

# Customer Satisfaction of Bangladesh Railway E-Ticketing System: A Gender Perspective

Zannatul Ferdous<sup>1</sup>, Fawziyah Faiza Islam<sup>2</sup>, Farabi N A Rahman<sup>3</sup>, Maruf Hasan Rumi<sup>4</sup>

## ABSTRACT

*E-ticketing service is one of the most popular innovations in the rail transportation service. Considering the significance of the service, the study aims to explore customer satisfaction of the e-ticketing system of the Bangladesh Railway. It also investigates the gender perspective in regards to the service quality dimensions. A cross-sectional study was conducted among 361 respondents, followed by a quantitative approach. A structured questionnaire was used to survey the passengers from different railway stations in Dhaka City. The findings showed that the service quality indicators such as well customized website ( $\beta = .130$ ,  $p$  value < 0.05), ease of using the website ( $\beta = .339$ ,  $p$  value < 0.05), ticket purchasing and website crash ( $\beta = .162$ ,  $p$  value < 0.05), web browsing security ( $\beta = .150$ ,  $p$  value < 0.05), NID & credit card payment security ( $\beta = .186$ ,  $p$  value < 0.05) have significant impact on customer satisfaction. Both Multivariate analysis of variances and discriminant analysis revealed that male and female customers have a significant variation in perception regarding user-friendliness and fulfilment dimension. Concentrating on the findings, the study has also suggested some implications to the government and the concerned organizations, such as enforcing gender-sensitive policy (reserved compartments for women in railway service) to increase female satisfaction of the e-ticketing service of Bangladesh Railway.*

**Keywords:** E-Ticketing, Customer Satisfaction, E-S-QUAL, Bangladesh Railway

## INTRODUCTION

Railway transportation has a conventional notion of being more cost-effective, environment friendly and less cumbersome than other modes of transportation all over the world (Hossain & Islam 2013; Oliveira et al. 2019; Tang & Lo 2008). Therefore, it has a significant impact on the economic growth and development of a country (Mitchell 1964; Pradhan & Bagchi 2013; Rahman & Rahman 2009). To keep pace with the digitization of public service delivery and improve customer satisfaction, most

---

<sup>1</sup> Department of Public Administration, University of Dhaka, E-mail: [zannat0727@gmail.com](mailto:zannat0727@gmail.com)

<sup>2</sup> Department of Public Administration, University of Dhaka

<sup>3</sup> Department of Public Administration, University of Dhaka

<sup>4</sup> Department of Public Administration, University of Dhaka

countries have been adding innovations like online ticket reservation, high-speed rail communication, information tracking system. (He et al. 2016; Swamy 2012). Among all of these, E-ticketing in rail service has a direct positive impact on customers' satisfaction (Guan et al. 2020). In addition, the service quality dimensions, to some extent, have a critical influence in respect to the demographic profile of the customers (Nithya & Kiruthika 2020).

The Railways in the Subcontinent had their inception during the British Period. Bangladesh Railway (BR), a state-owned transport agency, has served as a commercial enterprise and public utility service (Uddin & De 2014). Like other developed and developing nations of the Asia Pacific, it has faced many more challenges to fulfil its customer demands. It has been going through a continuous financial loss that was summed to BDT. 1738.37 crore in the fiscal year 2018-19 (Adhikary 2019). In addition to that, women have a lower level of satisfaction regarding the safety issues and perceive the service quality of BR to be very poor in case of providing security in the platform (Hossain & Islam 2013). Furthermore, there is an absence of exclusive compartments for women or female coaches even though the Railway Act 1890 had a provision to do so (Kibria 2020). To develop BR's service quality and fulfil the "Digital Bangladesh" agenda, BR had introduced an e-ticketing service in 2012 along with other innovative features such as SMS ticketing, rail tracking system and information display system. Such improvements are to be done to satisfy the needs of the entire population demographics, including both male and female customers. Therefore, the research aims to explore the relationship between customer satisfaction and service quality of the e-ticketing service of Bangladesh Railway. It also examines the differences in perceptions regarding service quality dimensions of e-ticketing service between male and female customers.

