



AN ECONOMICAL ANALYSIS OF PASSENGERS' SATISFACTION BMTC BUS SERVICES IN BENGALURU CITY

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Abstract

Passengers are those who pay a sum of money to travel from one place to another in public transport or private transport. Buses are vehicles which are designed to carry large number of people at the same time from one place to another such as omnibus, multi-bus, motor bus and autobus by charging a small fare. The BMTC bus transport corporation has satisfied almost all the passengers in a level which is likely to be as government organization not like private and we see many ways on how to improve in the areas where we lack to satisfy them. The objectives are to identify the factors influencing to selection of bus by the respondent, to identify the level of satisfaction perceived by the respondents travelling BMTC buses in Bengaluru City and to offer suggestion to improve the bus services to the transport service provider. The researcher used both primary and secondary sources of data. The researcher used statistical techniques for Chi-Square test.

Keywords: Passengers Satisfaction, BMTC and BMTC Bus Services.

Introduction

The survival of any business in today's competitive world is highly dependent on its performance, which is further determined by the quality of services as delivered to the customers by the organization. On the other hand, effective customer service helps to develop satisfied customers those may build and maintain long lasting firm-customer relationships, while counting on profits on mutual understanding basis. Therefore, service quality and customer satisfaction become major issues for various service providers across all the sectors, including public transport, and considerable research has been conducted on both. (Aniley, 2010)

The rural people as well as urban people have come forward to utilize the bus facilities largely. In the present study, a genuine attempt has been made to ascertain the level of satisfaction and utilization of bus by the passenger. The incremental improvements in the bus system to meet the capacity requirements of different size cities. It is imperative that bus systems are planned such that they satisfy the requirements of users as well as service providers within the limited source constraints.

Bus transport is the most desirable and sustainable system from societal perspective. A well planned bus system can provide a high level of mobility to a large section of the population with the least cost. A flexible, comfortable, easily available and reliable bus service may encourage shift from private vehicles to public transport. Since travel demand varies overtime and space, public transport systems often have underutilized

capacity at non-peak hours and high road factor in peak hours. The objective of an efficient system is to meet the diverse demand and minimize operator's loss. (K, 2020)

Objectives of the Study

1. To identify the factors influencing to selection of bus by the respondent.
2. To identify the level of satisfaction perceived by the respondents while travelling in BMTC buses.
3. To offer suggestion to improve the bus services to the transport service provider.

Hypothesis of the Study

Ho: The level of satisfaction perceived by the respondents is high while travelling in BMTC Bus. (Age Wise and Gender Wise)

H1: The level of satisfaction perceived by the respondents is Low while travelling in BMTC bus. (Age Wise and Gender Wise)

Methodology of the Study

In this research have been choose Bangalore City area. The population of the study consisting of bus service of Bangalore City. The researcher has adopted convenient random sampling method. A sample size of 120 respondents selected. The study is research based on both primary and secondary data. The primary data were collected from the passengers who had travelled in BMTC buses in Bangalore City. The secondary data collected from the books, journals, magazines and internet. The research framework is constructed on the basis of the theories and objectives discussed above in the aspect of passenger's satisfaction are Simple Percentage, Rank Analysis and Chi-square analysis.

Case Study

The BMTC is one of the three Subsidiaries of Karnataka State Road Transport Corporation, in the context of the city's expansion in the year 1997, Bangalore Transport Service(BTS) was formed. Later Bangalore Transport Service (BTS) became Bangalore Metropolitan Transport Corporation. The Bengaluru Metropolitan Transport Corporation is the sole public bus transport provider for Bengaluru, serving urban, sub-urban and rural areas. BMTC is committed to provide quality, safe, reliable, clean and affordable travel. The testimony of its success lies in increasing passenger trips everyday by a wide range of customer base. In an effort to modernize its services for commuter comfort, BMTC strives to strengthen information systems and improve processes through introduction of intelligent technology solution, make capacity enhancement through infrastructure development, user-friendly interchange facilities, fleet upgradation and augmentation, apart from its core activities, which includes fare structuring, route network optimization, planning and monitoring. BMTC reaches far and wide, in every nook and corner of the city, making public transport an attractive travel choice for everyone.

Table.No.1: BMTC at a Glance.

1	No of Schedules	5189
2	No. of Vehicles	6484
3	Daily Service kms.(Lakhs)	8.56
4	No. of Trips	46000

5	Everyday Traffic Revenue(Rs.Crores)	2.42
6	No of buses under PPP	---
7	Infrastructure established	
	Depots	45
	Bus stations	54
8	Staff Employed	30185
9	Bus Staff Ratio	5.82

Source: <https://mybmtc.karnataka.gov.in/info-1/BMTC+Glance/en>

The above table indicates that BMTC number of schedule 5189, number of vehicles 6484, number of trips 46000, 54 bus stations and 30185 employees is worked in corporation.

