

## Customer Satisfaction with Public Transport: the case of Metro Bus Service



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**Abstract:** *The purpose of the study is to explore the relationship between the satisfaction of customers and quality of service in relation to the Metro Bus Service in the twin cities of Rawalpindi and Islamabad. The factors that affect the customer satisfaction were explored through three dimensions and defined in the study. Therefore, a causal relationship was developed between the Metro Bus Services and the satisfaction of customers. For studying the customer satisfaction in public transport, the research paradigm pragmatism is chosen. In this research paradigm, the researcher not only perceives the reality but also the results are based on the interpretations of the individuals as well Data was collected through the questionnaire and quantitative research methods. SPSS is used to analyse the data and it is found that the significant results are shown for the reliability and tangibility whereas the other dimension is not supported by the research results. Therefore, the customer satisfaction and perception of service quality of Metro Bus can be improved through enhanced reliability and improving the features reflected in tangibility. This will lead to the customer satisfaction and improved service delivery through the Metro Bus Service.*

**Keywords:** Customer Satisfaction, Metro Bus Service, Public Transport, Quantitative Research, Service Quality

### Introduction

With the disarrayed and disordered urban development, transport system has been affected to a larger extent. It has led to the increasing problems of the mobility within the twin cities. Furthermore, the use of public transportation is not encouraged due to the increasing problems in the twin cities. In addition, the private vehicles on the road have also increased that has led to the aggravating traffic problems coupled with accidents on daily basis adding to the pollution and increased time consumed in reaching the destination within the twin cities as compared to the distance travelled.

The increasing use of private vehicle can be

associated with the dissatisfaction of the customers with the public transportation. There are number of factors involved in the dissatisfaction of the customers in the public transport as will be discussed in the following sections. Therefore, it can be deduced that prioritizing the public transportation policy must be the agenda of the government to promote the use of public transport among the masses. The transport sector has been neglected by the government which has led to the grave traffic and public transport situation.

In the developed countries the increasing use of public transport and its popularity has been associated with the affordable commute from

one place to another characterized by cheap fares and accessibility is also easy. The fares are reasonable in such countries as the government subsidizes the public transport through adoption of different economic policies (Hörcher & Tirachini, 2021). There are several benefits associated to the use of public transport. Research conducted in different cities reveals that the congestion and traffic jams problems on the roads are minimized through the use of public transport. Similarly, there are dedicated separate lanes for the running of public transport to avoid the road congestion (Abdulrazzaq, Abdulkareem, Yazid, Borhan & Mahdi, 2020). Furthermore, the people prefer public transport as they socialize through its use and meet new people (Cochran, 2020). Furthermore, the customer's needs, and demands are met by the public transport service providers and adds to the convenience of the customers. The use of public transport also leads to the money saving and reduced transportation costs for the customers (Tirachini, & Antoniou, 2020). It is also revealed in this report that the public transport is safer than the private transport and also encourages the customers to do daily walks to and from the stations and terminals that adds to the health concerns of the customers as well.

### **Research Objectives**

- To measure the factors affecting the satisfaction of consumers on Public Transport
- To propose measures to improve public transportation

### **Research Questions**

- What is the effect of reliability on the satisfaction of passengers?
- What is the relationship between the tangible service delivery through transportation and the satisfaction of passengers?
- What is the effect of the responsiveness on the satisfaction of the passengers?

### **Literature Review**

Public transportation relates to the system of transport where everyone who has paid the fare

can utilize it which operates on the routes designated by the government following different yet fixed time schedules (Dong, Ma, Jia, & Tian, 2021). Modern cities are based on the provision of public transportation systems for the use of general public at a large scale (Ceder, 2021). The Public transport system is based on the values of social equity in order to give benefit to all who pay the taxes and their mobility can be made easy in return for their taxes (Vecchio, Tiznado-Aitken & Hurtubia, 2020).

Customer satisfaction relates to fulfilment of the expectations of customers by the use of products and services (Zarifah et al., 2020). Customers who are not satisfied with products/services either return the product or complains about it. Therefore, the satisfaction is interlinked with the quality of the service and if the complaint is received, it means the failure of the service (Shamsudin, Johari, et al., 2020). Therefore, in order to improve the quality of the service, it is essential that the right values and information of the service is shared with the customers where the role of leader comes into play. With the right strategy, customers loyalty can be achieved and aids in development of brand image (Shamsudin, Azmi, et al., 2020).

