ASSESSMENT OF PASSENGER'S SATISFACTION WITH PUBLIC TRANSPORT SERVICES: A CASE OF DAR ES SALAAM BUS RAPID TRANSIT SRVICES (DBRT) IN TANZANIA

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CERTIFICATION

The undersigned certifies that he has read and hereby recommends for acceptance by the Open University of Tanzania a dissertation entitled: ***"Assessment of Passenger's Satisfaction with Public Transport Services: A Case of Dar es Salaam Bus Rapid Transit Services (DBRT) in Tanzania",*** in partial fulfilment of the requirements for the award of Degree of Master of Arts in Monitoring and Evaluation (MA M&E) the Open University of Tanzania.

……..

Dr. Felician Mutasa (PhD)

Supervisor

……..

Date

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DECLARATION

I, **Kamali S. Swalehe**, do hereby declare that, the work presented in this dissertation is original and it has never been presented to any other university or institution. Where other people's work has been used, references have been provided. It is in this regard that I declare this work as originally mine. It is hereby presented in partial fulfilment of the requirement for the Degree of *Master of Art in Monitoring and Evaluation.*

.....

Signature

.....

Date

DEDICATION

I dedicate this work to my lovely family, Hadija Mtani (wife), Haulat Kamali (daughter), Shani Kamali (daughter), and Lailat Kamali (daughter), for their love, tolerance, advices, prayers, and encouragement.

ACKNOWLEDGEMENT

First, for the accomplishment of this dissertation, I would like to thank the almighty God for giving me good heath physically and mentally and for his guidance throughout my life and the time of my study.

Second, I would like to acknowledge my family for their support from day one up to now. Also, I would like to express my deep appreciation to my supervisor Dr. Felician Mutasa for valuable contribution in producing this dissertation. These people shall never be forgotten for their assistance and a lot of contribution that they offer me which played a key role in enriching this dissertation.

Finally, I would like to take this opportunity to thank those who's their names do not appear in my dissertation. I really recognize their roles that might have played in one way or another towards the fulfillment of this dissertation.

ABSTRACT

This study focused on assessing passenger's satisfaction in public transport services, a case of DBRT in Dar es Salaam, Tanzania. The study was guided by four objectives, which was to determine comfort of the passengers, to identify waiting time of the bus services, to evaluate the safety and security of passengers inside the bus and to identify number of passengers in the bus. In this study 166 respondents participated in data collection whereby 140 were passengers, 23 were DBRT staff, and 3 were SUMATRA staff. The study used questionnaires to collect data from respondents and analyzed using SPSS and Microsoft Excel to generate Table, charts and graphs showing percentages. Findings indicate that passengers are dissatisfied with the quality of services offered by DBRT. Also, it was noticed that passengers are not satisfied with waiting time in bus stop, fare charged, safety, speed and care. Moreover, passengers were not satisfied with the overcrowding and cleanness inside the bus. The study found that in order to improve passenger's satisfaction more buses are needed to accommodate the demand and the frequency of the buses should be increased.

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LIST OF ABBREVIATIONS

BRT	Buses Rapid Transit
DART	Dar es Salaam Rapid Transit Agency
DBRT	Dar es Salaam Buses Rapid Transit
NLTTA	National Land Transport Transition Act
SUMATRA	Surface and Marine Transport Regulation Authority
DBRT	Usafiri Dar es Salaam Rapid Transit

CHAPTER ONE

INTRODUCTION

1.1 Overview

This chapter introduces the background of the study, statement of the problem, objectives of the study, research questions, significance of the study and scope of the study and limitations of the study.

1.2 Background of the Study

Increasing travel demand and preferences in using private vehicle is causing rapid motorization in many counties around the world and most people are now highly dependent on private motorized travel, this is because of attractiveness of using private car in transportation (Beirão and Sarsfield Cabral, 2007). The increase of private motorization has resulted and caused traffic congestion which has been the source of longer travel times for many people (Beirão and Sarsfield Cabral, 2007).

In addition to congestion, private motorization is also affecting the safeness of road users and high consumption of non-renewable vehicles has caused serious threat to the human environments. Researchers agree that many problems in public transport can be prevented by improving quality of service in public transport (Kodukula, 2009).

Public transport should become a solution for sustainable transport in the future. However, in order to keep and attract more passengers, public transport must have high quality service to satisfy and fulfill wide range customer's needs (Oliver, 1980; Anable, 2005). Transport service industry comprises of several modes which range

from air, water, railways, pipelines and road transports. However, this study focused on rapid transport, which is under the category of road transport. A rapid bus use dedicated lane with ability to carry out significant number of passengers taking trip to work, home, hospital, school and leisure. Unlike a commuter bus (daladala), which frequently stops anywhere in a city centers, a rapid bus stops only in dedicated bus stops along the route. Intercity buses exist all over the world that is operated by government or private industry (Young, 2004).

Despite the popularity of the mode of transport, there have been outcry from passengers about the quality of service offered that are very poor. Researchers and transport expert have tried to single out all problems related to transportation to level of satisfaction. For example, Fellesson and Friman (2008) conducted a study in European countries to assess the satisfaction of passengers in public transport. Results showed that passengers were not satisfied with the reliability and information, waiting time in bus stops, comfortable of seats and staff skills, knowledge and attitudes to passengers. There have been similar study in Africa where road transport is dominant compared to other mode of transport. Odufuwa (2006) highlighted some indicators for public transport to offer more efficient and safer services to passengers (Okoko 2007).

For decades, Dar es Salaam has been facing similar challenges of accommodating passengers during the rush hours Fellesson and Friman (2008) conducted a transnational comparison of customers' public transport perceived service satisfaction in eight cities (Stockholm, Barcelona, Copenhagen, Geneva, Helsinki, Vienna, Berlin, Manchester and Oslo) in Europe.

The result showed four general factors: system such as traffic supply, reliability and information; bus and bus stop design that makes customer comfortable and enjoy the travel experience; staff skill, knowledge and attitude toward customer; and safety not only both in the bus and bus stop but also safe from traffic accident. Furthermore, it was concluded that differences in public transport technology and infrastructure may cause differences in individual item loadings.

Eboli and Mazulla (2007) investigated service quality attributes important for customer satisfaction with a bus transit service in Cosenza, Italia. Respondent were asked to rate the importance and satisfaction with 16 service quality attributes (bus stop availability, route characteristic, frequency, reliability, bus stop furniture, bus overcrowding, cleanliness, cost, information, promotion, safety on board, personal security, personnel, complains, environmental protection and bus stop maintenance).

The result shows that the latent variable important for global customer satisfaction is service planning which is reflected in reliability, frequency, information, promotion, personnel and complaint. Beirão & Sarsfield Cabral (2007) summarizes advantages in using public transport according to Portugal public transport users. The result highlights the importance of a cost friendly and less stressful public transport service. It is perceived as less stressful since there is no need to drive, it is possible to relax and one may be able to rest or read. Travel time on exclusive bus lanes is considered faster than the car, there is less exhaust.

As a result, municipals, city councils and ministry of works, transport and communications have been addressing the problem whenever they meet in economic

forums and agenda. Unfortunately, no single solution has managed to solve the prevailing problem because the widening of the roads or any improvement of mode of transports tends to attract more demand. It is not surprising to see cities are overwhelmed with traffic jams and endless congestion, which compromise all economic activities and social life of people in urban areas (World Bank and OECD, 2003).

Since Dar es Salaam is the one of the fastest-growing cities in Sub- Saharan Africa, with estimated population of 4.5 million (NBS, 2012) and annual population growth rate of 4.3 percent per annum. The city is characterized by all types of people ranging from those with high income to lower income. According to household budget survey of 2016 nearly 70 percent of the population in Dar es Salam is under lower income (World Bank, 2002; NBS, 2016). These people are engaging in different informal activities which requires them to travel every day from one point to another. Unfortunately, most of them cannot afford the fare charged and cannot reach to working place on time but they have no option (Olvera et al., 2003). With that in mind, transport operators both companies, drivers and conductors have been taking advantage of the scarce of buses to provide poor quality of service.

