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*Influence of Service Quality on Customer Satisfaction:
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Transit*

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Influence of Service Quality on Customer Satisfaction: Empirical evidence from Dar es Salaam Rapid Bus Transit

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Abstract

This explanatory study aimed at determining the influence of quality services on customer satisfaction for the Dar es Salaam Bus Rapid Transit customers. The study specifically determined the influence of service quality dimensions namely assurance, responsiveness, reliability, tangibility and empathy on customer satisfaction. A total of 123 research participants were selected using convenience sampling technique. The collected data were analysed by Binary logistic regression. The findings indicate that Tangibility, responsiveness, empathy and reliability had positive and significant effect on customer satisfaction. Findings also revealed that, assurance dimension had negative and insignificant influence on customer satisfaction. Thus, it is concluded that, empathy, responsiveness, tangibility and reliability are antecedents of customer satisfaction. Hence, it is recommended that, Dar es Salaam Bus Rapid Transit should offer quality service to its customers so as to retain them.

Keywords: *Bus Rapid Transit, Customer's Satisfaction, Service Quality*

Introduction

Customer satisfaction is defined as is a situation where customer needs, wants, and expectations are achieved regarding the goods and services they utilize (Rita et al., 2019). Satisfying customers is a main factor to effectively form a potential and loyal customer base (Idrees & Xinping, 2017). Customers who are satisfied are ready to stay longer with a product or service, less price sensitive and willing to positively appraise the business (Kotler & Keller, 2020). Scholars such as Darvas and Caber (2019) and Gerdt et al. (2019) pointed out that satisfied customers have a tendency to purchase more than dissatisfied ones and can pay premium. On the other hand, satisfied customers used to repurchase a product (Razak & Shamsudin, 2019).

Consequently, making customers satisfied with the service on offer has become the main focus of each service organization (Amin et al., 2016) including public transport services such as Bus Rapid Transit (BRT). Bus Rapid Transit is recognized as a bus-based public transport system aiming at linking the capability and speediness of rail with the flexibility and cost-effective bus system. The advantages of BRT include few stops, fare prepayment system, high-capacity buses (Blonn et al., 2006) as well as providing comfortability to passengers and increased number of service frequency (Cain et al., 2009). In 2016, the

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city of Dar es Salaam, Tanzania became the first East African city to launch a first phase of BRT as a means to get rid of congestion and enhance productivity and competitiveness as a commercial hub. However, in order to keep and attract more passengers, public transport (such as BRT) should invest in factors that satisfy and fulfil various needs of passengers (Senelwa et al., 2023).

Service quality is amongst the factors that impacts customer satisfaction. Precisely, previous scholars have established that service quality dimensions namely responsiveness, reliability, tangibility, assurance and empathy are amongst the factors that have the ability to influence customer satisfaction (Abed et al., 2022; Agustina & Handayani, 2023; Ayinaddis et al., 2023; Chiguvu, 2023; Fachrial et al. 2023; Jou et al. 2023; Kulu & Bola, 2023; Madhushani et al., 2023; Mapunda, 2021; Marina et al. 2023, Noor et al., 2023; Peter & Batonda, 2022; Senelwa et al., 2023; Suwignyo et al., 2023; Tang et al., 2022, Wongthongchai, 2022). However, the findings from these scholars have generated debatable and inconsistent findings. In particular, scholars have come up with various findings about the influence of the dimensions of service quality on making customers satisfied with service offered. For example, Wongthongchai (2022) in the Thailand mass public Transit, Ayinaddis et al. (2023) in Ethiopia and Suwignyo et al. (2023) in Indonesia found that reliability of services offered positively and significantly impact satisfaction of customers towards the services provided. However, Kulu and Bola (2023) from Nigeria discovered that reliability of service has no impact on customer's satisfaction. Noor et al. (2023) in Indonesia found that reliability has insignificant negative impact on customer satisfaction. Agustina and Handayani (2023) also revealed insignificant negative effect of service reliability on customer satisfaction. On the other hand, scholars such as Agustina and Handayani (2023), Mapunda (2021) and Tang et al. (2023) found positive and insignificant effect of service assurance on customer satisfaction. However, other scholars such as Madhushani et al. (2023) in Sri Lanka, Noor et al. (2023) in Indonesia, Tang et al. (2022) in Malaysia and Kuwait, Peter and Batonda (2022) in Tanzania, and Abed et al. (2022) in Palestine established that assurance of services exert positive and significant impact on satisfaction of customers. However, Ulkhaq in Indonesian Bus Rapid Transit found that the gap attained based on the average value of expectation and perception was negative and that there were many complaints from passengers including no guaranteed security for the passengers' luggage and inadequate staff skills. Moreover, Nyabundi et al. (2021) in Kenya, Ali et al. (2022) in Malaysia, Abed et al. (2022) in Palestine, Madhushani et al. (2023) in Sri Lanka and Noor et al. (2023) in Indonesia reveal that tangibility is the predictor of customer satisfaction. Contrarily, other researchers (Agustina & Handayani, 2023; Kuklu & Bola, 2023; Tang et al., 2022) found service tangibility does not build customer

satisfaction. Furthermore, Peter and Batonda (2022) and Setiono and Hidayat (2022) found significant effect of service empathy on customer satisfaction whereas Mapunda (2021) found that empathy has positive and insignificant effect on satisfying BRT passengers. A study by Bhele and Rajchal (2023) in the Nepalian public transport noted that the public perceptions of public transport services with indicators responsiveness, reliability, tangibility, insurance, empathy and comfortability is very low in offering good services to passengers.