Customer trust, therefore, plays an essential role in customer satisfaction. The trust of the customers leads to the satisfaction and ultimately to the loyalty who become the assets for the organisation (Sharma, Gupta, Gera, Sati & Sharma, 2020). Therefore, the attention to customers' needs is must so that the dedicated departments can work on improving the service quality, leading to customer satisfaction that paves way for the customers trust leading to customer loyalty (Razak & Nayan, 2020). Hence, it is necessary to maintain the standard of services. The smooth business operations can help in building standards and benchmarks for the improvement in service quality. There is a need for training the employees in the respective service delivery operations so that the customers trust, and satisfaction is achieved preventing any unexpected problems and ordeal situations and circumstances (Laisak, Rosli, & Sa'adi, 2021).

The customers satisfaction needs to be evaluated

from time to time so that top notch services are provided, and the organisation aims, and objectives are achieved (Nguyen et al., 2018). Organisations must track their operations, all the events and steps involved in the service delivery to identify any loopholes and weak areas which may affect the service delivery. All the identified loopholes then must be removed to the satisfaction of the target customers and audience and draw conclusive results in tracking the improved service delivery (de Ona, 2022).

Service quality is closely associated with the satisfaction of customers (Mahsyar & Surapati, 2020). The growth and expansion of the business depends on the quality of services provided to the customers. The dimensions of the service quality considered for this research paper are discussed here which are closely associated with the satisfaction of customers. Although other dimensions are also investigated by other researchers but the three dimensions to be discussed here are tangibles, responsiveness and reliability. The customer satisfaction is the ultimate goal of providing exceptional services.

Tangibles relate to all the physical appearances of the product or service for the customers. It includes the presentation of the product/service, the colour, appearance, the employees get up, their uniform and working conditions etc (Nägele, von Walter, Scharfenberger & Wentzel, 2020). It is mostly aimed at improving the first appearance and first impression of the product/ service that develops the perception of the customer. The Metro Bus which is a public transport, its tangibles includes the appearance of the bus, the cleanliness and appearance of the station and terminal, the appearance and behaviour of the staff at the bus station and inside the bus. The physical features of Metro Bus alter the perception of the customers.

The second dimension of service quality discussed is the reliability. It relates to the service delivery accurately or not as claimed and promised by the organisation (Engdaw, 2020). This determines the standard and benchmark of the services provided to the customers. The reliability of the services includes receiving the services on time and receiving services in their standard form. The reliability leads to customer

satisfaction and vice versa (Shamsudin, Nayan, et al., 2020). for Metro Bus the reliability will relate to timely arrival and departure of the bus, latest technology at the metro stations to reduce the weighting time and generate the tokens in time to catch the bus on time etc.

Lastly responsiveness is related to the quality of the service which means that best quality of service is provided to the customers and that too swiftly. As soon as any unforeseen and ordeal situation arises it is addressed not only quickly but also effectively. It enhances or diminishes the perception of good quality in the eyes of customers (Islaini & Nayan 2020). Therefore, internal services must be improved to enhance the responsiveness. For Metro Bus it relates to addressing the customers issues quickly, in time and easing their access to the bus. It also includes the transparent information processing and providing information in an efficient manner.

## **Methodology**

### **Research Paradigm**

Research paradigm relates to the philosophy of data collection, analysis in relation to a specific phenomenon so that the research is guided on a specific path (Khatri, 2020). It also relates to drawing knowledge about particular social setting and how the reality is perceived by the researcher. For studying the customer satisfaction in public transport, the research paradigm pragmatism is chosen. In this research paradigm, the researcher not only perceives the reality but also the results are based on the interpretations of the individuals as well (Kelly & Cordeiro, 2020). This study will be based on the subjectivity of the issue as multiple dimensions and perceptions of people added to finding facts and deducing results.

### **Research Design**

The proper course of action to be followed in research is determined by the research design to give a specific direction to the research questions posed (Creswell, 2021). As this study will investigate the customer satisfaction with the public transport, so the case study design was adopted where a single organisation was studied

and analysed to generate results.

### Quantitative Method

The quantitative approach to research is adopted where the survey method is used to collect data after sample is extracted from the target population. Questionnaire is used to extract data from the participants and interpret their attitudes towards a particular issue of interest (Creswell, 2021).

### Data Collection

Questionnaire was used to collect data for this research. Closely ended questionnaire based on 5-point Likert scale used to collect data.

### Sampling Technique and Sample

Simple random sampling technique is used to

extract the sample. Sample chosen is representative of all genders that is males and females using the Metro Bus Service to interpret their satisfaction level from the service quality of the Metro bus service. 220 is the sample taken for this research.

