

Service Quality Gap towards Digitalization of Tamilnadu State Transport Corporation in Kanyakumari District

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Abstract

In our daily life Transport is an inevitable part for fulfilling the civil requirements such as Education, Food, Employment, Medical Services, Business and Profession. When we see the modern technology applications in the transport system of developed country, it looks too wonder for us such as Automatic Vehicle, smart city concept, embracing an open-data policy and ensuring open non-propriety systems, facing the responsibility for cyber security and so on. Modern means of transport are very fast. There is a considerable service quality gap between the passengers' expectations and perceptions on TNSRTC in Kanyakumari District towards tangibility, responsiveness, reliability, assurance, safety, comfort and convenience. The Digitalisation is not an issue for the future. It is already happening and the public transport sector needs to embrace it for fulfilling the gap in the near future.

Key Words: Digitalization, Service Quality, Service Quality Gap, Modern means of transport

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I. INTRODUCTION

Transport has recorded a substantial growth over the years both in terms of length and output of the system. Good physical connectivity in the Urban and Rural areas are essential for economic growth. Digital technologies have the potential to deliver a revolutionary impact on the public transport sector. Digitalization brings a host of opportunities for the public transport sector, including opportunities to increase efficiency and improve quality, lower costs, open up new revenue streams, improve the customer experience and loyalty, and explore new services, with new concepts like 'mobility as a service'. Specially in the study area majority of the passengers are using TNSTC bus service for their daily needs since, the domination of private sector bus service is low. The primary reason for the loss is mismanagement of resources and customers dissatisfaction. Transport system want to cherish as like as the developed state. When we see the modern technology applications in the transport system of Developed country it looks too wonder for us such as Automatic Vehicle Monitoring which facilitate to keep up the time, Transport app to check the details about the bus time from their home. Because in India we are still using application of technologies specially it is in Private sector transport.

Statement of the Problem

In the selected study area, private bus facilities are very less, passengers suffer with lack of bus service in all the routes. The primary factors to increase the market share, bus operators should improve the performance, enhance the service quality attributes and fulfill the expectation of passengers. India is still in the slab of Developing Country. India's Transport system want to cherish as like as the developed state. Monitoring which facilitate to keep up the time, Transport app to check the details about the bus time from their home. Because in India we are still using application of technologies specially it is in Private sector transport. But in India Public transport is one of the fastest growing economies in the world, for achieving a growth rate of 7.5% per annum. Hence this Study on Service Quality gap towards Digitalization of Tamilnadu State Transport Corporation in Kanyakumari District have chosen for the research.

II. OBJECTIVES OF THE STUDY

- To know the dominant place of digitalization in the forthcoming scenario of transport sector.
- To analysed the service quality gap while utilizing transport services offered by the TNSTC in Kanyakumari District, marching towards to the 2020s will be a decade of transformation on digitalization .

Scope of the Study

Scope of the study is confined to the service quality in the TNSTC services and also aims to analyze the passengers' Perception level towards Tamil Nadu State Transport Corporation Transport services. It helps to identify the satisfaction level of the passengers towards TNSTC services. TNSTC (Tamil Nadu State Transport Corporation) Technological developments and the advance of the digital age fundamentally have shifted the way we experience day-to-day life. Lack of public transportation facilities and therefore the citizens are largely dependent on private modes of transport, such as bicycles (26.3 million) and motorcycles (25.4 million) in Rural and Urban India. More people use motorcycles than travel by bus (22.9 million). In 2015 the number of daily trips using a motorcycle for commuting was 35 million (excluding personal trips); it is based on the increasing trend of vehicle registration. It is estimated that there are around eight accidents every hour and a total of 15 percent of all accidents in the country occurred in the state. Proper safe and secured mode of transportation facility if provided by the TNSTC may reduce these accidental cases.

III. RESEARCH METHODOLOGY

The researcher has selected 600 sample respondents among that the study chosen 150 respondents from each taluk, the four taluks of Kanyakumari District, viz Thovalai, Agastheeswaram, Kalkulam, and Vilavancode, again the taluks divided into small strata. From each strata 25 to 50 samples selected according to convenient random sampling method.