The best practice shows that it is important to optimize and improve quality of service to increase passenger's satisfaction and loyalty to that mode of transport. However, up to now there is not conventional definition of customer satisfaction despite being widely researched. Scholars have established several reasons concerning the customer satisfaction in acquiring services/goods as elaborated in the work of Weinstein (2000).

The pressure of ministries, municipals, city councils and transport stakeholders to overcome the challenges of transport in Dar es Salaam lead to introduction of Bus Rapid Transit (BRT) in 2012. BRT was introduced in order to reduce the car dependence and at least to improve the level off services in transportation systems. The idea came after learning a lesson from other countries, which have succeeded in implementing similar projects. Many South American countries including Colombia have managed to cutoff congestion, traffic jams and accidents by 80 percent after introducing BRT (Wright, 2017).

From that background, Dar es Salaam was the first city in Tanzania to implement the project. The project was established under the name Dar es Salaam Bus Rapid Transit Services (DBRT) with the purpose of improvement in transport mobility, accessibility, safety and quality of service delivery and equity along the selected corridors in Dar es Salaam (Bagoka, 2015). Despite the significant effort and support made by government to overcome the aforementioned challenges the rate of traffic accidents, waiting time, delays along the route, ticketing procedures, limited number of buses, unreliable traffic lights have been compromising the mode of transport to render required service (Kiunsi, 2013). It is clear that the initial goal of eliminating car dependence in city have not been achieved as reported in the work of Rwenyagira (2016).

Researchers agree that something must be done to reduce car dependence, which will lead many people to use public transport like DBRT. Studies suggest that the only solution is to uplift level of satisfaction by improving quality of service inside and outside the bus terminals or stops. In the context of Tanzania literature assessing

passenger's satisfaction in public transport, specifically DBRT are limited. Therefore, the present study assesses passenger's satisfaction in DBRT operating in Dar es Salaam city.

1.3 Statement of the Problem

For more four decades, passengers in Dar es Salaam have been using commuter buses to make trip to various economic, social and leisure activities. Up to now, in some area around the city people are served by the same mode of transport after long debate of stopping them to operate in city centers. Daladala were characterized with a number of drawbacks including unscheduled time, changing of fare, change of routes, poor cleanliness inside the bus, abuse language from drivers and conductors to passengers and many others (Lupala, 2002).

The government and transport stakeholders made efforts to overcome the challenge by introducing DBRT, which operate by following all regulations of transport. Also, the mode has a capacity to carry more than three times the number of passengers used to be in commuter bus (daladala). Despite the significant effort made by government and transport stakeholders, the mode of transport service still face numerous and significant challenges. There are comprehensive materials in the work of Kinyama and colleagues (2008) concerning poor quality of service offered in public transport. Similar problems are found in DBRT which carry more than 140,000 passengers per day. Although UDRT has operated for three years, passengers are not satisfied with service offered. However, after thorough review of literature, it was noticed that there are knowledge gap to understand the level of satisfaction of passengers in DBRT.

From that background, the present study assessed the passengers satisfaction in DBRT based on the quality of service offered.

1.4 Research Objectives

The study consists of both main objective and specific objectives.

1.4.1 General Research Objective

The aim of the study was to assess passenger's satisfaction in DBRT being a public transport services in Dar es Salaam, Tanzania.

1.4.2 Specific Research Objective

(i) To determine comfortability of the passengers inside the bus.

(ii) To identify waiting time of the bus services.

(iii) To evaluate the safety and security of passengers inside the bus.

(iv) To identify number of passengers in the bus.

1.5 Research Questions

(i) What is the level of comfortability inside the bus?

(ii) How long it takes after arriving at waiting stations to board?

(iii) Does the safety and security of passengers inside the bus attained?

(iv) Does the bus carry recommended number of passengers?

1.6 Significance of the Study

This study revealed the following significances; first the findings of the study are useful to future reference of other researchers. Also, the study add knowledge, which bridge gap found in previous work of scholars investigated passengers satisfaction in

public transport. Findings are useful to policymakers in amending and reviewing some regulations regarding public transport.

1.7 Limitations of the Study

The limitations of this study were as follows: Inadequate funds for stationeries, transport and daily meals payments. Lack of good attitudes towards giving proper and true information by the respondents due to the reluctance about information confidentiality lacking of cooperation affected the process of conducting this research.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviews the literature and related models to research problem. The chapter introduces the definition of key terms like DBRT, passenger's satisfaction, public transport, services and relationship between passenger's satisfactions with public transport services. Also, presents theoretical reviews, empirical studies, research gap, conceptual framework.

2.2 Definition of Key Terms

This study used the following key terms to analyze the problem under study.

2.2.1 Satisfaction

Satisfaction, is an overall effective response to a perceived discrepancy between prior expectation and perceived performance after consumption (Bitner, 1994).

2.2.2 Public Transport

According to White, (2002) public transport is all modes of transportation available to the public irrespective of ownership. Mass transport.

2.2.3 Satisfaction of Passengers on Public Transport Services

Satisfaction is all what passengers want in public transport services but there are a lot of changes need to be done by the government to improve the transport system for passengers. These changes would bring innovative mobility strategies and meet

passengers' satisfaction which will improve the quality of living for the urban and rural residences. Passengers perception of quality service varies from different service delivery environments due to different urban setting such as land use and traffic system, location, level of accessibility, well fare structure and route characteristics.

2.4 Theoretical Framework

2.4.1 Transportation Theory

Transportation theory describes the tendency of narrative consumers to "travel" or be mentally drawn into the reality described in a narrative, as well as the outcomes associated with this experience of narrative immersion. Narrative transportation involves a strong sense of absorption into a narrative, including emotional and cognitive responses to narrative content that mirror reactions to real-world events.

Transported readers may also experience vivid mental imagery. Transportation predicts the persuasive impact of narratives, with transported consumers frequently displaying increases in story-consistent beliefs, attitudes, and behaviors. Transportation has also been found to influence aspects of the mind as central as self-concept. It is related to, but distinct from other forms of media engagement **(**Melanie, 2017).

2.5 Empirical Studies

2.5.1 Worldwide Empirical

There are a lot of literatures on customer satisfaction and complaints handling, Gatersleben and Uzzell (2007) investigated affective experiences of daily commute. The results revealed that commuting by car as well as by public transport can be

stressful because of delays caused by the traffic volume. Public transport was perceived as unpleasant and public transport users expressed a more negative attitude toward their daily commute than users of other transport modes. The negative attitudes were shown to be related to stress as well as boredom caused by delays and waiting time. They suggested that public transport is stressful due to unpredictability and longer travel times. This study also acknowledges some sources of pleasure for public transport users. Attributes relating to pleasurable feelings were as the possibility to read during the trip, to listen to music, to interact with other people, and to look at the passing scenery.

Sohail, et al., 2004, most developing country governments face dilemma on how to promote affordable public transport for the urban poor. In the developing countries, the trend of turning to the private sector for the provision of public transport services has resulted in a large number of individual operators whose main aim is to maximize.

UK Department for transport (2003) has also conducted studies regarding customer need in public transport. High frequency of service, services that are reliable and fares that offer value for money are revealed as important needs of UK public transport users. The bus also has to have a broad range of destinations to fulfill travel demand of customer. In this report, the users also reported about the importance of understandable time table information in bus stop and in local newspaper in order to make them aware of the existence of the service. Simple ticketing arrangement is also important in order to make them use public transport.

Fellesson and Friman (2008) conducted a transnational comparison of customers' public transport perceived service satisfaction in eight cities (Stockholm, Barcelona, Copenhagen, Geneva, Helsinki, Vienna, Berlin, Manchester and Oslo) in Europe. The result showed four general factors: system such as traffic supply, reliability and information; bus and bus stop design that makes customer comfortable and enjoy the travel experience; staff skill, knowledge and attitude toward customer; and safety not only both in the bus and bus stop but also safe from traffic accident. Furthermore, it was concluded that differences in public transport technology and infrastructure may cause differences in individual item loadings.