### Findings and Results

#### Reliability Analysis

Cronbach Alpha is used to measure the reliability and if its value is less than 0.6 then the data collected is not reliable. Values above 0.7 are considered acceptable and values closer to 1 show that the data is highly reliable (Hair et al., 2014)). Cronbach Alpha for all constructs in this research are shown:

| Construct             | Cronbach's Alpha |
|-----------------------|------------------|
| Customer Satisfaction | 0.937            |
| Reliability           | 0.945            |
| Responsiveness        | 0.950            |
| Tangibles             | 0.868            |

#### Table 1 Reliability Analysis

From the table above it can be seen that the value of Cronbach's Alpha is greater than 0.7 for all the constructs which reflects high reliability of the data.

### Discriminant Validity

Discriminant validity is conducted to identify and ensure that the constructs are distinctive and measure the variables accordingly and is done through Average Variance Extracted (AVE). It relates to the explanation of variables is discriminant and no correlation is found between the variables. The values are reflected in the table below:

| Construct             | Average Variance Extracted |
|-----------------------|----------------------------|
| Customer Satisfaction | 0.798                      |
| Reliability           | 0.819                      |
| Responsiveness        | 0.832                      |
| Tangibles             | 0.793                      |

## Table 2 Average Variance Extracted

### Testing of the Model

Model is tested with obtaining relationship

| Relationship                          | $\beta$ | T Statistics | p-value | Decision      |
|---------------------------------------|---------|--------------|---------|---------------|
| Reliability ~ Customer Satisfaction   | 0.222   | 3.034        | 0.003   | Supported     |
| Responsiveness ~Customer Satisfaction | 0.144   | 1.549        | 0.122   | Not Supported |
| Tangibles ~ Customer Satisfaction     | 0.269   | 6.066        | 0.000   | Supported     |

### Table 3 Model Testing

The table shows the relationship between the dependent variable and the independent variables. The dependent variable is customer satisfaction whereas the independent variables are reliability, responsiveness, and tangibles.

From the table it can be seen that the path coefficient value that is  $\beta$  for the reliability and customer satisfaction is 0.222 which reflects medium magnitude. The T value is 3.034 and p-value is 0.003. the p-values lower than 0.005 are considered significant and show a considerable effect of one variable on another. Hence, this supports that reliability has an impact on the satisfaction of the customers as shown in the results.

The relationship between the variables responsiveness and the customer satisfaction is not supported as the p-value is not significant. Its value is greater than 0.005 which means it is not significant. Similarly, the is  $\beta$  for the responsiveness and customer satisfaction is 0.144 which shows a small magnitude of impact. The result between responsiveness and the customer satisfaction is not supported by the research.

The relationship between the variables tangibles and the customer satisfaction is supported as the p-value is significant. The path co-efficient value that is  $\beta$  for the tangibles and customer satisfaction is 0.269 which reflects medium magnitude. The T value is 6.066 and p-value is 0.000. the p-values lower than 0.005 are considered significant and show a considerable effect of one variable on another. Hence, this

between the variables i-e the independent and dependent variables. The relationship is shown below in the table.

supports that tangible has an impact on the satisfaction of the customers as shown in the results.

The results shown reflect that the two constructs that is reliability and tangibles are significant and show positive relationship between them and the customer satisfaction. The other construct that is responsiveness is not supported by the results. It means that people prefer reliability and tangibles over the responsiveness. It is true for this setting only. If these factors are positive, then the customers will base their decisions on these two factors and their satisfaction level will be judged accordingly. Furthermore, it can be deduced that people have low understanding of the responsiveness due to the prevailing lack of education and illiteracy. People prefer public transport only when it is reliable which reflects low fares and affordable rides coupled with comfort and tangible features. These factors play an essential role in determining the perception of people.

### Conclusion

This research is based on the perception of people using public transport and investigating whether they are satisfied with the use of public transport or not. For this purpose, the service quality was explored, and its dimensions were investigated through the sample where questionnaires were used to gather data. After the data analysis it is found that the two constructs of this research are supported by the result whereas one construct is not supported. People prefer reliability and tangibles for their satisfaction whereas responsiveness does not contribute to their satisfaction.

## Recommendations

Based on the research results following recommendations are made: Through smartphone apps and digital displays at bus stops, inform passengers in real time about the whereabouts of buses and their anticipated arrival times. Make sure all passengers, including those with disabilities, can access buses' accessible features and that they are clearly marked with signage.

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