## **LITERATURE REVIEW**

### **Customer Satisfaction**

Satisfaction includes judgment concerned with a specific purchase decision (Oliver 1980). Customer satisfaction refers to the customer's overall evaluation of the performance of an offered service (Bansal et al. 2014). It has relationship with service quality (Ali 2012; Hossain & Islam 2013; Rahman & Rahman 2009; Sahabuddin 2014; Siddiqi 2011). In recent days, a huge transition has been seen in online service delivery. Perera & Bandara (2016) considered the quality of service and effectiveness of service operations as important aspects of achieving the customer satisfaction of any service organization. They focused on customer satisfaction & service quality among local railway travellers and foreign travellers in Sri Lanka.

### **E-Ticketing**

E-ticketing is a way to document the sales process from the customers' travel activities

without spending valuable time and documents physically. According to Budi Kurniawan (2010), electronic ticketing is a paperless electronic document used for purchasing tickets. Various researches have been conducted on railway service measuring service quality and customer satisfaction both internationally and nationally.

Bangladesh Railway (BR) carries 20% of passengers among all the transportation sectors (ADB 2000). Even so, the performance of the overall service quality of BR is considerably weak to meet the extended demand in modern times. In the same way, Kays (2013) found that BR's poor service also impedes regular customer demand. Hence, it is important to bring about both infrastructural and service quality development to restructure the rail service of the Bangladesh railway. In this regard, improvement of the service quality attributes, especially the physical environment of railway platforms and train, security, and waiting time, conveying improved customer satisfaction in the rail service of Bangladesh are necessary (Rahman & Rahman 2009; Hossain & Islam 2013). Uddin & De (2014) observed that around 91% of passengers suffer from buying tickets in the manual process due to long queues, sometimes failing to buy tickets at all after waiting for so long. So, they have recommended ensuring transparency in the railway ticket booking service. Therefore, Railway e-ticketing services have been introduced by Bangladesh Railway (BR) through a service contract with CNS Ltd. It leaves a significant impact on customer satisfaction considering the reduction of time, cost and visit of the customers (Hoque et al. 2017).

### **E-S-QUAL**

A. M. Shahabuddin (2014) supported that there is a strong connection between service quality and customer satisfaction. On the other hand, the service quality of Islami Bank Bangladesh Ltd. (IBBL) had been assessed through two service quality measurement scales which were the E-S-Qual scale and the E-RecS-Qual scale compiling six different dimensions where efficiency, fulfilment, privacy and reliability of the services were related to online service quality. On the other hand, responsiveness and contact dimensions were related to the problem solving through online services (Shahabuddin 2014). Boshoff (2007) conducted a psychometric assessment of the E-S-QUAL model. The result showed that the scale is effective in measuring the essence of electronic service quality. According to his paper, the most effective scale to measure the quality of service in internet-based service delivery is the E-S-QUAL scale developed by Parasuraman and his colleagues.

### **Gender Perception Towards E-ticketing System**

A study conducted by Lee and his colleagues (2013) examined that technology did not have a stronger effect on service quality for females than for males; rather, the need

for interaction significantly influenced the perceived service quality for females in the case of self-service kiosks in the USA. Nanggong & Rahmatia (2019) observed that in Indonesia, while adopting e-ticketing technology, perceived benefits have more importance for males and the effect of environmental concern is more important for females. The study also included that women are generally more concerned about environmental issues in comparison to men.

Research conducted by Tanrikulu & Celibatur (2013) found that trust factors in online ticket purchasing behaviour do not show differences regarding demographic factors like gender, education, income; rather, it shows differences according to occupations and peoples' electronic shopping tendencies. On the contrary, another study was conducted in India based on e-ticketing and its gender perspective by Smith and his colleagues (2012). The study showed a statistically significant preference between gender and the effectiveness and accessibility of e-ticketing technology. It also showed that male respondents think e-ticketing to be a more preferable and comfortable method for transportation.

