a certain competitor over the others. Quite a lot of surveys and polls have stressed upon the factors or the reasons that play a major role in decision making. Up until the 90s decade, these factors weren't categorically singled out, and were grouped under the generic 'service quality' heading, which included various variables of service such as speed of the service, staff behaviour, reliability of the service and so on. (Gubbins, 1988) Influence of quality of service on the satisfaction of customers should be paid more attention to. For a transport firm (e.g. cab services), behaviour of the driver, frequency and reliability of service and wait time are the most important factors that affect customer satisfaction. (Rabiul, M.S., Sarker, & Ahmed, 2014) Friendly behaviour of the driver helps in better communication and a greater understanding of customer's needs. (Disney, 1998). According to (Cavana & Corbett, 2007), frequency, responsiveness, convenience and reliability are the variables that affect customer satisfaction. Service quality, in the eyes of customers, is how a service delivery lives up to their expectations. (Fitzsimmons, 1999) Passengers tend to compare the service received to their perceived level of service. (Baker, Parasuraman, Grewal, & Voss, 2002) If the level of service is according to or exceeds their expectations, they will make a repeat purchase.

It is difficult to measure in what waythe customers perceive the quality of the service being provided. Many studies have been conducted in order to measure and understand the service quality. However, the SERVQUAL model which was developed by Parasuraman *et al.* has been widely used to measure the service quality. This model measures the difference between the measured service quality and the perceived service quality. At first, ten dimensions had been put forth in the model – access, courtesy, competition, credibility, communication, security, responsiveness, reliability, consumer understanding and tangibles. (Parasuraman, Zeithaml & Berry, 1988). These 10 dimensions were later condensed to 5 – empathy, assurance, reliability, responsiveness and tangibles. (Ravichandran, Mani, Kumar, & Prabhakaran, 2010)

It remains a point of contention as to whether this model is applicable to other service industries, especially transport industry. (Cronin Jr & Taylor, 1992) This model has been outrightly rejected by other researchers since it is solely based on customer perception. A modified SERVPERF model was

later proposed and was found to be reliable to measure the effective quality of the service (Boulding, Kalra, Staelin, & Zeithaml, 1993) Another model called RECSA was proposed by (McKnight, 1986), which is an acronym for Reliability, Extent of service, Comfort, Safety and Affordability. It is considered an effective to determine the quality of the service, but it does not take into account the behaviour of the driver or the crew, ticketing services and other ancillary services, which are often a key determinant of customer satisfaction. A key hallmark of services is their inseparable nature; they just cannot be separated from their facilitators, be it people or a machine. Thus, the service quality cannot be properly measured if it ignores the contribution of the one who facilitates the service. Therefore, another construct "driver behaviour" has been included in this study to gauge its impact on the service quality.

3. Research Gap

Quite a lot of studies have focused on evaluating customer satisfaction for public transport services like bus, rail, road in various countries around the world. Many research studies in India have focused on customer perception of service quality, but there have been no studies whatsoever about the extent of influence service quality has on the customer satisfaction variable. All the above -mentioned studies were carried out using the SERVQUAL model, or SERVPERF, a modified version of the former model. There had been no prior study on cab services in India using a RECSA model. The study seeks to fill that gap by probing the kind of effect quality of service has on customer satisfaction by using the RECSA model, in which an additional independent variable used.

4. Research method

Hypotheses

H_1: Customer satisfaction variable is related to reliability of the service.

H_2: Customer satisfaction variable is related to continuous nature of the service.

H_3: Customer satisfaction variable is related to comfort of the service.

H_4: Customer satisfaction variable is related to safety of the service.

H_5: Customer satisfaction variable is related to affordability of the service.

H_6: Customer satisfaction variable is related to the driver's behaviour on-service.

This study was conducted in the Bengaluru Metropolitan Area in the Karnataka state in India during the month of June, 2020. Majority of the participants were from a post-graduate college who've availed cab services at least five times in their life, and this was explicitly asked to them because an accurate picture of the customer satisfaction would be clear only if they have

availed the service quite a few times. The questionnaire was sent to them via email, and in total 212 participants were selected. Similar studies have been conducted by (Govender, 2014) in South Africa, (Valenzo & Lazaro, 2019) in Mexico. Both the studies were based on RECSA model.