Table-2: Operational performance for the period from 2013-14 to 2019-20(Upto September-2019 Provisional)

Sl. No.	Parameter	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20 (Upto Dec-2019 Provl.)
1	Depots	39	40	40	43	44	45	45
2	Schedules Added	561	392	188	344	296	171	73
3	Schedules Curtailed	227	621	215	341	364	124	71
4	Schedules Operated	6473	6244	6216	6219	6143	6190	6192
5	New Vehicles added	838	197	0	101	1406	290	4
6	Vehicles Scrapped	492	450	120	343	880	440	63
7	Vehicles held	6775	6522	6401	6161	6677	6521	6460
8	%age Cancellation	4.8	8.4	10.7	14.0	14.9	12.2	11.2
9	Effective Km/day (Lakhs)	13.14	12.90	12.21	11.52	11.42	11.35	11.39
10	Veh. Utilisation (Kms.)	218.2	214.5	208.5	206.5	203.8	202.6	200.2
11	Fleet Utilisation (%age)	91.2	90.5	90.9	89.0	87.5	84.1	87.6
12	K.M.P.L (HSD)	3.82	3.79	3.76	3.74	3.74	3.74	3.73
13	No. of Breakdowns	3521	2754	2570	2462	2024	1243	1070

14	Rate of Breakdowns/10000kms.	0.07	0.06	0.06	0.06	0.05	0.03	0.03
15	No. of accidents	370	388	338	299	293	283	171
16	Rate of Accidents/Lakh kms.	0.07	0.08	0.07	0.07	0.07	0.07	0.05
17	Staff Position	36079	36474	35554	34306	34114	33878	33465

Source: <https://mybmtc.karnataka.gov.in/info-1/Perfomance+Indicator/en>

The above table indicates that operational performance from 2013-14 to 2019-20. Number of bus depot and number schedules, number of employees enhance to improve quality of Bengaluru city BMTC bus services.

Limitations of the Study

The study is limited to Bengaluru City only. The findings of the study cannot be generalized due to demographical differences. The researcher aims to study the satisfaction of services rendered by the BMTC city buses. The researcher focuses and collects the data only from the respondents who are able to understand and to give their answers for the questions asked for this research work. The respondents of Bengaluru City only were taken for this study.

Need and Importance of the Study

Movement of the people from one place to another place and the increase in population resulted in heavy demand for quick, efficient transport services. Under these circumstances, there is every possibility for deterioration of the quality of services provided by transport industries because of healthy competition. Yet, the private sector transport industries have to provide better services because it is a question of survival for them. The importance of the study is to find out answer for the question, how far the private sector transport industries are able to withstand the competition extended by their powerful counterpart (public sector), The survival of any service industry depends on how well they serve and satisfy their passenger. (M.Sirajudeen, 2019)

Data Analysis and Interpretation

Table-2: Preferences of Satisfaction level.

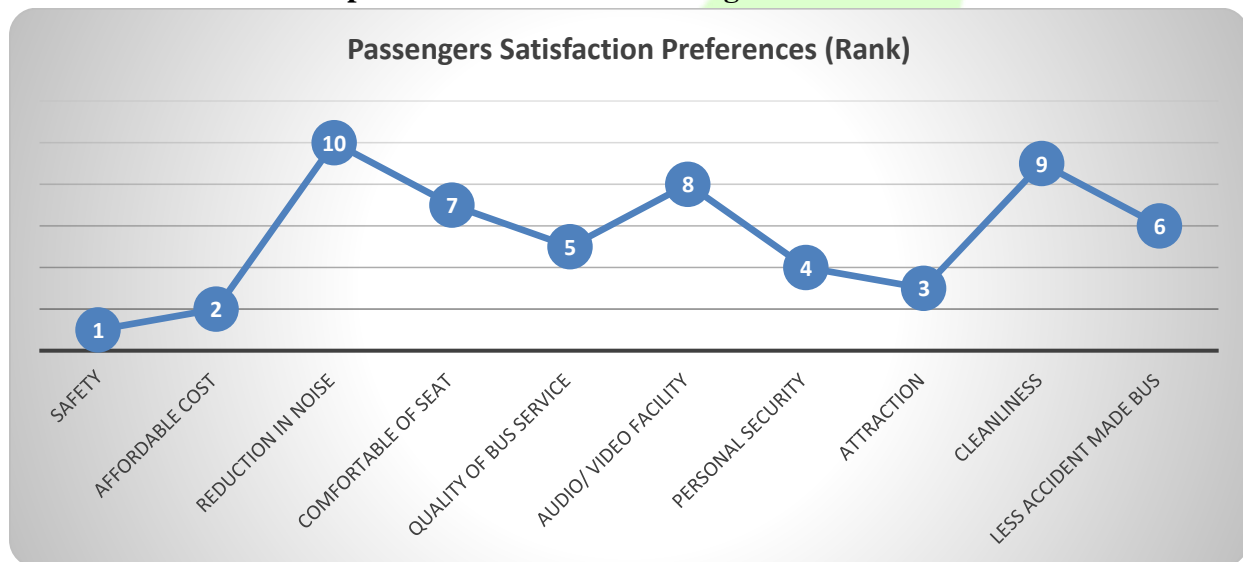
Sl.No	Factors	No. of Respondents	Rank
1	Safety	105	I
2	Affordable cost	92	II
3	Reduction in noise	46	X
4	Comfortable of seat	62	VII
5	Quality of bus service	76	V
6	Audio/ Video facility	56	VIII
7	Personal security	84	IV
8	Attraction	88	III
9	Cleanliness	52	IX