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Beirão and Sarsfield Cabral (2007) summarizes advantages in using public transport according to Portugal public transport users. The result highlights the importance of a cost friendly and less stressful public transport service. It is perceived as less stressful since there is no need to drive, it is possible to relax and one may be able to rest or read. Travel time on exclusive bus lanes is considered faster than the car, there is less

exhaust emissions and there are opportunities to talk to fellow passenger while travelling.

A literature review (Oktiani 2009) confirms that there is research with an aim to identify unattractive and disappointing factors in public transport. For instance, Beirão (2007) conducted depth interviews in Porto to find out dissatisfying factors. Customers reported waste of time, too crowded, lack of comfort, time uncertainty, lack of control, unreliability, long waiting times, need to transfer, they cannot change route to avoid traffic congestion, lack of flexibility, and long walking time. Edvardsson (1998) found that driver incompetence, punctuality and information were important factors causing dissatisfaction.

Friman et al. (2001) conducted a mail survey to investigate factors affecting customer satisfaction in public transport service in Sweden. The results showed that overall cumulative satisfaction related to attribute specific cumulative satisfaction and remembered frequencies of negative critical incidents (e.g. the driver behaves unexpectedly bad or the bus is leaving before scheduled departure time).

2.5.2 Empirical Studies in Africa

The predicament of how public transport services can be more efficient and safer is frequently discussed by Odufuwa, (2006). Solutions involving registration of all modes of public transport and regulation of operation time have not yet solved the problems of the service in most Nigerian cities (Okoko, 2007).

Petra, 2005; Rivera, 2008,in their studies signal for the consideration of transportation needs to both women and men in the management of transportation sector in the city.

Scholars over the years has observed that, public transport operators are more concerned with speeds than the reliability, safety, convenience and accessibility of the service to the user users. Lynch et al. (1988) noted that, there is need to consider whether the existing public transportation services in developing cities purvey for the pressing mobility needs of the vulnerable groups. They then emphasized that, for public transportation in future cities to be an alternative to private automobiles the operating conditions must be improved.

Transportation in South Africa –The MSA in 1998 realized that there's a need for transportation skills in all tiers of Government. "South Africa has been rated the worst among 46 countries in human resource development practices. Whereas the pre-transition economy stressed the labor creation in transportation works, the new economy needs transport workers with sufficient skills to create value in their work.

Government becomes a hitch for transport to meet the national and customer objectives. While all provinces are experiencing technical and administrative skills shortages and high turnover, the problem is most striking in the newly established provinces. As provinces grow, new skills are needed in the dimension of land use and infrastructure planning, contract design and management, monitoring and enforcement, and multi-modal passenger system inquiry, design, and support.

These skills are needed at the state level to create and the vision and make the critical scope and density decisions. "Kingma", head of Public Transport, Cape Metropolitan Council, shares similar sentiments on the need for public transport professionals. "The two key component of the National Land Transport Transition Act (NLTTA)

are the establishment of Transport Authorities and the devolution of powers to the Transport Authorities. To date local government accede the importance of public transport in vision statements and policies. However, they have evade away from implementing the vision statements and policies. This is primarily because they don't want to commit themselves to the costs associated with public transport."

However, there is another reason and that is, municipal engineers have virtually no experience or training in how to deal with public transport. The problem is compounded by the fact that there are no university or technician training programmes, which are geared towards public transport. The limited transportation courses, which are available, concentrate primarily on road and traffic engineering. This is an area where the National Department of Transport needs to take the lead and bring out experts to provide courses to build the capacity of municipal engineers in the field of public transport.

It was evident in many public transport studies carried out recently (1999 – 2000) for the Pretoria Metropolitan Council (now Tshwane Metropolitan Municipality), were not practical and workable. In fact, a major portion of many reports was actually derived out of public transport literatures that are not applicable to the current South African needs. It is necessary now to declare that South Africa needs radical public transport solutions for immediate implementation that compliments the ultimate implementation plan 2020 hence. The South African Government is firmly committed to making rail a more attractive and widely available mode of public passenger transport, concession rail operations, rationalize services in relation to metropolitan

planning for optimal mode-for-route choice, integration with other transport modes, and empower small contractors, etc.

The South African Government is not adequately equipped with transportation skills to implement the MSA strategy with its current transportation officials. The Minister however, mentioned that close attention is being given to building sufficient capacity in the provincial departments of transport to manage this function in a cost-effective manner while meeting the needs of customers in a manner appropriate to market conditions.

According to Hughes and Zhu (2011), the implementation of bus rapid transit can have at least six potential impacts on greenhouse gas emissions on a certain corridor: Induced modal shift to BRT from more emission-intensive modes. Increased fuel efficiency due to increase in mixed traffic speeds: significant increases in overall traffic speed can be achieved by removing many frequent bus stops. Reduced vehicle kilometers travelled due to planned routes. Increased fuel efficiency of buses due to improved transit vehicle speed. Improved bus fuel efficiency of new buses and the scrap page of old buses. Decreased auto trips due to the development of transit-supportive land uses and decreased household motorization rates.

2.5.3 Empirical Studies in Tanzania

Olvera et al. (2003) explained about transportation conditions and access to services in a context of urban sprawl and deregulation which shows major deficiencies in urbanization and transportation systems are reinforcing patterns of social and urban segregation in Dar es Salaam, Tanzania's largest city. Analysis of the 1993 Human Resources Development Survey shows that there are numerous obstacles to the daily

travel of the city's inhabitants, notably the poor. These barriers weigh heavily on schedules, complicate access to services ever further, limit the use of urban space, and place considerable pressure on household budgets. Consequently, the poorest individuals tend to retreat into their neighborhood where the low-quality urban facilities are unable to assist in the development of human and social capital and economic opportunities, the alleviation of poverty or the prevention of social exclusion.

The age-standardized injury death rates among men were approximately three times higher than among women in all study areas. Transport accidents were the commonest cause of mortality in all injury-related deaths in the three project areas, except for females in Hai District, where it ranked second after intentional self-harm. We conclude that injury deaths impose a considerable burden in Tanzania. Strategies should be strengthened in the prevention and control of avoidable premature deaths due to injuries http://www.sciencedirect.com/science/article.

Mfinanga (2012) carried out study about Challenges and Opportunities for the Integration of Commuter Minibus Operators in Dar es Salaam City and found that Public transport in Dar es Salaam is dominated by private bus as daladala not only that but also service offered is generally poor and unsafe, lacking professionalism, efficiency, quality and safety for the commuters. These factors compelled the City Council to consider the introduction of a Bus Rapid Transit (BRT) system in the city, namely DART system, which is being implemented by the Dar Rapid Transit Agency (DART). (http://www.codatu.org/wp-...ICLE-Codatu-XV-2012-EN.pdf).

Sohail et al. (2006) explained the importance of effective regulation for sustainable public transport in developing countries. The research undertaken in Colombo (Sri Lanka), Faisalabad (Pakistan) and Dar es Salaam (Tanzania) shows the following importance, Firstly an appropriate regulatory framework and effective mechanisms of enforcement for sustainable urban transport systems in developing countries. Secondly, the paper highlights the critical importance of communication and co-ordination between stakeholders (defined here as transport users, providers and regulators) if regulation is to be effective.

The views of poor and disadvantaged passenger groups—women, children, the elderly and disabled—are used in the paper to illustrate the importance of transport systems to their livelihoods, such as work, education, health and social pursuits. The studies suggest that in the context of the failure of both the fully regulated public transport sector and the completely deregulated sector self-regulation is a potentially useful alternative. In practice self-regulation has been achieved in the case study locations through the formation of cooperatives or associations of stakeholders such as users and operators (https://dspace.lboro.ac.uk/dspace-jspui/handle/2134/3845).