RECSA model was used to develop a questionnaire, which is a modification of the SERVQUAL model that is used to assess the quality of the service. In addition to the five constructs in the RECSA model, one more construct, viz. driver behaviour was added as well, since drivers are the sole providers of the service and could play a pivotal role in enhancing customer satisfaction. The questionnaire was sent to 10 people for pre-testing to remove any errors, ambiguities and inconsistency in the sentence framing.
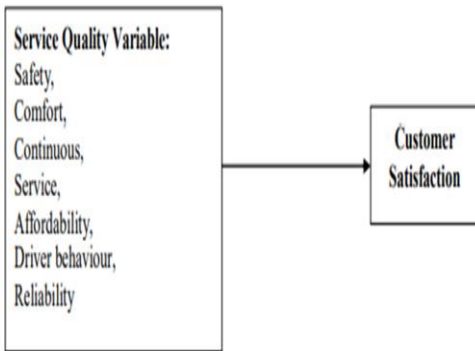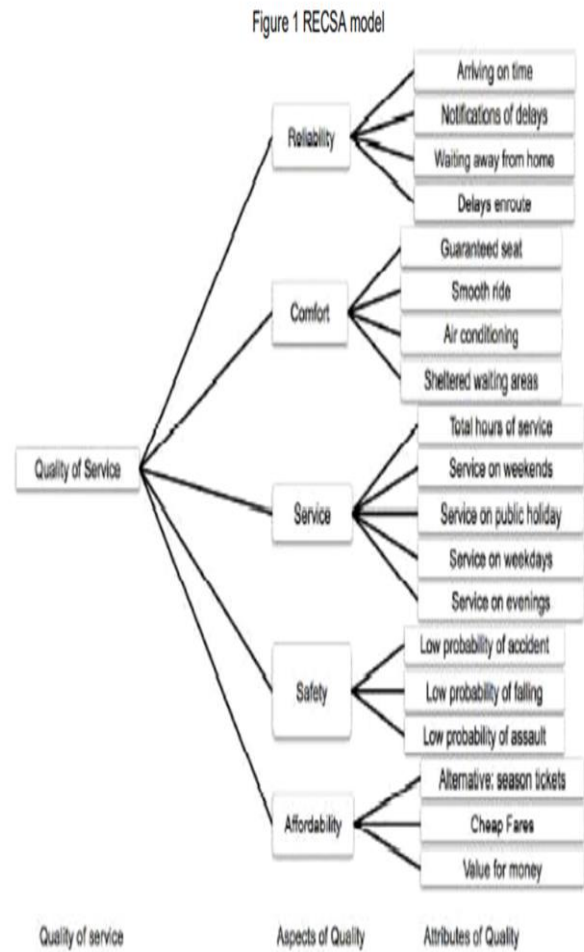

Figure 1 Constructs of modified RECSA model

Source: McKnight, C.E., Pagano, A.M and Paaswell, R.E. (1986)