It can be concluded that there still no consensus amongst scholars about the impact of dimensions of service quality on satisfaction of customers toward various services offered by business firms. This creates a research gap that need to be filled. The review of literature also suggests that the majority of studies regarding how customers perceive the services provided have been largely done in other sectors rather than the transport sector in particular the BRT. This paucity of information in the transport sector calls for more studies to be conducted to enlighten the understanding on how customers perceive the services provided by BRT. Interestingly, Bus rapid transit is a new-fangled form of mass transit in the Tanzanian community, hence its capability to deliver eminence transport services that touches the minds of customers is still mainly under searched (Mapunda, 2021). Therefore, evaluation of the services offered by Bus rapid transit in Tanzania from customer's intuitions remains un-important task to be done. This will help BRT to identify customer's needs and correct the deficient found using the concerns raised by customers. It also permits BRT to compare before and after variations, discover the quality-related problems, and generating clear standards for service delivery. As an attempt to fill the identified gaps in the literature, this study used a SERVQUAL model to assess the effect of quality service on satisfaction of customers toward services offered by Dar es Salaam bus rapid transit.

Research Objectives

This study strengthens the theoretical foundations of the relationship between the dimensions of service quality and customer satisfaction in the transport industry and contribute to the marketing management literature. It also provide an in-depth understanding of how managers can provide quality service to enhance customer satisfaction. Specifically, the study had the following objectives:

- (a) To assess the effect of service responsiveness on satisfaction of customers
- (b) To assess the effect of service reliability on satisfaction of customers
- (c) To assess the effect of service tangibility on satisfaction of customers

- (d) To assess the effect of service assurance on satisfaction of customers
- (e) To assess the effect of service empathy on satisfaction of customers

Literature Review

The concept of Service Quality

Service quality has arisen as the essential weapon for a business firm to win against competitors in the 21st of marketing competition (Peter & Batonda, 2022). Customers want the best of the services they need, and want to be satisfied with the services they receive (Bucak, 2014). Service quality is defined as the degree to which the service provided attains prior expectations of customers, it is the subsequent comparison that is made by customers about preceding expectations on the service offered and their afterward discernments of the real experience of service performance (Sewaka et al., 2023).

In measuring the quality of services, the SERVQUAL model which was coined by Parasuraman et al. (1988) has been widely used by scholars. This model stipulates that customers used to assess the quality of services offered by business organizations through five (5) distinctive dimensions namely empathy, reliability, tangibility, assurance and responsiveness. These dimensions contribute to a positive customer experience and their perception of the service provided. Responsiveness reveals the service supplier's commitment to meet customer's needs and expectations (Zeithaml & Bitner, 2016). In the SERVQUAL theory setting, responsiveness can be evaluated via indicators like quick and timely service delivery, and willingness of DBRT staff to help passengers. Zeithaml and Bitner (2016) defines reliability as "the capability of the supplier to offer a promised service precisely and consistently". In the context of SERVQUAL theory, reliability is evaluated by equating customer's expectations with their actual experiences. The service is considered reliable if and only if it constantly realizes or surpasses the prior expectations of customers. On the other hand, tangibility depicts the physical facilities and equipment applied to provide the service as well as the appearance of personnel representing the service supplier (Zeithaml & Bitner, 2016). In the case of SERVQUAL theory, tangibility at DBRT can be measured through the good looking of DBRT premises, attractive staff dress, modern buses, seats and belts as well as waiting areas. Besides, assurance is regarded as employee's kindness and the capability to be supportive (Zeithaml & Bitner, 2016). It encompasses imparting sureness and trust in customers through indicating expertise as well as professionalism. In the SERVQUAL theory setting, assurance can be assessed through knowledge and skills for answering

questions asked, the ability of DBRT staff to impart confidence to passengers and guaranteeing safety for passenger's properties. Furthermore, empathy includes exhibiting sympathy, kindness, attention to customers' emotions and specific situations. In the context of SERVQUAL theory, empathy can be measured through the capability of staff in understanding the specific needs of the passengers and have the best interest of passengers in their heart.

Interestingly, the SERVQUAL model offers a systematic approach to understand, measure and manage the five dimensions, making it valuable tool for business aiming to enhance their service quality. The strengths of this model include provision of comprehensive framework for assessing service quality, covering the five key dimensions discussed in the previous sections. This holistic approach allows organizations to gain a well-rounded view of the quality of service. It also give more emphasis on customer's perspective (customer-centric). The model's questions and criteria are designed to capture the customer's viewpoint making it highly customer-centric. However, the SERVQUAL model is not without its limitations. One of the key weakness is its reliance on perception-expectation gap, which can be subjective and may not always accurately represent service quality. The model's dimensions might not be universally applicable across all industries or cultures, potentially limiting its adaptability in diverse contexts. Despite its disparagement, the SERVQUAL model has been utilized by the majority of service quality studies (Agustina & Handayani, 2023; Tang et al., 2022). Therefore, the current study also used this model to meet its objectives.