2.6 Research Gap

In the vein of literature review the study reviewed passenger's satisfaction with DBRT in Dar es Salaam. The study by Mfinanga (2012) carried out study about Challenges and Opportunities for the Integration of Commuter Minibus Operators in Dar es Salaam City and found that Public transport in Dar es Salaam is dominated by private bus as daladala not only that but also service offered is generally poor and

unsafe, lacking professionalism, efficiency, quality and safety for the commuters and he suggest that implementation of Bus Rapid Transit (BRT) system in the city in Tanzania main land will be a solution.

Also Olvera (2003) carried out a study about transportation conditions and access to services in a context of urban sprawl and found major deficiencies in urbanization and transportation systems are reinforcing patterns of social and urban segregation in Dar es Salaam, Tanzania's largest city and suggest that implementation of road transport master plan in Tanzania urban area will be a solution.

Currently, there is a need of assessment on public bus transport services on passenger's satisfaction in Dar es Salaam through DBRT system. This study therefore, provides a benchmark for comparisons of the current and previous transportation services. Based on the aforementioned reasons, this study has been conducted to assess DBRT passenger's satisfaction on public transport services in Dar es Salaam city.

2.6 Conceptual Framework

A conceptual framework is a research tool anticipated to help the researcher to be familiar and understanding the factors influencing customer's satisfaction in public transportation. The basic feature of conceptual framework includes independent, intervening and dependent variables. Independent variables are variables that influence others variables and dependent variables are variables which are influenced by variation that occur in another variable.

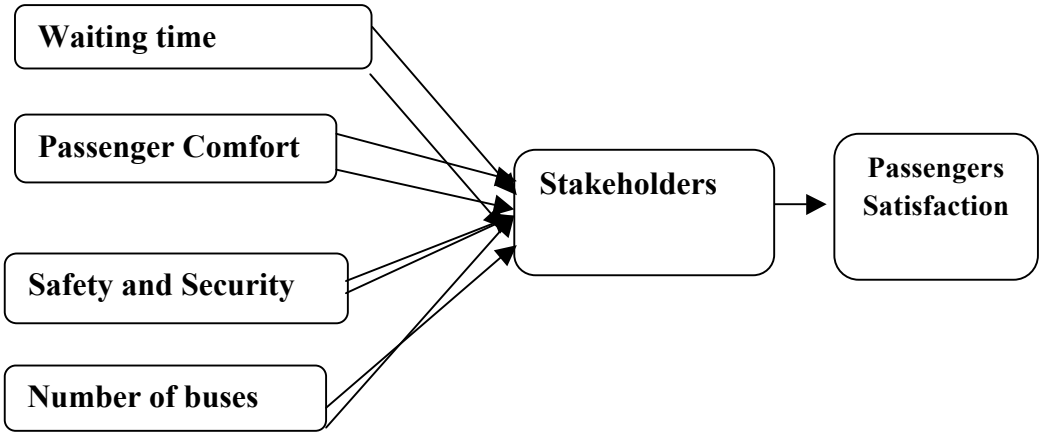

Figure 2.1: Conceptual Frameworks, Customer Satisfaction Model of DBRT

Source: Developed by the Researcher, 2019

Factors influencing customer's satisfaction of DBRT in Dar es Salaam in the model, customer satisfaction depend on independent variable which are means of transport, price setting up Fare price, Comfort ability of the passengers, minimization of vehicle congestion, smoothness of the transport operation and change of customers behavioral which all together influences dependent variables which is customers satisfactions. Guided framework below shows relationships between variables influenced passenger's satisfaction. It helps to explain how independent and intermediate variables led to dependent variables.

(i) Waiting Time

Empirical evidence shows that the time travelers spend outside the transportation vehicle of choice (e.g., waiting at a stop) is more onerous than the time they spend inside the vehicle in motion to their destination (Ben-Akiva and Lerman 1985). This is partly due to the higher degree of uncertainty associated with waiting for a transit vehicle. This phenomenon is well characterized by Duffy (2002): "People don't mind waiting for a bus if they know how long it's going to be. Even if they have to waste

the time, at least they know it's going to be 15 minutes. Otherwise they're sitting there thinking the bus will be along in about two minutes, and when it doesn't show, then they start getting frustrated." In general, reducing waiting time uncertainty is expected to improve passenger satisfaction, and ultimately increase bus ridership.

Mishalani et al. (2000) studied the value of information to passengers in terms of using the waiting time more effectively, while Hickman and Wilson (1995) studied the value in terms of improved route choice. This research focuses on passengers' perceptions of their waiting time at stops (outside the vehicle) and, as a result, the possible reduction in such times when real-time passenger information is provided.

(ii) Passenger Comfort

This is a psychological state characterized by stress and lack of control due to the suffocation caused by overcrowding before and during trip including poor physical facilities of the BRT system (Marco at el, 2015). This is considered in terms of noise levels produced by bus and passengers, vehicle bumping due to poor road condition, overcrowding of commuters at the stations and terminals and within the buses, rough driving and over speeding, poor/lack of toilets at the terminals, bad communication between ticketing agency or drivers and commuters, poor hygiene and ventilation in buses and stations and lack/poor travel information.

Comfort is one of the major travelling behaviors which cause commuters to shift to other modes neglecting other benefits such as travel time and fare. In order to minimize overcrowding and improve comfort to commuters it is necessary to.

(iii) Number of Buses

For decades, Dar es Salaam has been facing similar challenges of accommodating passengers during the rush hours the bus where purposely introduced for improvement in transport mobility, accessibility, safety, and quality of transport service delivery along the selected corridors in Dar es Salaam (Bagoka, 2015). Reports show that as for 2014 commuter buses operated in Dar es Salaam city were 5,200. Despite the big number of buses, motorcycle and tricycles in the city but traffic problems remained high. The routes had tremendous traffic accidents, waiting time for daladala at stops were more than one hour, delays on journey due to traffic congestion were also high (Kiunsi, 2013). Thereby the higher the number of buses is proportionally with passenger's satisfaction.

(iv) Safety and Security

Fellesson and Friman (2008) conducted a transnational comparison of customers' public transport perceived service satisfaction in eight cities (Stockholm, Barcelona, Copenhagen, Geneva, Helsinki, Vienna, Berlin, Manchester and Oslo) in Europe. The result showed four general factors: system such as traffic supply, reliability and information; bus and bus stop design that makes customer comfortable and enjoy the travel experience; staff skill, knowledge and attitude toward customer; and safety not only both in the bus and bus stop but also safe from traffic accident. Furthermore, it was concluded that differences in public transport technology and infrastructure may cause differences in individual item loadings.

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CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter covers the research design that was the overall logic general strategies or basic plans of the approach, methods of obtaining and analyzing data. Therefore, this chapter presented the research design, area of the study, techniques used in selecting population samples and instruments which used in data collection.

3.2 Research Design

Research design is a plan or blueprint of how research is intended to be conducted. It focuses on the end product point of departure and the logic of the research (Babbie and Mouton, 2001). This means that any research must develop a design that guide the process of planning and execution during data collection in order to have clear pattern of expenditure and even time frame of completing the activity**.** The study used a case study design to describe unity of details looking on how service quality is contributory factors to the satisfaction of passenger's needs.

3.3 Research Approach

This study employed both qualitative and quantitative approaches in carrying out the study. Qualitative approach used so as to allow the researcher to gain a deeper and clearer understanding of the respondents' knowledge, feelings and experience concerning DART. According to Kombo and Tromp (2006), qualitative research uses the natural setting, for instance, a transportation setting and not a laboratory, and that in qualitative research, feelings and insights were considered important. Therefore, qualitative approach were adapted to all respondents.

However, the study also used the quantitative method for other respondents who were given questionnaires to fill in. The prevalent use of quantitative data was focused inquiry on a discrete set of variables to test specific research question. The qualitative data is open the study through presenting the large, interconnected complexities of a situation. The researcher developed quantitative measures from a qualitative data because measures are not currently available, existing measures do not represent populations that was studied and the topic was not explored much by others.