Figure 2 RECSA model

5.   Results and Discussion

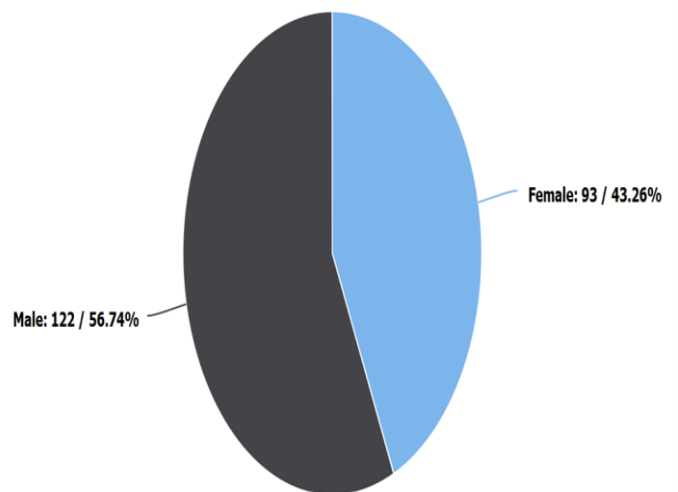Survey participants' demographic data

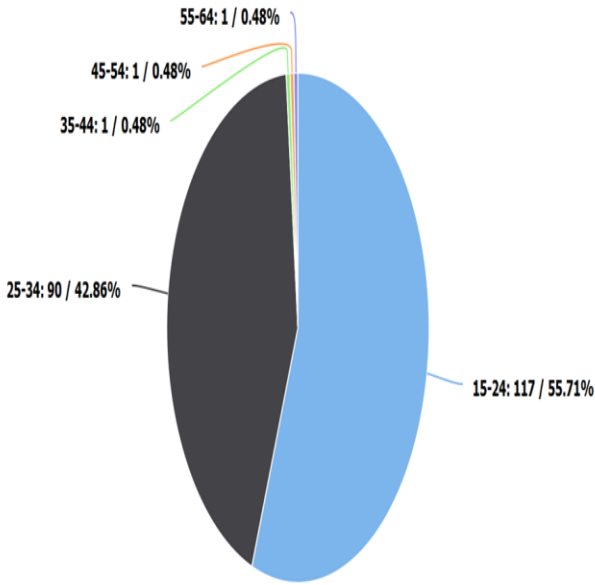Figure 3 Gender wise breakdown of survey participation

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Figure 4 Age groups of the participants

Figures 1 and 2 show the demographic characteristics of the participants. Out of total sample size of 210, 122 were males and 93 were females, representing 56.74% and 43.26% of the total sample size respectively. Majority of them (55.71%) belonged to the 15-24 age group, while 42.86% belonged to the 25-34 age group.
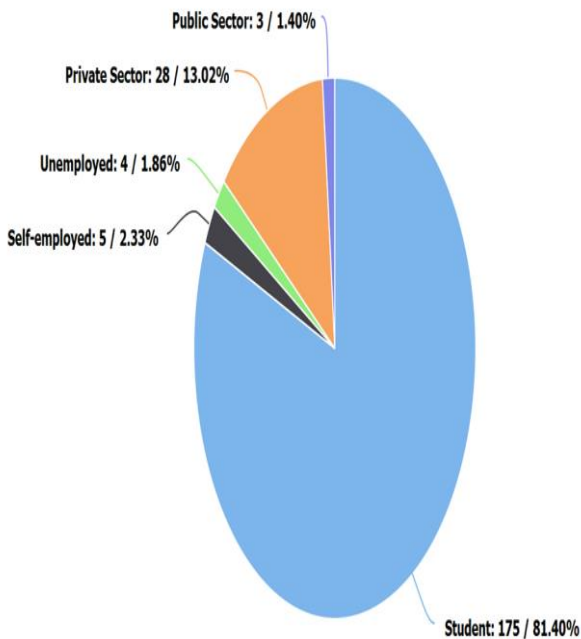

Figure 5 Occupation of the participants

Figure 3 shows that the majority of the participants(N=175), which constituted 81.40% of the total number, were students. 2.33% of the participants were self-employed, 1.86% unemployed, 13.02% worked in the private sector while 1.40% worked in the public sector.

6.   Descriptive statistics

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Comfort	212	2.50	5.00	4.4104	.55202
Reliability	212	2.67	5.00	4.5597	.38548
Extent of service	212	1.00	5.00	4.4316	.58317
Safety	212	2.50	5.00	4.5660	.54891
Affordability	212	1.00	5.00	4.1557	.78903
Driver behaviour	212	2.00	5.00	4.1840	.62842
Valid N (listwise)	212				

Figure 1 Overall mean

As can be seen from the figure above, the sample size taken was N=212. Safety had the highest mean value of all the variables (4.5660), followed by reliability (4.5597), extent of its service (4.4316), comfort (4.4104), driver's behaviour (4.1840) and affordability (4.1557).