Empirical Review

The link between dimensions of Service Quality and Satisfaction of Customers

Responsiveness and Customer Satisfaction

Previous studies established that responsiveness impacts the satisfaction of customers including Noor et al. (2023) in Indonesia, Ayinaddis et al. (2023) in Ethiopia, Agustina and Handayani (2023) in Indonesia, Tang et al. (2022) in Malaysia and Kuwait and Suwignyo et al. (2023) in Botswana. Hence, it was hypothesized that H_1 : *responsiveness has positive and significant effect on customers' satisfaction at DBRT.*

Reliability and Customer Satisfaction

Scholars have recognized that the more reliable the service the higher the customers become satisfied with a product or service. For example, a study by Ayinaddis et al. (2023) in Ethiopia and Suwignyo et al. (2023) in Indonesia reveal that customers have the tendency of being satisfied with the reliable services they

encounter. Mapunda (2021) also found that BRT passengers get satisfied when there is reliable services. However, Kulu and Bola (2023) in Nigeria pointed out that that reliability of service does not contribute to customer's satisfaction. Interestingly, Noor et al. (2023) and Ayinaddis et al. (2023) conducted their studies to establish the link between service reliability and customer satisfaction and discovered that reliability of service has insignificant negative impact on customer satisfaction. A study by Bakti et al. (2018) also in the public transport found that service reliability does not influence satisfaction of customers. These findings suggests that the link between reliability and customer satisfaction is still equivocal amongst scholars. Hence, more studies are needed to have further understanding of the link between these variables. Hence, the current study hypothesized that

H₂: Reliability plays a significant role in influencing satisfaction of customers at Dar es Salaam bus rapid transit.

Tangibility and Customer Satisfaction

Earlier scholars have searched about the link between tangibility and customer satisfaction. The findings reveal that Abed et al. (2022) in Palestine, Setiono and Hidayat (2022) in Indonesia, Madhushani et al. (2023) in Sri Lanka, Noor et al. (2023) in Indonesia and Nyabundi et al. (2021) in Kenya found positive and significant effect on customer satisfaction. Bakti et al. (2018) also indicate that tangibility positively and significantly exert influence on passenger's satisfaction in the public transport services. These scholars highlight the importance of service tangibility in influencing satisfaction of customers. Contrary to these studies, Agustina and Handayani (2023), Kulu and Bola (2023), and Tang et al. (2022) pointed out that service tangibility positively but insignificantly builds satisfaction of customers. In other words, tangibility does not have impact on customer's satisfaction. Moreover, it can be said that, the findings of previous studies are mixed. This calls for more studies to be done in this area of consumer behavior. Therefore, we study hypothesized that *H₃: Tangibility plays a significant role in influencing satisfaction of customers at Dar es Salaam bus rapid transit.*

Assurance and Customer Satisfaction

Previous scholars like Madhushani et al. (2023) in Sri Lanka, Noor et al. (2023) in Indonesia, Tang et al. (2022) in Malaysia and Kuwait, Peter and Batonda (2022) in Tanzania, Anh and Thanh (2022) in Vietnam and Abel et al. (2023) in Palestine found that assurance of service positively and significantly impact satisfaction of customers toward various services offered by organization. However, Hussein (2016)

investigated the link between service quality and customer satisfaction in the taxi businesses and revealed that there is no link between assurance and satisfaction of customers toward the services provided. Scholars like Agustina and Handayani (2023) and Tang et al. (2022) discovered that assurance has positive but insignificant influence on customer satisfaction. Similarly, Mapunda (2021) also conducted a study in the BRT and revealed that assurance has positive but not significant effect on the satisfaction of customers. A general observation from previous studies reveal that scholars' findings are not the same. This call for more studies to unveil the link between assurance and customer satisfaction. Therefore, this study hypothesized that: *H₄: Assurance plays a significant role in influencing satisfaction of customers at Dar es Salaam bus rapid transit.*

Empathy and Customer Satisfaction

Tang et al. (2022) in Malaysia and Kuwait, Peter and Batonda (2022) in Tanzania, Kulu and Bola (2023) in Nigeria, Huda et al. (2023) and Zygiaris et al. (2022) in Saudi Arabia determined the impact of service empathy toward customer satisfaction and established that service empathy dimension plays a big role in making customers satisfied with the services offered. It can be said that, empathy is the predictor of customer satisfaction. Contrarily, a study by Tijjang (2022) in Indonesia discovered that empathy positively but insignificantly impact the way customers are satisfied with the service. Mapunda (2021) also pointed out that service empathy has no significant impact on customer satisfaction. Thus, it was hypothesized that: *H₅: Empathy plays a significant role in influencing satisfaction of customers at Dar es Salaam bus rapid transit.*