Meaning of Digitalization

It refers to the adoption or increase in use of digital or computer technology by an organisation, industry, country and so on. In other words, it is the use of digital technologies to improve processes, lower costs and gain productivity (e.g. operation and maintenance) and to establish new business models providing new revenue, and value-producing opportunities; it is the process of moving to a digital business¹. It is the integration of digital technologies into everyday life by the digitisation of everything that can be digitized.

Opportunities

- Changing governance, organisation & relationships - re-design of the business models, constant improvements with the help of score-cards and the corporate organization to be fit for the digital age
- Exponential growth of data - develop additional services, such as travel planner apps.
- Improved operational efficiency and maintenance - using modern technology, ultimately improving service quality, reliability and efficiency as an eco-friendly driving

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- Relationship with the customer- optimizing route-planning or offering personalized real-time information services via mobile devices, e-tickets, mobile ticketing, GPS Position Service
- Emerging players and New mobility services and platforms – technology has enabled the appearance of integrated mobility platforms, such as Mobility as a Service (MaaS), which can provide a single entry point to a full range of urban mobility services.
- Autonomous and connected vehicles- electric autonomous vehicle
- Cyber security, cyber safety and privacy – provide high quality services
- Impact of digitalization on human resources - ensuring that its employees will be trained
- New streams of revenue - diversify their revenues.

Advantages of Modern Means of Transport

- Modern means of transport are very fast. We can travel from one end of India to another in a few days by train and a few hours by aero plane.
- We can easily move goods from one part of the country to another.
- Trade with foreign countries has become possible because of the fast and reliable means of air, road and water transport. We can buy as well as sell goods to other countries.

Negative Effects of Modernization in Transport

- A number of people lose their lives in accidents.
- Air pollution is a major ill-effect of modern means of transport. Most of our cities have heavy traffic. The smoke emitted from these vehicles is harmful to the health of people as well as the environment. These vehicles also cause noise pollution which is harmful to the health of the people.
- To enjoy the benefits of technology and to minimize the ill-effects of modern means of transport, we can do the following things :
- Cars and vehicles should be kept in good condition so that they do not give out exhaust fumes. Their pollution levels should be checked regularly and kept within the permissible limits.
- A good public transport system should be provided. Then fewer people will use their vehicles thereby reducing the number of vehicles on the road.
- We can make special lanes for bicycles, two-wheelers and rickshaws so that they can move faster and more safely.

Meaning of Service Quality

Service quality is a comparison of perceived expectations (E) of a service with perceived performance (P), giving rise to the equation $SQ=P-E$. This conceptualization of service quality has its origins in the expectancy-disconfirmation paradigm.¹

Service Quality Gap in Tamilnadu State Transport Corporation (Tnsta)

To assess the service quality gap in TNSTC with reference to Kanyakumari District, Tirunelveli Division, the required data have been collected from the passengers. The service quality gap is calculated as follows :

Service quality gap = Expectation - Perception (actual experience)

A perception of service above the expectation produces satisfaction; while the perception below the expected level produces dissatisfaction.

Satisfaction = Service Received – Service Expected

The following table shows the service quality gap in TNSTC with reference to Kanyakumari District, Tirunelveli Division:

Table 1
Service quality gap in TNSTC with reference to Kanyakumari District, Tirunelveli Division

Sl. No	Statements	Expectation Mean	Perception Mean	Service quality gap
	Tangibility	3.3887	2.5701	0.8186
1.	Modern Equipments and Vehicle	3.4167	2.5767	0.8400
2.	Appealing Physical Facilities	3.4217	2.6533	0.7684
3.	Appealing Interiors	3.3467	2.4683	0.8784
4.	Facilities at the Terminal Points	3.3700	2.5833	0.7867
	Responsiveness	3.2812	2.7708	0.5104
5.	Willingness to Help Passengers	3.4217	2.8450	0.5767
6.	Prompt Service to Passengers	3.2650	2.8733	0.3917
7.	Respond the passengers Request	3.1750	2.7133	0.4617