Pearson's correlation

Correlations

		Customer Satisfaction	Comfort	Reliability	Extent of service	Safety	Affordability	Driver behaviour
Customer Satisfaction	Pearson Correlation	1	.638**	.579**	.623**	.553**	.487**	.546**
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000
	N	212	212	212	212	212	212	212
Comfort	Pearson Correlation	.638**	1	.233**	.400**	.344**	.084	.246**
	Sig. (2-tailed)	.000		.001	.000	.000	.224	.000
	N	212	212	212	212	212	212	212
Reliability	Pearson Correlation	.579**	.233**	1	.252**	.250**	.172*	.189**
	Sig. (2-tailed)	.000	.001		.000	.000	.012	.006
	N	212	212	212	212	212	212	212
Extent of service	Pearson Correlation	.623**	.400**	.252**	1	.299**	.098	.157*
	Sig. (2-tailed)	.000	.000	.000		.000	.155	.022
	N	212	212	212	212	212	212	212
Safety	Pearson Correlation	.553**	.344**	.250**	.299**	1	.009	.198**
	Sig. (2-tailed)	.000	.000	.000	.000		.897	.004
	N	212	212	212	212	212	212	212
Affordability	Pearson Correlation	.487**	.084	.172*	.098	.009	1	.152*
	Sig. (2-tailed)	.000	.224	.012	.155	.897		.027
	N	212	212	212	212	212	212	212
Driver behaviour	Pearson Correlation	.546**	.246**	.189**	.157*	.198**	.152*	1
	Sig. (2-tailed)	.000	.000	.006	.022	.004	.027	
	N	212	212	212	212	212	212	212

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Figure 7 Pearson correlation coefficients

As is evident from *Figure 5,* all the variables, viz. comfort, reliability, extent of service, safety, affordability and driver

behaviour are positively and significantly correlated with the customer satisfaction.

The variable comfort shows the highest correlation of all the variables, with a value of **0.638.** This shows that as the comfort level increases, customer satisfaction increases. Customers seek clean and comfy seats, air-conditioning and probably some music too which will make their ride a comfortable one. This is in line with the findings of (Rabiul, M.S., Sarker, & Ahmed, 2014) who identified cleanliness, AC and comfort as a part of an independent service variable that has a direct relationship with customer satisfaction.

The extent of the cab service was the next most important influential factor on customer satisfaction, and had *r* =0.623 . This goes to show that customers place an importance on the service being available on a regular basis, both on weekends and weekdays. Customers were found to be satisfied with the service being available 24*7 and on public holidays as well.

Reliability variable also has a significant and a direct relationship with customer satisfaction, with *r* value being **0.579** . This study found that the customers were satisfied if the rides arrived on time, whether or not they were informed about any delays, or if they were able to track the ride progress in-app and share with their kith and kin.

Safety was also an important variable and has a direct bearing on customer satisfaction. Customers tend to take their safety extremely seriously, and this study found out that since the coronavirus pandemic began, customers would like it if the driver wears a mask and keeps a sanitizer at hand. The ability to send emergency alerts to their family and friends was also an important factor that was taken into consideration.

Affordability and driver's behaviour too had a direct relationship with customer satisfaction, although affordability wasn't as strongly linked as driver's behaviour. Customers would like their driver to be polite and well behaved. They would also like the driver to drive safely and responsibly and not indulge in rash driving.

7. Multiple regression analysis

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.985[a]	.970	.969	.79472

a. Predictors: (Constant), Driver behaviour, Affordability, Extent of service, Reliability, Safety, Comfort

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	1.594	.791		2.015	.045	.034	3.154
	Comfort	2.245	.114	.276	19.697	.000	2.020	2.470
	Reliability	3.118	.153	.267	20.412	.000	2.816	3.419
	Extent of service	2.266	.106	.294	21.462	.000	2.058	2.474
	Safety	2.001	.110	.244	18.149	.000	1.783	2.218
	Affordability	1.960	.071	.344	27.535	.000	1.820	2.100
	Driver behaviour	2.010	.092	.281	21.876	.000	1.829	2.192

a. Dependent Variable: Customer Satisfaction

Figure 8 Multiple regression results

In the present study, six variables were taken into account that were thought to influence the customer satisfaction, viz. safety, comfort, reliability, extent of service, affordability and driver behaviour. These variables were analysed using multiple regression analysis in SPSS 23. The adjusted R^2 value turned out be 0.969, which means 96.9% of the variance in customer satisfaction can be explained by these variables, while 3.1% variance is due to other factors. There is virtually no difference between the R and R^2 values, suggesting that not a single variable chosen was redundant, and that the model overall is a nice fit.