Conceptual Framework

Independent variables

Dependent Variable

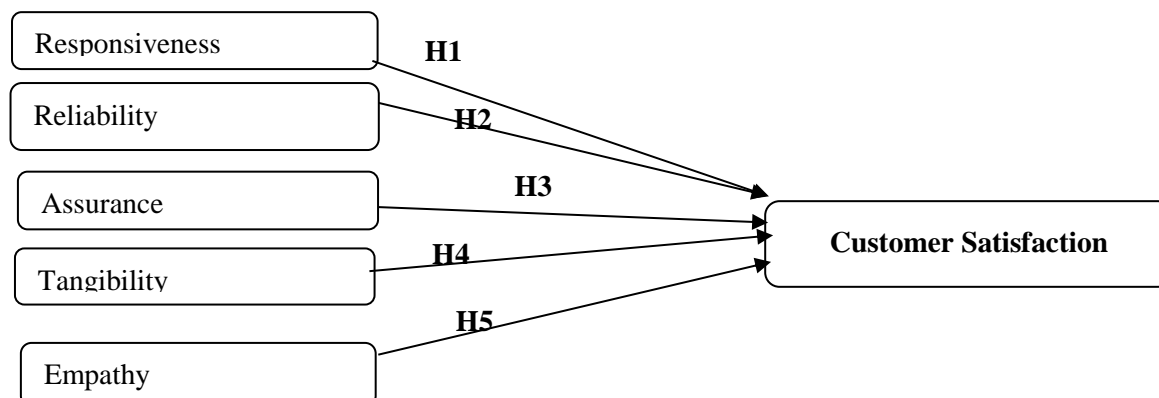


Figure 1: Conceptual Framework
Methodology

This explanatory research used a positivism research philosophy and a deductive research approach. DBRT was the area where the study was done. More specifically, at Kivukoni, Gerezani and Kimara stations. Dar es Salaam is the only city with BRT in Tanzania, hence its choice. DBRT constituted the population of the current study which is estimated to be 200,000 customers per day for all bus stops (DBRT report, 2020-2021).

Using Yamane (1967) formula, 123 research participants were chosen for this study. Convenience sampling was utilized by this study. The reason for choosing this sampling technique was motivated by the nature of the research participants. Since the researchers administered the questionnaire, the response rate was high (100%). The researchers were able to clarify the questions asked by respondents to enable them respond accordingly.

This study considered validity and reliability of the research questionnaire. Experts in the field of marketing were consulted to offer their views regarding the questions and thereafter the questions were adjusted accordingly. Besides, Cronbach's Coefficient Alpha was utilized to assess the reliability of the research instrument. The values of 0.7 and above was regarded as reliable (Cronk, 2018). It worth mentioning that this assumption was met as the Cronbach's coefficient Alpha values were 0.712 for responsiveness, 0.715 for reliability, 0.736 for tangibility, 0.713 for assurance and 0.778 for empathy. The five variables were measured using scale items previous studies. To measure responsiveness, the four scale items from Gobena (2019) were used whereas reliability was measured using the four scale items from Wahid (2017). On the other hand, four scale items for assurance and tangibility were adapted from Akalu (2015) and Nyabundi et al. (2021) respectively. Additionally, empathy was measured using the scale items from Beyene (2019).

Multicollinearity assumption was ensured through calculating the Variance Inflated Factor (VIF) and Tolerance values. A recommendation by Field (2019) was observed. The author suggested a threshold value of Tolerance values less than 0.1 and VIF values not greater than 10. The normality assumption was checked by Kolmogorov-Smirnov p-values. Non-significant values indicate the data were approximately normally distributed. Table 1 reveals the values of VIF, Tolerance and normality test. It indicates that multicollinearity and normality assumptions were met.

Table 1: Multicollinearity Statistics and normality test

Measured variables	Collinearity Statistics		Kolmogorov-Smirnov p-value
	Tolerance	VIF	
Responsiveness	.725	1.542	0.421
Reliability	.734	1.534	0.146
Assurance	.685	1.439	0.211*
Tangibility	.621	1.651	0.145
Empathy	.673	1.524	0.621

*. This is a lower bound of the true significance

Source: Authors, (2023)

The data was analyzed using descriptive analysis and binary logistic regression analysis. The logistic regression model was as follows:

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + e$$

Where by

Y = Passenger satisfaction

B_0 = Constant factor

$\beta_1 - \beta_5$ = Coefficients

X_1 = Responsiveness

X_2 = Reliability

X_3 = Assurance

X_4 = Tangibility

X_5 = Empathy

e = Error term

Findings and Discussions

This study used descriptive analysis to profile the demographic information and found that the majority (59.3%) of study participants were males whereas female were 40.7%. This suggests that majority of people that use the DBRT transport are males. This number may be explained by the real life style that majority of males are the ones who take care of their families and hence they have to move from home to their working areas. However, the findings of this study differs from that of Ekwiriyaton and Hamra (2022) which was conducted in the Public Land Transport Users in Bangkok. These authors found that female respondents were 65%.

The findings also reveal that the large number of research participants (35%) possessed bachelor degree education followed by those with diploma level (21.1%). The respondents with certificate education occupied the 18.7% of the total number of research participants whereby 17.9% of respondents had secondary education and the remaining group were primary education leavers. Generally, the education level implies that majority of DBRT passengers were educated hence were in the position to answer the questions asked.

On the one hand, the findings indicate that the large percentage of research participants (35%) aged between 18 to 30 years followed by those aged between 31 to 40 years. This is good news to DBRT as it shows that these passengers have the ability to actively engage in economic activities which will enable them to get money for their daily needs and others for DBRT transport. This age group also implies that these passengers have long time to stay with DBRT as long as the company will have long-lasting relationship with its passengers through improved service quality.

The binary logistic regression analysis was applied as the depended variable has two levels of measurement namely “Yes” and “No”. Table 2 reveals the case processing summary and it informs that there were no missing information and that 123 research participants agreed to participate in this study.