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8.	Instill Confidence top Passengers	3.2633	2.6517	0.6116
	Reliability	3.2425	2.7471	0.4954
9.	Keeping up the Promises	3.3517	3.0234	0.3283
10.	Service right at first time	3.2083	2.7367	0.4716
11.	Keeping up the time	3.2400	2.5502	0.6898
12.	Error Free Services	3.1700	2.6783	0.4917
	Assurance	3.2762	2.9175	0.3587
13.	Safety	3.4500	2.8483	0.6017
14.	Courteousness with Passengers	3.2500	2.6900	0.5600
15.	Knowledgeable Employees	3.2367	3.0300	0.2067
16.	Trustworthiness	3.1683	3.1017	0.0666
	Empathy	3.3108	2.7675	0.5433
17.	Individual Attention	3.3367	2.9733	0.3634
18.	Convenient Operating Hours	3.3017	2.8050	0.4967
19.	Passengers Best interest at Heart	3.5000	2.8317	0.6683
20.	Understand specific needs of passengers	3.3333	2.7900	0.5433
21.	Convenient Schedules	3.1717	2.6067	0.5650
22.	Convenient Frequencies	3.2217	2.5983	0.6234

The gap score for each item and dimension was computed by subtracting the expectation score from the perception score. Table shows that the highest gap of the quality relates to the tangibility dimension (gap mean score =0.8186), and there is a considerable gap between the passengers' expectations and perceptions. The lowest gap of the quality relates to the assurance dimension (gap mean score = 0.3587).

Findings of Service Quality Gap in Tamil Nadu State Transport Corporation (TNSTC)

- It is found that among the passengers of TNSTC with reference to Kanyakumari District, Tirunelveli Division, the mean scores of expectations are high and ranged from 3.1683 for (item 16: Trust Worthiness) to 3.5000 for (item 19: Passengers Best interest at Heart).
- Among the five dimensions, the highest expectation related to the tangibility dimensions (dimension's mean score = 3.3887) and the lowest expectation

- related to the reliability dimension (dimension's mean score = 3.2425).
- It is observed that the mean score of the perceptions ranged from 2.4683 for (item 3: Appealing Interiors) to 3.1017 for (item 16: Trust Worthiness). Among the five dimensions of quality, the highest perception related to the assurance dimension (dimension's mean score = 2.9175) and the lowest perception related to the tangibility dimension (dimension's mean score = 2.5701).
 - It is learnt that the highest gap of the quality relates to the tangibility dimension (gap mean score = 0.8186), and there is a considerable gap between the passengers' expectations and perceptions. The lowest gap of the quality relates to the assurance dimension (gap mean score = 0.3587).

Findings of Value Added Service Quality Gap in TNSC

- It is found that the value added service quality of TNSC among the passengers of TNSC with reference to Kanyakumari District, Tirunelveli Division, the mean scores of expectations towards value added service quality of TNSC are high and ranged from 2.8850 for (item 8: Probability of accidents) to 3.5533 for (item 29: Newly bought vehicles).
- Among the eight dimensions of value added service quality of TNSC, the highest expectation related to the quality of vehicles dimensions (dimension's mean score = 3.3791) and the lowest expectation related to the safety dimension (dimension's mean score = 3.1229).
- It is observed that the mean score of the perceptions towards value added service quality of TNSC ranged from 2.2633 for (item 33: Refreshment facilities) to 3.0633 for (item 18: Informative staffs).
- Among the eight dimensions of value added service quality of TNSC, the highest perception related to the ticket fare level dimension (dimension's mean score = 2.8891) and the lowest perception related to the quality of vehicles dimension (dimension's mean score = 2.4025).
- It is learnt that the highest gap of the quality relates to the quality of vehicles dimension (gap mean score = 0.9766), and there is a considerable gap between the passengers' expectations and perceptions. The lowest gap of the quality relates to the ticket fare level dimension (gap mean score = 0.3496).

Suggestions As Regards Passengers' Service Quality Tangibles

The bus station premises and the buses have to be equipped with fire extinguishers. Especially in buses, small size user friendly extinguishers have at least one hour run pharmacy to cater to the needs and requirements of passengers. This could be possible by having collaboration with private companies like Apollo Care Pharmacy and so on.