Out of the six variables chosen, all of them had a positive beta coefficient. Also, out of the six variables, i.e. comfort (b=0.276, p=.000) reliability (b=0.267, p=.000), extent of service (b=0.294, p=.000), safety (b=0.244, p=.000), affordability (b=0.344, p=.000) and driver's behaviour (b=0.281, p=.000) all of them were significant in affecting customer satisfaction.

	Statement	B	P value	Result
H1	Customer satisfaction is significantly and directly related to reliability of the service	0.267	0.000	Accepted
H2	Customer satisfaction is significantly and directly related to continuous nature of the	0.294	0.000	Accepted
H3	Customer satisfaction is significantly and directly related to comfort of the service	0.276	0.000	Accepted
H4	Customer satisfaction is significantly and directly related to safety of the service	0.244	0.000	Accepted
H5	Customer satisfaction is significantly and directly related to affordability of the servic	0.344	0.000	Accepted
H6	Customer satisfaction is significantly and directly related to the driver's behaviour on	0.281	0.000	Accepted

Figure 9 Hypotheses result

8. Discussion

This study was conducted in Bengaluru Metropolitan Area in the Karnataka state of India, and the findings shed light on the customers inclination towards the factors which influence overall satisfaction with the cab service. It was found that all

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the independent had a positive relationship with the dependent variable, i.e. customer satisfaction. It was found that as much as 97% of the variance in customer satisfaction (i.e. the dependent variable) is because of the independent variables included in the study. The model can be used to applied to other transportation as well, namely metro rail services, ferry services and bus services. The findings of this study can help the firms to increase customer satisfaction and therefore building a loyal customer base.

9.   Conclusion

In this study, an attempt was made to understand the influence of service quality and its factors that determine customer satisfaction. For this purpose, RECSA model was used with an additional variable, driver's behaviour, in addition to comfort, reliability, extent of service, affordability and safety. The results showed that all of these variables have a direct and a positive relationship with the dependent variable, i.e. customer satisfaction. Pearson's correlation test revealed that all the factors were positively correlated with customer satisfaction, with comfort and the extent of service being most highly correlated. Passengers are highly satisfied when the cab service is available on weekends, are available 24*7 when needed. Clean, comfortable and pleasant-smelling cabin also has a major influence on customer satisfaction. Other factors like emergency contact features, reasonable prices, driver's behaviour also have a major influence on customer satisfaction.

Comfort was the most correlated variable in this study, and this finding is consistent with the work of (Horsu, 2015) and (Rabiul, M.S., Sarker, & Ahmed, 2014) who identified clean, comfortable and pleasant smelling cabin as a part of the independent variable that influenced service quality and subsequently customer satisfaction.

Reliability also was a major influencer on customer satisfaction, as shown by (Kokku, 2011) who argued that customers placed a very high importance on the cabs reaching the pick-up and drop-off points on time, or informing the customers about any delay or other contingencies.

Customer satisfaction is also influenced by safety concerns and the behaviour of the driver. Customers felt safe to use the service because the cars had seat belts, the driver had knowledge of the route and drove safely, and also handled transactions properly. These findings are also corroborated in a report by (MM Research, 2008) in New Zealand, where the customers considered the service safe because the driver drove safely, communicated well, knew the routes and handled transactions well.

Other variables that affected the service quality were affordability and extent of service. This study showed that customers were satisfied because the cabs had been available on weekdays, weekends, holidays and were available round the clock, 7 days a week. This finding is in-line with

(Govender, 2014) where he found that cabs' availability in the evening and on holidays influence customer satisfaction.

Multiple regression was done to determine the effect of all the variables on customer satisfaction. It was found that the six variables that were tested had a positive correlation with the dependent variable. As much as 96.9% change in customer satisfaction is due to the independent variables, as revealed by the adjusted R^2 value

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