3.4 Area of the Study

Dar es Salaam was established by Sultan Seyyid Majid of Zanzibar in 1862 as a port and trading centre. The Sultan brought laborer's and slaves from Zanzibar to carry out its construction. Buildings and streets were made of stone. After the death of Sultan Majid eight years after the establishment of the city, the development projects were abandoned and the city was left to decay (Kimaryo, 1996). Therefore, this study was carried out in Dar es Salaam region because the researcher selects all routes of DBRT public transportation as a case study because of an easy accessibility of respondents. The Dar-es-Salaam metropolitan area is located on the eastern part of Tanzania between 6º34'S and 7º10'E along the West Indian Ocean coastline.

3.5 Study Population

Population is the target group to be studied; it is the aggregate of all the units pertaining to a study (Krishnaswami et al., 2007). The study population consisted nearly different stakeholders to which includes passengers' who use DBRT public transport, service provider (DBRT) and regulator of public transport board (SUMATRA).

3.6 Sampling Techniques

The sample for this study drowned from the population through purposive and random sampling techniques.

3.6.1 Purposive Sampling

Rwegoshora (2006) defined purposive sampling, as the sampling procedure in which each element of a population is purposively selected for some characteristics, or characteristics of interest. It is mostly used for focused group. Purposive samplings are sometime chosen because they fit certain criteria; the method is often used for community studies or case studies, (Kothari, 2014). In this study, purposive sampling used to select 3 respondents' as servicer regulators (SUMATRA) in order to have clear insight of the situation and issues concerning with proper service management.

3.6.2 Simple Random Sampling

Kothari (2014) there are much more current references states that simple random sampling provides equal chance to every member in the population to be involved. Key informant applied for 23 respondent's service provider categories such as drivers, ticket seller, managers and bus stop supervisors' 3 respondents from DBRT staff by purposive method, but also the simple random sampling used to attain 140 respondents as passengers and a random selection of the DBRT route.

3.7 Sample Size

Refers to the respondents selected for the representation of the total population in order to produce a miniature cross section (Powell, 1997). The sample size for this study drowned from a study population which use DBRT public transport in Dar es Salaam region. The number of DBRT user is infinite, it is impossible to exactly know

number of DBRT user. If population under study is infinite, sample size was calculated by using the following formula (Cochran, 1977).

$$n = \frac{p(1-p)Z^2}{e^2}$$

Whereby;

n = Sample size

P = Population proportion (0.5)

Z = Represents confidence; the value is from z-score table, confidence interval at 99%, z = 2.58

e = Acceptable random error (10% of σ (e = 0.10σ)

$$n = \frac{0.5(1-0.5)2.58^2}{0.10^2}$$

n = 140

Therefore, the sample for the study included total sample of 166 stakeholders which categorized as follows 140 passengers, 23 DBRT service provider and 3 service regulators board members. To accomplish this task effectively and efficiently the researcher used 166 respondents among stakeholders in Dar es Salaam, because the size was affordable to the study putting into consideration of time and fund available.

3.8 Methods of Data Collection and Tools

There are two major approaches for gathering information about a situation, person problem or phenomenon. These approaches are secondary data and primary data employed as the data collection approaches in this study.

3.8.1 Secondary Data

Secondary data involves collecting information from various sources. This include published articles in journals, published books, various newspapers and other relevant documents found from internet websites provided the means for secondary source. In this study these sources used to collect information as a secondary data.

3.8.2 Primary Data

Primary data refers to the data a researcher obtains from the field that is a subject in the sample (Mugenda, 2003). It argues that a primary source of data provides the word of witness or first record of an event. They include a broad range of materials such as diaries, letters and other documents by the participants in an event. In this study, primary data collected through the use of self-administer questionnaires, key informants' questionnaires, and observation.

3.9 Data Collection Instruments

Base on the nature of the problem, one method of data collection was not effective in obtaining reliable and valid information. Thus, more than one method of data collection were used for ensuring reliability and validity. This study therefore, both primary and secondary data as well as quantitative and qualitative methods of data collection were used. These include: Questionnaire for both passengers' respondent and key informants also observation form report.

3.9.1 Questionnaires

These are set of questions intended to capture the feelings, attitudes and values of respondents in a systematic way (Kothari, 2004). Questionnaire is one of most used in data collection methods, the researcher used it to all categories of the respondents.

The method was suitable to the respondents because many of them were literate, who can read and write. Additionally, the method was free from researchers' bias as it gave the respondents enough time to reply to the questions on their own understanding. Both key informants and passenger's questionnaire were selected according to the sampling technique used as the study indicted.

3.9.2 Observation

The study used observation method to observe behaviors of satisfaction or dissatisfaction of both service providers and passengers. This method was not bias and it also helped the researcher to keep memory. The researcher was carefully and accurately watch and record the events as they occurred in their natural setting by the help of photography.

3.10 Data Analysis

Data analysis refers to the computation of certain measures along with searching for Patterns of relationship that exist among data groups (Kothari, 2004). Both qualitative and quantitative methods for data analysis were used in this study. Quantitative research design uses numerical information such as statistics and tables. Both qualitative and quantitative therefore complemented each other so as to obtain accurate information. The data collected during the study were analyzed by using the SPSS software so that the study becomes successful. The result obtained from data collection instruments such as interview and questionnaire were analyzed by using SPSS tool and the results were in the form of tabulation on the percentage distribution of the respondents, graph, and chart.

3.10.1 Data Interpretation

The interpretation of data is in a report from where tables, graphs, charts, and tools of analysis (SPSS) and Microsoft excel used to interpret data collected through primary and secondary method concerning with the satisfaction of the passengers with DBRT bus transport services.

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSION

4.1 Introduction

This chapter presents the research findings and discussion of the study. The presentations were made according to the specific objectives of the study.

4.2 Responses Rate

The researcher distributed 166 questionnaires to the respondents. The summary of response rate is presented in Table 4.1.

Table 4.1: Response Rate

Type of respondent	Number of respondents expected	Number of obtained respondents	Response Rate	Frequency	Percentage
Passengers	140	80	Responded	98	59.0
DBRT Staffs	23	15			
SUMATRA	3	3	Declined	68	41.0
Total	**166**	**98**		**166**	**100**

Source: Researcher Data, 2019

The response rate was depending on the availability and willingness of respondents to participate in the study by accepting and filling the questionnaires administered so as to provide information for the study. A sample of 166 respondents selected for this study. As shown in Table 4.1, out of the total 166 questionnaires the researcher administered, only 98 questionnaires were responded and 68 not responded.

4.3 Characteristics of the Respondents

The following characteristics of the respondents were covered in the study; age, gender, occupation.

4.3.1 Ages Group of the Respondents

From the study, it was realized that among of the respondents fell between the ages of 14 -19 years represented by 5.0% respondents between the ages of 20-35 years represented by 17.0% respondents between the ages of 36-45 years represented by 38.0% respondents fell between the ages of 46-65 years represented by 35.0% and respondents fell between the ages of 66 and above years represented by 5.0%.

Table 4.2: Age Group of the Respondents

Age group in years	Frequency	Percent
14 – 19	5	5.0
20 - 35	17	17.0
36 - 45	37	38.0
46- 65	34	35.0
66 and above	5	5.0
Total	**98**	**100.0**

Source: Field Data, 2019

The result show that age of 36-45 years and 46-65 years which was represented by 38.0% and 35.0% of the total number seemed to have aspiration in involving using DBRT public transport either for going to school/college or work. (See table 4.2).

4.3.2 Gender of the Respondents

The results show that, of the total of 98 respondents administered with the questionnaires, majority were males 61.0% and the females totalled 39.0% (See Figure 4.1).