Table 2: Case Processing Summary

Unweighted Cases	N	Percent	
Selected Cases	Included in Analysis	123	100.0
	Missing Cases	0	.0
	Total	123	100.0
Total		123	100.0

On the other hand, Table 3 shows the classification Table. This shows the analysis results excluding all independent variables in tested model. This acts as a reference point for evaluating the model when the independent variables are taken into account. This is the reference point for assessing the study model when predictor variables are considered.

Table 3: Block 0, Classification Table

Observed		Predicted			
		Satisfaction		Percentage Correct	
		No	Yes		
Step 0	Satisfaction	No	0	34	0
		Yes	0	89	100.0
Overall Percentage					72.4

Table 4 indicates the Hosmer and Lemeshow Test which informs about the goodness of fit statistics. The p-value results of less than 0.05 suggests that the tested model is bad whereas the p-value results greater than 0.05 reveal that the model fits the data. Hence, the p-values of 0.116 connote that the model fits the data.

Table 4: Hosmer and Lemeshow Test for Goodness of Fit

Hosmer and Lemeshow Test			
Step	Chi-square	Df	Sig.
1	12.877	8	0.116

The model coefficients for Omnibus Tests were presented in Table 5. It shows that the p-value is significant connoting that the model fits the data.

Table 5: Model Coefficients for Omnibus Tests

Model Coefficients for Omnibus Tests				
Step 1	Step	Chi-square	Df	Sig.
	Step	28.812	17	0.036
	Block	28.812	17	0.036
	Model	28.812	17	0.036

Moreover Table 6 reveals the model summary of this study. It informs that forty percent (40%) of variations in the dependent variable is caused by the independent variables included in the model whereas 60% of variations was accounted by variables not involved in the tested model.

Table 6: Model Summary

Model Summary				
Step	-2 Log likelihood	Cox and Snell R Square	Nagelkerke R Square	
1	116.216 ^a	0.309	0.402	

Additionally, Table 7 indicates the regression coefficients. It shows that responsiveness significantly impacts satisfaction of BRT customers in the study area with odds ratio of 0.5. These findings suggest that the higher the service responsiveness from BRT employees, the more customers become satisfied with the service. Thus, H₁ was supported. Previous studies also found similar results including Noor et al. (2023) in Indonesia, Ayinaddis et al. (2023) in Ethiopia, Agustina and Handayani (2023) in Indonesia, Tang et al. (2022) in Malaysia and Kuwait and Chiguvu (2023) in Botswana. The results also reveal that reliability plays a significant role in influencing the satisfaction of DBRT customers with odds ratio of 1.879. The odds ratio of 1.879 is higher than 1 which suggests that there is high possibility of DBRT customers to get satisfied with the services offered than not get satisfied with the service. This is a good indicator to DBRT as it can use this opportunity to attract more customers and increase their customer base. Thus, H₂ was accepted.

Table 7: Regression Coefficients

Step		B	S.E.	Wald	Df	Sig.	Exp(B)	95% C.I. for EXP(B)	
								Lower	Upper
1 ^a	Responsiveness	0.694	0.411	2.845	1	0.022	0.500	0.223	1.119
	Reliability	0.631	0.389	2.625	1	0.005	1.879	0.876	4.032
	Assurance	-0.437	0.356	1.504	1	0.320	0.646	0.322	1.298
	Tangibility	0.333	0.375	0.788	1	0.035	1.395	0.669	2.908
	Empathy	0.815	0.426	3.662	1	0.001	2.260	0.981	5.210

A study by Ayinaddis et al. (2023) in Ethiopia and Suwignyo et al. (2023) in Indonesia also established that reliability plays a significant role in influencing satisfaction of customers. Contrary to these results, Kulu and Bola (2023) in Nigeria found that service reliability does not make customers get satisfied with the service provided. Noor et al. (2023) in Indonesia found that reliability has insignificant negative impact on customer satisfaction. Agustina and Handayani (2023) also revealed insignificant negative impact of reliability on satisfaction of customers. In other words, service reliability reduces the desire of customers to get satisfaction though the reduction is not significant. It can be deduced from various studies that the link between reliability and satisfaction of customers is still equivocal. Hence, more studies are needed to have further understanding of the relationships between these variables.

Interestingly, Table 7 reveals that assurance had negative but insignificant effect on customer's satisfaction with odds ratio of 0.646. These results connote that, as assurance of services increase at DBRT the

satisfaction of customers decrease. However, the decrease in satisfaction of customers is considered not significant. Hence hypothesis H3 which stated that assurance plays a significant role in influencing satisfaction of customers was not supported. Similarly Hussein (2016) conducted a study in the taxi business in Kenya and concluded that assurance of service does not influence satisfaction of customers from the services they encounter. Scholars such as Agustina and Handayani (2023) and Tang et al. (2022) opined that assurance of service positively but insignificantly impacts satisfaction of customers. However, other scholars such as Madhushani et al. (2023) in Sri Lanka, Noor et al. (2023) in Indonesia, Tang et al. (2022) in Malaysia and Kuwait, Peter and Batonda (2022) in Tanzania, Anh and Thanh (2022) in Vietnam and Abed et al. (2022) in Palestine reveal that assurance of service exert significant impact on satisfaction of customers.