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TNSTC can also introduce the modern buses like Double Ducker, Articulated bus which has some additional features like more space, it helps to accommodate many passengers and Low tunnel height. All these modern services help to enhance service quality of the existing TNSTC transport services. For effective maintenance of the buses as clean TNSTC can appoint more trained personnel. It creates employment opportunity also.

NGO's and social organizations should be approached asking them to provide water coolers to be placed in a properly constructed marbleized flooring at each bus depots, duly checked by sanitation officer attendant should be appointed by each depot so as to take care of the waiting halls and the facilities to the passenger awaiting their departure at odd time and complaint register to be maintained by attendant to take note of inconvenience to the passengers.

It is also suggested that Bio fuel can be used to reduce the pollution and insist to protect our environment. Luggage Keeping facility, Air Condition, Good engine and breaking system, special seating arrangements for the disabled passengers must be enhanced. This study insists to launch environment friendly vehicles.

Reliability

Adherence to strict timings is required to maintain service quality. Non availability of Bus service frequently, the passengers prefer their own vehicles it also causing huge accidents. In order to reduce these accidents TNSTC may introduce more new hi-tech buses to all the places of kanyakumari District. Through these effective facilities TNSTC can charge reasonable fare. Then more people use the service helps to strengthen the revenue source of the Government. In the study area very low dominance percentage involvement by the private transport. The top officials can draw a supreme system to standardize and modernize the TNSTC transport sector. As a result of these changes passengers believe hundred percentage only on the TNSTC transport service in the coming decades.

Responsiveness

For development of communication skills and customer relationship management, training should be provided to the conductors, drivers and bus depot officials on regular intervals about the effective hospitality. Also create awareness to the passengers about how efficiently they can use the transport service without causing any damage. The employees of the TNSTC should be more honesty, dedicated, kindness sincere towards their job responsibility.

The corporation may consider designing and publishing TNSTC time table containing the particulars like routes, destination, timings and fares. The time table should be released and modified once in six months to accommodate the changes made by RTC.

Assurance

The distance in kilometers from one place to the other prominent places has to be painted and fixed at prominent places in local language so that passengers will have clarity on distance between places.

Empathy

Conductors and drivers need to give proper trainings as to how to deal with the passengers and take the job service oriented.

IV. CONCLUSION

Digitalization is not an issue for the future. It is already happening and the public transport sector needs to embrace it, to take advantage of the numerous opportunities it offers as well as preparing itself for its role in the future mobility market. If not, many traditional public transport companies risk being left on the sidelines, their value chains cut or impacted by new stakeholders which are better responding to customer expectations. Public transport must remain the backbone of mobility in urban areas in order for them to be sustainable. Public transport operators and authorities should develop 'digitalization strategies' to ensure this.

V. REFERENCE

1. Advances in Services Marketing and Management, Vol.4, JAI Press, Greenwich, CT. AnandSwaroop, B (1993), "Improvements in Service Levels of City Buses—A Case Study of Hyderabad— Secunderabad", Indian Journal of Transport Management, April.
2. Modern Marketing principles and practices R.S.N Pillai, Bagavathi, Fourth Revised Edition PP.508-520
3. Vuchic, R (2009), "Comparative Analysis and Selection of Transit Modes in Public Transportation", Transportation, 7 (3).
4. Yi, Y (1990), "A Critical Review of Consumer Satisfaction", in Zeithaml, V.A. (Ed.), Review of Marketing, Vol.3, American Marketing Association, Chicago, IC.
5. Zahoor Ahmed Bhat (2003), "Public Versus Private Bus Operations—An Evaluation of Quality of Service", Indian Journal of Transport Management, April-June.
6. Zeithaml Valerie, A, Parasuraman, A and Berry, L.L (1990), Delivering Quality Services: Balancing Passengers' Perceptions and Expectations, Free Press, New York
7. Zeithaml, V.A, Berry, L.A, and Parasuraman, A (1996), "A Behavioural Consequences of Service Quality", Journal of Marketing, 60 (2).
8. Advanced Public Transport Rue Sainte-Marie 6, B-1080 Brussels | Belgium
9. www.google.com