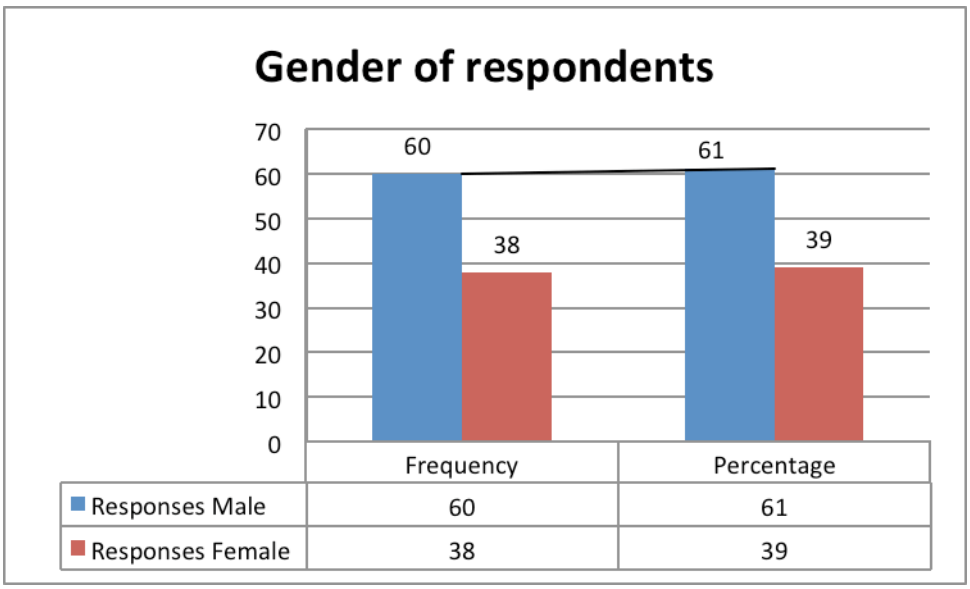

Figure 4.1: Gender of Respondents

Source: Field information, 2019

From this statistics, it can be deduced that more men were represented in this study than women and opinions given were male-dominated (See Figure 4.1).

4.3.3 Occupation of the Respondents

The study revealed that 26.0% of respondents were students 61.0% of respondents were business people and 13.0% of respondents were employed (See Figure 4.2).

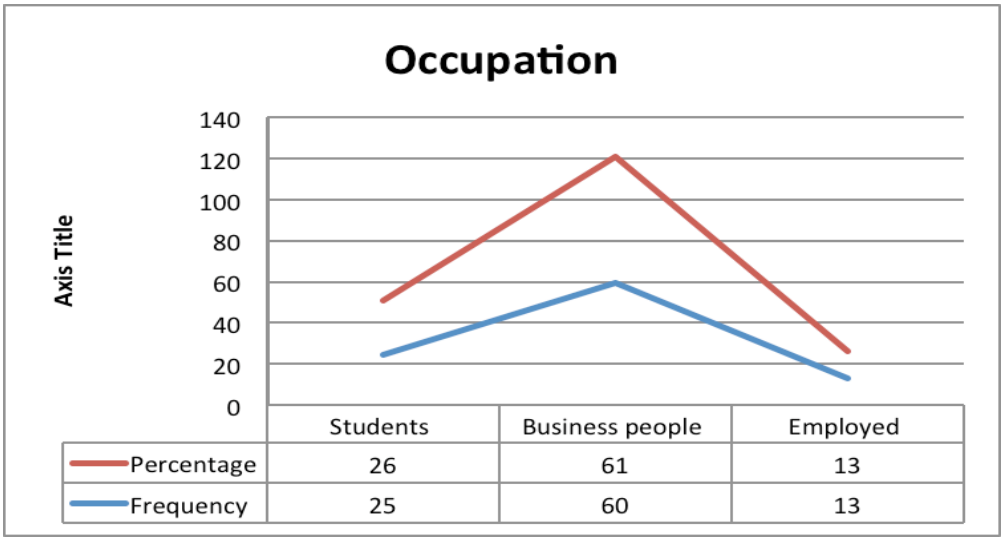

Figure 4.2: Occupation of the Respondents

Source: Field Work, 2019

From this statistics, it can be deduced that more business people were use DBRT public transport. This is due to the routes of DBRT public transport, from Mbezi to Gerezani, Mbezi to Kivukoni, Mbezi to Morocco, and Morocco to Gerezani, and Morocco to Kivukoni there are many schools, markets and offices. Also, in student's side other public transport (daladala) refuse to carry students especially during morning and evening because students pay TZS. 200/= as transport cost, that's why many students use DBRT public transport (See Figure 4.2).

4.4 Comfort of the Passengers Inside the Bus

Table 4.3 show that 88.0% of the passengers said comfort inside the bus is not attained and 12.6% of the passengers said comfort inside the bus is attained.

Table 4.3: Comfort of the Passengers Inside the Bus (n = 80)

Comfort	Frequency	Percent
I am comfortable	10	12.0
I am not comfortable	70	88.0
Total	**80**	**100.0**

Source: Field Data, 2019

Table 4.3 indicates that most of the passengers were not comfortable when they inside the bus, represented by 80.0% of the all total number of passengers. This implied that due to most of respondents respond negatively so that comfort-ability of the Passengers inside the bus is not attained. During discussion with one passenger on Comfort-ability inside the bus when using Bus Rapid Transits, she said that,

> *"...Passenger discomfort worsens during rush-hour traffic when many passengers have to travel standing all the way in extremely crowded conditions. The Comfort is an important consideration for riders of public bus transport and, as such, basic standards for comfort must be established and monitored to ensure that the Dar es Salaam bus operators adhere to them..."*

Plate 4.1: Interior of One of the DART Buses

These findings were consistency to that plate 4.1 (citiscope.org/commentary/2017) that show some Passenger discomfort worsens during rush-hour traffic when many passengers have to travel standing all the way in extremely crowded conditions.

4.4.2 Number of Passengers in the Bus

Figure 4.3 show that, 37.0% of the passengers said that crowded and 52.0% of the passengers said that overcrowded (see Figure 4.3).

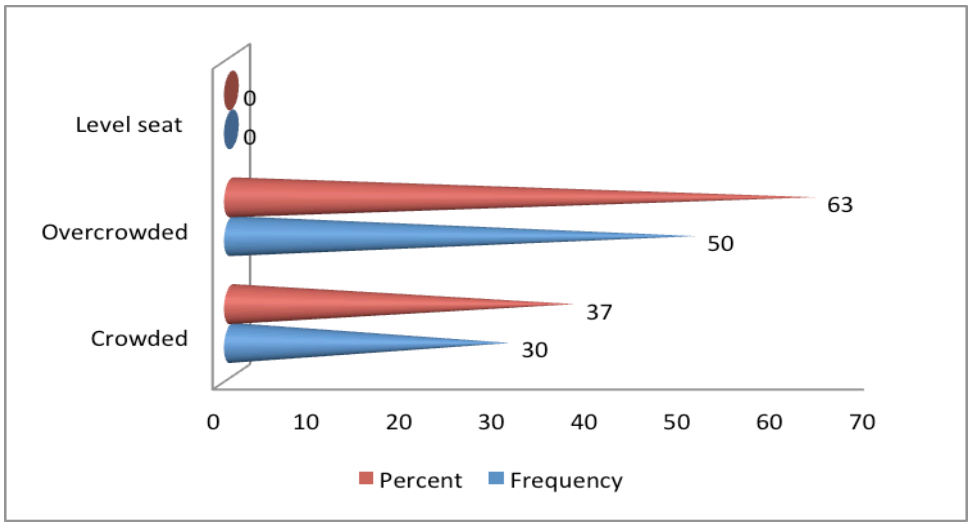

Figure 4.3: Responses of Situation of Number of Passengers in the Bus (n = 80)

Source: Field Data, 2019

Figure 4.3 it realized that situation of number of passengers in bus is overcrowded, represented by 63.0% of the all total number of passengers.