Nevertheless, Table 7 shows that tangibility plays a significant role in influencing satisfaction of customers at DBRT with odds ratio of 1.395. These results suggest that the probability of DBRT customers get satisfied with the service provided is greater than that of not satisfied with the service. Thus, H₄ was supported. Previous scholars also found similar results including Abel et al. (2022) in Palestine, Setiono and Hidayat (2022) in Indonesia, Madhushani et al. (2023) in Sri Lanka, Noor et al. (2023) in Indonesia and Nyabundi et al. (2021) in Kenya. These scholars underscore the importance of service tangibility in influencing satisfaction of customers. However, Agustina and Handayani (2023), Kulu and Bola (2023) and Tang et al. (2022) discovered that, tangibility does not have significant impact on satisfaction of customers from the services they receive.

Table 7 also reveal that service empathy positively and significantly influences the satisfaction of customers at DBRT with odds ratio of 2.260. These findings connote that satisfaction of customers from service encounters increase with an increase in service empathy at DBRT. The results also connote that the probability of customers to get satisfied with the service provided is greater than that of not satisfied. Similarly, Tang et al. (2022) in Malaysia and Kuwait, Peter and Batonda (2022) in Tanzania, Ali et al. (2022) in Malaysia, Kulu and Bola (2023) in Nigeria, Huda et al. (2023) and Zygiaris et al. (2022) in Saudi Arabia discovered that service empathy plays a big role in influencing satisfaction of customers. However, a study by Tijjang (2022) in Indonesia declared that service empathy does not build satisfaction of customers from their services encounters.

Following the results, the researchers observed that amongst the five dimensions of service quality tested, empathy ($\beta = 0.815$) exerted strong influence on making customers get satisfied with services offered followed by responsiveness ($\beta = 0.694$) and reliability ($\beta = 0.631$). Other scholars such as Ayinaddis et al. (2023) in Ethiopia also found similar results. This suggests that, for higher customer satisfaction, managers and other marketing practitioners should invest more on service empathy than any other service quality dimension.

Conclusions and Recommendations

The findings of this study establishes that with the exception of assurance, both the tangibility, responsiveness, reliability, and empathy dimensions exert positive and significant impact on satisfaction of customers at DBRT. This implies that the increase of these service dimensions makes customers to be satisfied. This study concludes that the studied variables namely tangibility, empathy, responsiveness, and reliability are the antecedents of customer satisfaction. However, empathy has strong impact in influencing customer satisfaction than any other service quality dimension. It is recommended that, DBRT should offer services promptly, reliably, with high empathy and improve their physical evidences such as the appearing of their buses, seats and seat belts and services to enhance customer satisfaction. Moreover, more attention should be given to service empathy as it plays a big role in making customers satisfied with a product or service compared to other dimensions.

References

- Abed, H. M. A., Nofal, M. I. M. I., Alnasr, F., Alsheikh, G. A. A., & Alnawafleh, E. A. T (2022). The influence of service quality, customer satisfaction and bank image on customer loyalty in Palestinian Islamic banks. *Journal of Management Information and Decision Sciences*, 25(S4), 1-18.
- Agustina, A., & Handayani, S. (2023). HHC RSPP patient satisfaction and the impact of reliability, assurance, tangible, empathy, and responsiveness. *East Asian Journal of Multidisciplinary Research*, 2(2), 799-810.
- Akalu, A. (2015). The effect of service quality on customer satisfaction on selected insurance companies in Addis Ababa. *Journal of Business*, 1(1), 12 – 44.
- Ali, A. M., Doski, S. A. M., & Saadon, A. I. (2022). The Impact of service quality dimensions on customer satisfaction: Case study of University Utara Malaysia. *Asian Journal of Social Sciences and Management Studies*, 9(1), 11- 17.

- Amin, A., Anwar, S., Adnan, A., Nawaz, M., Alawfi, K., Hussain, A., & Huang, K. (2016). Customer churn prediction in the telecommunication sector using a rough set approach. *Neurocomputing*, 237, 242–254.
- Anh, D. H., & Thanh, H. N. (2022). Service quality and customer satisfaction in the banking industry: An empirical study in Vietnam. *Journal of the Academy of Business and Emerging Markets*, 2(2), 15-26.
- Ayinaddis, S. G., Taye, B. A., & Yirsaw, B. G. (2023). Examining the effect of electronic banking service quality on customer satisfaction and loyalty: An implication for technological innovation. *Journal of Innovation and Entrepreneurship*, 12(22), 1-18.
- Bakti, I. G., Rakhmawati, T., Damayanti, S., Sumaedi, S., Yarmen, M.: Testing and extending Ptransqual public transport service quality model: A causal approach. In: IEEE International Conference on Industrial Engineering and Engineering Management (IEEM), Bangkok, Thailand, 16–19 December 2018. IEEE (2018). <https://doi.org/10.1109/IEEM.2018.8607345>
- Beyene, T. A. (2019). Assessment of service quality on customer satisfaction in Ethiopian Insurance Corporation. *International Journal of Research in Business Studies and Management*, 6 (4), 6-20.
- Bhele, R. & Rajchal, P. (2023). The Effect of Public Transport Services on Quality of Life: A Case Study on Road Section from Dhulikhel to Ratnapark. *Journal of Engineering Research and Applied Science*, 12 (1), 2277-2284.
- Blonn, J., Carlson, D., Mueller, P., & Scott, I. (2006). Transport 2020 Bus Rapid Transit: A cost benefit analysis. https://www.busadvocates.org/articles/regionaltransit/CBA_BRT_FINAL_REPORT.pdf
- Bucak, T. (2014). The effect of service quality on customer satisfaction: A research on hotel businesses. *International Journal of Education and Research*, 2(1), 1-12.
- Cain, A., Flynn, J., McCourt, M., Reyes, T. (2009). Quantifying the importance of image and perception to bus rapid transit. <https://rosap.ntl.bts.gov/view/dot/17433>
- Chiguvi, D. (2023). Analysis of the effectiveness of e-customer service platforms on customer satisfaction at ABSA, Botswana. *International Journal of Research in Business and Social Science*, 12(1), 57–71.
- Cronk, B. (2018). *How to Use SPSS: A step by step guide to analysis and interpretation* (9th edition). New York, NY: Routledge.