10	Less accident made bus	72	VI
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The table shows that rank given by respondent based on their preference. Safety is the first factor, affordable cost factor as the second factor, attraction as the third factor, personal security as the fourth factor, quality of bus services as the fifth factor, less accident made bus as the sixth factor, comfortable of seat as the seventh factor, audio/video facility as the eighth factor, cleanliness as the ninth factor and reduction of noise as the tenth factor.

Thus, the passengers gave first rank to the factor, safety rather than other factors. In addition, level of satisfaction affordable cost.

Graph-1: Preferences of Passenger's Satisfaction.



The above graph indicates passenger's satisfaction preferences based first rank given by respondents as the safety factors.

Table-3: Age Wise Classification of the respondents and level of satisfaction based on time.

Time Factors	X ² Value	Table Value	DF	S/NS
Frequency	101.33	14.06	7	S
Punctuality	101.33	14.06	7	S
Speed	101.33	14.06	7	S
Time keeping	101.33	14.06	7	S

Source: Primary data

S-Significant, NS- Not significant @ 5% level

It is inferred that the null hypothesis was accepted (i.e, significant influence). Other Factors like frequency, punctuality, speed and time keeping. Whereas significant influence of time factors the null hypothesis were rejected.

Most of significant factors are frequency, punctuality, speed and time keeping are significant factor.

Table-4: Gender Wise Classification of the respondents and level of satisfaction based on time.

Inside Appearance Factors	X ² Value	Table Value	DF	S/NS
Cleanliness	83.80	11.03	5	S
Bus comfort	83.80	11.03	5	S
Seat availability	83.80	11.03	5	S
Seat comfort	83.80	11.03	5	S

Source: Primary data

S-Significant, NS- Not significant @ 5% level

It is inferred that the null hypothesis was accepted (i.e, significant influence). Other Factors like Cleanliness, Bus comfort, Seat availability and Seat comfort. Whereas significant influence for level of satisfaction based on time inside appearance factors, So the null hypothesis was rejected.

Results of the Study

1. The level of satisfaction perceived by the respondents is low while travelling in BMTC bus. Based on age-wise time factors, age group 20-30 years and 31-40 years Above passenger's level satisfactions on factors are like frequency, punctuality, speed and time keeping are low level satisfaction about passengers of travelling in BMTC bus.
2. The level of satisfaction perceived by the respondents is low while travelling in BMTC bus. Based on gender wise inside appearance factors like Cleanliness, Bus comfort, Seat availability and Seat comfort are low level satisfaction about passengers of travelling in BMTC bus.

Suggestions of the Study

1. To provide excellent bus service, the quality of the bus service should be better; hence, rash driving should be avoided.
2. Most of the respondents travel for their work. In order to increase the travel for other purposes the bus might be stopped in between for the need of the passengers.
3. To increase the number of passengers in the government bus they should provide entertainment facility so that the passengers do not get stress while travelling.

Conclusion

This study reveals that Passengers Satisfaction on BMTC Bus Services in Bangalore City. The mostly they prepare the private buses due to low cost. Transport services are vital role for the development of people. The bus operators should render efficient services to the satisfaction of the travelling public. It is also observed that the passengers are confronted with many problems, so the bus operators should try to implement the suggestions to avoid problems, so that they would be in a position to render efficient services to the travelling public.

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