4.4.3 Passengers Waiting Time of bus Services

4.4.3.1 Waiting time of Bus Services

Figure 4.4 show that, 25.0% of the passengers said that not more than 10 minutes, 63.0% of the passengers said that between 10-15 minutes and 12.0% of the passengers said that between 15-30 minutes.

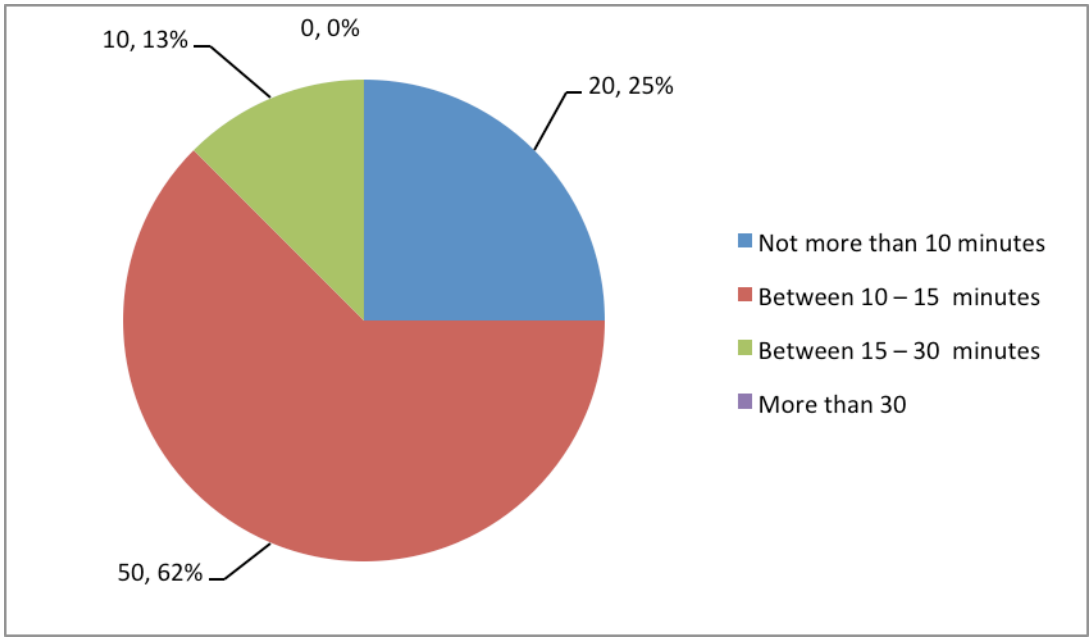

Figure 4.4: Responses of Waiting Time of Bus Services (n = 80)

Source: Field Data, 2019

Figure 4.4 it realized that waiting time of bus services said that it take between 10-15 minutes, represented by 63.0% of the all total number of passengers.

4.4.4.2 Suggestion of waiting service time

Table 4.4 show that, 73.0% of the passengers said that high satisfied, 27.0% of the passengers said that satisfied and no passengers said that not sure.

Table 4.4: Responses of Suggestion of Service Time During Bus Services (n = 80)

Service time	Frequency	Percent
High satisfied	58	73.0
Satisfied	23	27.0
Not satisfied	0	0
Total	**80**	**100.0**

Source: Field Data, 2019

Table 4.4 points that most the passengers said that waiting service time is high satisfied represented by 73.0% of the all total number of passengers.

Plate 4.2: Bus Stations with Passing Lanes

Findigs were consistency to that plate 4.2 (citiscope.org/commentary/2017) that show, DART has reduced commute times by more than half for some residents, who previously faced upwards of four hours stuck in traffic every day. At stations with passing lanes, some of the existing bus fleet can provide express service to key destinations, saving even more time.

4.4.5 Ticketing System

The researcher asked DBRT Staffs about uses of bus ticketing system.

4.4.5.1 Bus Ticketing System

Table 4.6 show that, 15(100.0%) of the DBRT Staffs said that the uses of bus ticketing system improved.

Table 4.5: Responses of uses of Bus Ticketing System (n = 15)

Bus Ticketing System	Frequency	Percent
Improved	15	100.0
Somehow improved	0	0
Not improved	0	0
Total	**15**	**100.0**

Source: Field Data, 2019

Table 4.5 it realized that the uses of bus ticketing system improved represented by 100.0% of the all total number of DBRT Staffs.

4.4.5.2 Waiting Time of Bus Ticket

Figure 4.5 show that, 10(67.0%) of the DBRT Staffs said that not more than 10 minutes and 5(33.0%) of the DBRT Staffs said that between 10-15 minutes.

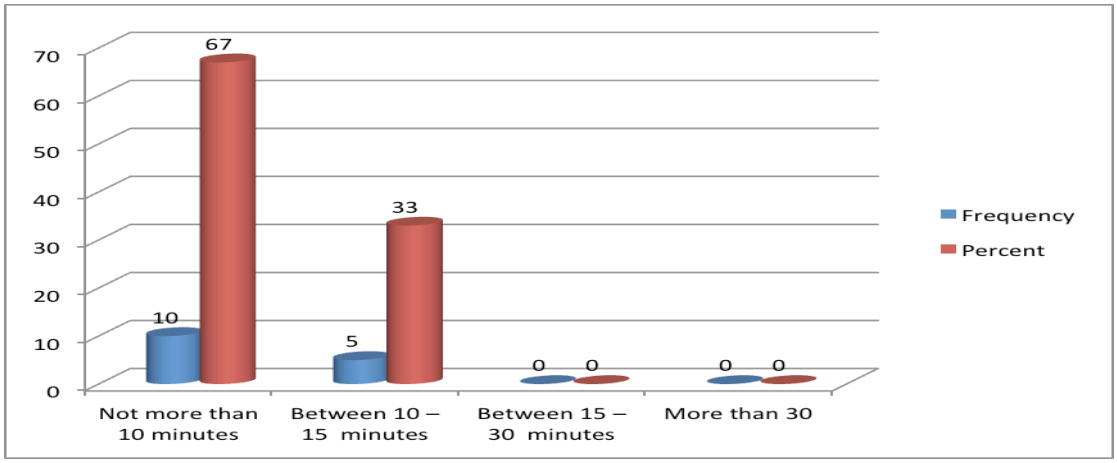

Figure 4.5: Responses of Waiting Time of Bus Ticket to Passengers (n = 15)

Source: Field Data, 2019

Figure 4.5 reveals that waiting time of bus ticket it take not more than 10 minutes, represented by 67.0% of the all total number of DBRT Staffs.

Plate 4.3: Ticket in the Stations

The findings were consistency to that plate 4.3 (citiscope.org/commentary/2017) that show, terminals have gates and one buy a seasonal ticket and gets a Contactless smart card or gets a printed ticket with a bar graphic. Put the ticket under the gate scanner and get you through the gate like many other rapid transport systems in cities one taps the card and the price of the journey is charged. At the moment there are staffs help people get through the gates as the whole system is still being nurtured among the general population.

4.4.6 Safety and Security

Furthermore, the other dimension was safety and speed, the respondents were asked to select between safety and Security that is good with DBRT.

4.4.6.1 Safety inside the bus

Table 4.6 show that, 45(56.0%) of the passengers said not improved, 38.0% of the passengers said somehow improved and 6.0% of the passengers said improved.

Table 4.6: Responses of uses of Bus Ticketing System (n = 80)

Bus Ticketing System	Frequency	Percent
Improved	5	6.0
Somehow improved	30	38.0
Not improved	45	56.0
Total	**80**	**100.0**

Source: Field Data, 2019

Table 4.6 points out that the Safety inside the DBRT buses is not improved represented by 56.0% of the all total number of passengers. So that they are not safe due to one bus carry many passengers (See figure 4.6).

4.4.6.2 Security in the Bus Stop

Table 4.7 show that, 3(100.0%) of the police said improved.