- Davras, Ö., & Caber, M. (2019). Analysis of hotel services by their symmetric and asymmetric effects on overall customer satisfaction: A comparison of market segments. *International Journal of Hospitality Management*, 81, 83–93.
- Ekwiriyaton, P., & Hamra, W. (2022). Selected Service Quality Factors that Influence the Satisfaction of Public Land Transport Users in Bangkok. *Sripatum Chonburi Journal*, 18(4), 42-57.
- Fachrial, P., Prasidi, A., Sabilla, M. F., Maisarah, P., Ratnasari, D., & Pahrudin. C. (2023). The Influence of Service Quality and Station Facilities on Mass Rapid Transit Jakarta Passengers' Satisfaction. *International Conference on Advance & Scientific Innovation*, KnE Life Sciences, pp. 877–886.
- Field, A. (2019). *Discovering statistics using IBM SPSS statistics* (5th edition). New Delhi, Sage.
- Fornell, C. (1992). A national customer satisfaction barometer: The Swedish experience. *Journal of Marketing*, 56(1), 6-21.
- Gerdt, S. O., Wagner, E., & Schewe, G. (2019). The relationship between sustainability and customer satisfaction in hospitality: An explorative investigation using eWOM as a data source. *Tourism Management*, 74, 155–172.
- Global BRT Data: <https://brtdata.org/>. Accessed Dec. 25, 2023.
- Gobena, A. G. (2019). The impact of service quality on customer satisfaction: A case study on Nekemte Municipality, Oromia region, Ethiopia. *Annals of Social Sciences and Management Studies*, 4(1), 0014 – 0025.
- Hoo, W. C., Waheeda, A., & Reesha, A. I. (2023). Factors influencing the passenger satisfaction at public transport in Kuala Lumpur, Malaysia. *Journal of Project Management Practice*, 3(1), 77- 94.
- Huda, M. N., Beurekat, B., Melat, M., & Digidowiseiso, K. (2023). The influence of reliability, responsibility, assurance, empathy and physical evidence on customer satisfaction with disabilities at Tangerang station. *Journal Syntax Admiration*, 4(5), 843-856.
- Hussein, A. A. (2016). *Service quality practices and customer satisfaction in taxi companies in Nairobi*. (Masters Dissertation, University of Nairobi).
- Idrees, Z., & Xinpings, X. (2017). Impact of banking relationship characteristic on service quality dimensions and customer retention. *International Journal of Academic Research in Economics and Management Sciences*, 6(1), 2226-3624.
- Jou, Y. T., Saflor, C. S., Mariñas, K. A., & Young, M. N. (2023). Determining factors affecting perceived customer satisfaction on public utility bus system in occidental Mindoro, Philippines: A case study on service quality assessment during major disruptions. *Sustainability*, 15, 1- 21.

- Kotler, P., & Keller, K. L. (2020). *Marketing Management* (15th ed.). Pearson Education, inc.
- Kotler, P., Ang, S. H., & Tan, C. T. (1996). *Marketing and Management: An Asian Perspective*. Pearson Publisher.
- Kulu, H. B., & Bola, O. I. (2023). Event service quality and customer satisfaction in the hospitality industry in Bida, Nigeria. *GPH-International Journal of Social Science and Humanities Research*, 6(2), 35-48.
- Kuo, Y., Leung, J. M. Y., & Yan, Y. (2023). Public transport for smart cities: Recent innovations and future challenges. *European Journal of Operational Research*, 306(3), 1001-1026.
- Levinson, H. S., Zimmerman, S., Clinger, J. & Gast, J. (2003). Bus rapid transit: Synthesis of case 50 studies. *Transportation Research Record*, 1841(1), 1-11.
- Lewis, B. R., & Mitchell, V. W. (1990). Defining and measuring the quality of customer service. *Marketing Intelligence and Planning*, 8(6), 11-17.
- Madhushani, W. A. I., Rajapaksha, R. L. P. W., Dilshani, U. P., Abeyrathne, G. R. H. S., Weligodapola, M., & Dunuwila, D. V. R. (2023). The relationship between service quality and customer satisfaction in Sri Lankan banks. <https://ssrn.com/abstract=4453720> or <http://dx.doi.org/10.2139/ssrn.4453720>
- Mapunda, M. A. (2021). Customers' Satisfaction on Bus Rapid Transit Services in Tanzania: The Servqual Model Perspective. *Sustainable Education and Development*, 194–208.
- Marina, S., Pasha, K., Ricardianto, P., Octora, T. Y., Rahmawati, A., Sianturi, T. F. D., Wiguna, E. S., Sitorus, P. P., & Endri, E. (2023). Corporate image and service quality: Evidence from Indonesia Mass Rapid Transport. *Uncertain Supply Chain Management*, 11, 1265–1274.
- Muhammad, I., Farid Shamsudin, M., & Hadi, N. U. (2016). How Important Is Customer Satisfaction? Quantitative Evidence from Mobile Telecommunication Market. *International Journal of Business and Management*, 11(6), 57. doi:10.5539/ijbm.v11n6p57.
- Mujiya, M. U, Ardiani, A. J., Farhan, M., Bagja, R. P., Hanif, R. Z. (2019). Service Quality Analysis of Bus Rapid Transit A Case in Semarang, Indonesia. *The 4th International Conference on Intelligent Transportation Engineering*.
- Noor, I., Alhidayatullah, A., Amal, M. K. (2023). Dimensions of service quality in influencing customer satisfaction. *Adpebi International Journal of Multidisciplinary Sciences*, 2(2), 189–197.