Table 4.7: Responses of Security in the Bus Stop (n = 3)

Bus Ticketing System	Frequency	Percent
Improved	3	100.0
Somehow improved	0	0
Not improved	0	0
Total	**3**	**100.0**

Source: Field Data, 2019

Table 4.7 it realized that the security in the bus stop is improved represented by 100.0% of the all total number of police (See Figure 4.6).

The findings were compatible to survey Fellesson and Friman (2008) conducted a transnational similarities of customers' public transport perceived service satisfaction in eight cities (Stockholm, Barcelona, Copenhagen, Geneva, Helsinki, Vienna, Berlin, Manchester and Oslo) in Europe.

The result showed four general factors: system such as traffic supply, reliability and information; bus and bus stop construction that makes customer comfortable and enjoy the travel experience; staff skill, knowledge and attitude toward customer; and safety in the bus and bus stop but also safe from traffic accident. Furthermore, it was concluded that differences in public transport technology and infrastructure may cause differences in individual item loadings.

4.6.7 Discussion on the Challenges of Bus Public Transport According to Respondents

(i) According to passengers

Chances of getting a seat; Passengers whose their route started from the origin and nearest the destination of the bus route had a greater chances of getting a bus seat as compared to those whose their route begin at the middle. This was because most of the buses were full loaded at the origin of the route especially during working days.

(ii) According to Students

The lack of availability of sufficient numbers of buses (especially high-capacity buses) is reflected in the long waiting lines and times, the frantic struggle to board a bus upon its arrival at most stops.

(iii) According to Drivers from BRT Bus

Transport demands exceed transport supply; this is indicated by passengers overloaded during peak hour.

(iv) According to disabled people

There is a problem of availability in public bus transport during provision of the services and the lack of seating capacity in the buses.

(v) According to road traffic police

The Comfort is an important consideration for riders of public bus transport and, as such, basic standards for comfort must be established and monitored to ensure that the Dar es Salaam bus operators adhere to them.

(vi) According to officials

Low security, most of them found their property stolen at the end of their journey. It was too hot inside the buses due to overloading. Also they arrived at the working place while they are tired and dirty especially during rainy season.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter summarized the whole study, provided the conclusion about the study and recommendations based on the findings of the study and discussion made.

5.2 Summary of the Study

The aim of this study was to investigate DBRT passenger's satisfaction with public transport services in Dar es Salaam, Tanzania. The objectives of this study were to determine comfort of the passengers, to identify waiting time of the services, to evaluate the safety and security of passengers inside the bus, to identify number of passengers in the bus. The study collected information by using questionnaires, and observation. The research objectives were used to guide the analysis of obtained data from the respondents.

The study found that Table 4.6 it realized that the Safety inside the DBRT buses is not improved represented by 56.0% of the all total number of passengers. So that they are not safe due to one bus carry many passengers. It realized that the security in the bus stop is improved represented by 100.0% of the all total number of police. Figure 4.5 it realized that waiting time of the buses takes not more than 10 minutes, represented by 67.0% of the all total number of DBRT Staffs.Table 4.5 it realized that the uses of bus ticketing system improved represented by 100.0% of the all total number of DBRT Staffs.Figure 4.4 it realized that waiting time of bus services said that it take between 10-15 minutes, represented by 63.0% of the all total number of

passengers. Figure 4.3 it realized that situation of number of passengers in bus is overcrowded, represented by 63.0% of the all total number of passengers. Table 4.3 it realized that most of the passengers were not comfortable when they inside the bus, represented by 80.0% of the all total number of passengers.

5.3 Conclusion

The study concluded that, comfort-ability of the Passengers inside the DBRT bus is not attained, it seem Passenger discomfort worsens during rush-hour traffic when many passengers have to travel standing all the way in extremely crowded conditions. Also, safety inside the DBRT buses is not improved represented; so that they are not safe due to one bus carry many passengers. However waiting time of bus services said that it take between 10-15 minutes, security in the bus stop is improved, the uses of bus ticketing system improved.

5.4 Recommendations

The study has made the following recommendations to improve passenger's satisfaction in DBRT transport services.

(i) Due to services provided by DBRT being very important, government should find a way forward to sponsor financial matters so as to improve services to the community. This will reduce dependent on fare collections to improve services provided, hence the fare will be reduced.

(ii) Education on public should be more given in order to educate them on how BRT conduct i.e. people to respect the places of people with disorder, elders, pregnant women, and sick people.

(iii) More buses should be added to satisfy passenger's need. DBRT should increase their buses since there are more people used DBRT transport service. This will increase safety to the passengers.

(iv) Government should improve infrastructure which can accommodate more buses, buses to works during rainy seasons. This will ensure the availability and reliability of the buses.

(v) Government should implement similar project to other roads around in the region, which will provide transport services. This will create competitive market in providing transport services, hence everyone will provide good services in order to get passengers.

(vi) The bus ticketing should be improved. Machines used to verify tickets should work so as to avoid the use of fake tickets hence DBRT loss revenue. Also, DBRT's cards should be continue provided, hence they reduce time used by passengers to take their tickets.

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APPENDICES

Appendix I: Questionnaire form to passengers

Demographic characteristics

Please tick in the provided space

1. Sex of Respondents
    a. Male
    b. Female

2. Age of the Respondents
    a. 20 - 35yrs
    b. 36 - 45yrs
    c. 46- 65yrs
    d. 66 and above

3. Occupation of Respondents
    a. Student
    b. Business man
    c. Employed

Part B question according to specific objectives of the Study

Please tick the correct answer.

Passenger's opinions on the following factors for satisfaction;

4. Do you comfortable with the situation inside the bus.
    (a) I am comfortable ( )
    (b) I am not comfortable ( )

5. What do you say about number of passengers in inside the bus?

   (a) overcrowded ( )
   (b) Level seat ( )
   (c) Crowded ( )

6. (i) how long are you waiting for a bus?

   (a) Not more than 10 minutes ( )
   (b) Between 10-15 minutes ( )
   (c) Between 15-30 minutes ( )
   (d) More than 30 minutes ( )

   (ii) What do you suggest about service time of bus services?

   i. ……
   ii. ……
   iii. ……
   iv. ……
   v. ……

7. What do you say about **Safety** in inside the bus?

   (d) Improve ( )
   (e) Somehow improve ( )
   (f) Not improved ( )

8. What others challenge you face during provision of bus services?

   vi. ……
   vii. ……
   viii. ……
   ix. ……
   x. ……
   xi. ……
   xii. ……

9. What should be done for challenge you face during provision of bus services?
   i. ……
   ii. ……
   iii. ……
   iv. ……

Thanks for your time and participation!

Appendix II: Questionnaire form to DBRT staff

Demographic characteristic

Please tick in the provided space

1. Sex of Respondents
    c. Male
    d. Female

2. Age of the Respondents
    e. 20 - 35yrs
    f. 36 - 45yrs
    g. 46- 65yrs
    h. 66 and above

3. What do you say about bus ticketing system?

(g) Improve ( )
(h) Somehow improve ( )
(i) Not improved ( )

4. For how long passengers wait for a bus?
    (e) Not more than 10 minutes ( )
    (f) Between 10-15 minutes ( )
    (g) Between 15-30 minutes ( )
    (h) More than 30 minutes ( )

Appendix III: Questionnaire form to police

Demographic characteristic

Please tick in the provided space

1. Sex of Respondents

    e. Male
    f. Female

2. Age of the Respondents
    i. 20 - 35yrs
    j. 36 - 45yrs
    k. 46- 65yrs
    l. 66 and above

3. What do you say about Security in the bus stop?

    (a) Improve ( )
    (b) Somehow improve ( )
    (c) Not improved ( )

4. What do you suggest about security in the bus stop?
    i. ……
    ii. ……
    iii. ……
    iv. ……
    v. ……

Appendix IV: Budget and Time Table

Budget No	Expenses	Unit	Amount (Tshs)
1	Food		300,000 /=
2	Transport		50,000 /=
3	Stationery		350,000 /=
4	Accommodation		250,000 /=
5	Voucher		50,000 /
Total		**1,000,000 /=**	