- Nyabundi, H., Aliata, V., & Odondo, A. (2021). Effect of tangibility on customer satisfaction among micro finance banks customers in Kenya. *European Journal of Business and Strategic Management*, 6(2), 15 – 20.
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1985). A conceptual model of service quality and its implications for future research. *Journal of Marketing*, 49, 41-50.
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing*, 64 (1), 12-40.
- Peter, J. J. & Batonda, G. (2022). Effect of service quality on customer satisfaction in Tanzanian energy industry: A case of TANESCO residential customers in Nyamagana district. *International Journal of Engineering, Business and Management*, 6(1), 47 – 59.
- Razak, A. A., & Shamsudin, M. F. (2019). The influence of atmospheric experience on Theme Park Tourist's satisfaction and loyalty in Malaysia. *International Journal of Innovation, Creativity and Change*, 6(9), 10–20.
- Rita, P., Oliveira, T., & Farisa, A. (2019). The impact of e-service quality and customer satisfaction on customer behavior in online shopping. *Heliyon*, 5(10), e02690. doi:10.1016/j.heliyon.2019.e02690.
- Rust, R.T., & Oliver, R. L. (1994). Service quality: Insights and managerial implications from the frontier. In Rust, R. T. & Oliver, R. L. (Eds), *Service quality: New directions in theory and practice*, 241-68.
- Senelwa, W. M., Nyaberi, D., & Mwaura, P. (2023). Service responsiveness and customer satisfaction among public transportation SACCOS service providers in Nakuru, Kenya. *The International Journal of Business Management and Technology*, 7(4), 270 – 281.
- Setiono, B. A., & Hidayat, S. (2022). Influence of service quality with the dimensions of reliability, responsiveness, assurance, empathy and tangibles on customer satisfaction. *International Journal of Economics, Business and Management Research*, 6(9), 330 -341.
- Sewaka, S., Anggraini, K., Mas'adi, M., Nurhadi, A., Arianto, N. (2023). The effect of customer satisfaction and service quality of banking products on loyalty of bank customer in Tangerang. *International Journal of Artificial Intelligence Research*, 6(1), <https://doi.org/10.29099/ijair.v6i1.295>
- [Suwignyo](#), W., [Indah](#), H. Y., [Hari](#), P. A., [Lia](#), R., [Muhaimin](#), D., & [Sofi](#), A. (2023). The effect of reliability and empathy on customer satisfaction: A survey of PT Telkom Indonesia's IndiHome customers. *Human Systems Management*, 1-14.

- Tang, R. Q., Tan, Y. J., Tan, Z. X., Tan, Y. T., Almadaw, G., & Alosaimi. A. (2022). A study of courier service quality and customer satisfaction. *International Journal of Applied Business and International Management*, 7(1), 137-150.
- Tanzania Invest (2017). Dar Es Salaam Officially Launch Bus Rapid Transit System. <https://www.tanzaniainvest.com/transport/dart-bus-rapid-transit-launch-dar>
- Tijjiang, B. (2022). Exploring the dimensions of assurance, empathy, and evidence in improving service quality and customer satisfaction: A service dominant logic theory perspective. *International Journal of Artificial Intelligence Research*, 6(1.2), <http://ijair.id>
- Wahid, S. N. (2017). Effect of tangibility and reliability service quality towards homestay customer satisfaction. *Journal of Tourism, Hospitality and Environment Management*, 2(5), 44 – 53.
- Wongthongchai, J. (2022). Service quality assessment of mass public transit related to passenger satisfaction: A case study of Nonthaburi. *Journal of Modern Management Science*, 15(1), 64 – 76.
- Yamane, T. (1967). *Statistics: An Introductory Analysis*. 2nd Edition, Harper and Row, New York.
- Zeithaml, V. & Bitner, M. (2016). *Services marketing: Integrating customer focus across the firm* (4th ed. b.). Boston: McGraw-Hill/Irwin.
- Zeithaml, V. A., Parasuraman, A., Berry, L. L. (1990). *Delivering Quality Service*, The Free Press, New York, N.Y.
- Zygiaris, S. Hameed, Z., Ayidh, A. M., & Rehman, U. S. (2022). Service quality and customer satisfaction in the post pandemic world: A study of Saudi auto care industry. *Frontiers in Psychology*, 13, 842141. 10.3389/fpsyg.2022.84214.