This literature shows that technological factors might not affect male and female customers differently in developed countries, but technology has a different impact on gender in developing countries. If we consider the context of Bangladesh, technology is a big issue for male and female because it has limited technological advancement and patriarchal culture. This paper would significantly impact literature since e-ticketing was introduced in Bangladesh only a few years ago. However, the gender perspective of this technology-based service has not yet given much priority.

## **HYPOTHESES**

- H1: There is a positive relationship between customer satisfaction and service quality.
- H2: There is a difference in the perception of male and female customers in terms of the reliability dimension of e-ticketing service.
- H3: There is a difference in the perception of male and female customers in terms of the user-friendliness dimension of e-ticketing service.
- H4: There is a difference in the perception of male and female customers in terms of the privacy dimension of e-ticketing service.
- H5: There is a difference in the perception of male and female customers in terms of the fulfilment dimension of e-ticketing service.

## **DATA & METHODOLOGY**

### **Research Approach & Sampling**

A cross-sectional study has been conducted, followed by a quantitative approach.

The quantitative approach helps best understand factors or variables' influence on an outcome and explain a certain problem or issue (Creswell 2014). The study area was Komlapur Railway Station and Airport Railway Station in Dhaka city, which were selected purposively because of time and resource constraints. Data were collected randomly from a sample size of 361 respondents, and the power analysis result (.998) demonstrated a strong representative sample of the study population.

### **Data Collection Tools**

As the study was mainly based on primary data, surveys had been used for data collection. A structured questionnaire was used to collect the quantitative data from the respondents. In order to reduce the non-respondent error (as some respondents may not have used the following service), 19 more respondents were taken into account. The survey was conducted between 20-30 January 2020.

### **Questionnaire Measurement Scale**

The questionnaire had been organized in two parts where the first one provides the demographics of the respondents, and the second one helps the measurement of the service quality, which was conducted by following the E-S-QUAL model. The E-S-QUAL model of measuring e-service quality is a multi-dimensional scale offered by Parasuraman and his colleagues (2005). They offered four-dimensional tools, which included efficiency, fulfilment, system availability and privacy of the online service. Here, the dimension 'efficiency' had been replaced by 'reliability' and another dimension, 'system availability', had been replaced by 'user friendliness' to have the contextual fitness (Du et al. 2013; Qteishat et al. 2014; Siddiki 2011). In order to conduct the whole research, a total number of 17 questions were developed under four dimensions of the E-S-QUAL model: reliability, user-friendliness, fulfilment, and privacy. The responses under these four dimensions had been valued by following a five-point Likert scale where '1' had been valued as 'Strongly disagree', and '5' as 'Strongly agree'.

### **Quality Assurance**

The reliability and validity of the questionnaire were tested for quality assurance. Almost 15 questionnaires were pre-tested for validity check, and a reliability test had been conducted to see the internal consistency and stability of the questionnaire. The Cronbach's alpha score of 0.753 from the reliability test showed a standard internal consistency level (Cronk 2008). Data were chronologically arranged for statistical analysis. For quantitative data analysis, the Statistical Package for Social Science (SPSS) (IBM version 23) had been used.

The descriptive analysis had been conducted to get a summary of the data and to detect sample characteristics (Thompson 2009). On the contrary, multiple linear regression analysis was used to examine the strength of relationships between each service quality dimension and customer satisfaction (Landau 2019). Furthermore, both MANOVA and

discriminant analysis (DA) were used to ascertain the strength of the variables on group differences and to explain the influence of each dimension of service quality that causes a difference in the perception of male and female customers. Similarly, these two analyses had been done to avoid type I error.

**RESULTS**

Table 1 shows that around 72% of respondents are male, and 28% are female. It also describes that the overall satisfaction of the respondents is average. The mean satisfaction scores of male respondents are greater than female respondents, which indicate that female customer satisfaction is comparatively lower than their male counterparts. The statistics of table 1 had been conducted following descriptive analysis.

**Table 1: Male-Female Ratio & Overall Satisfaction Score of the Customers**

Characteristics of the Respondents	Frequency	Percentage	Mean Satisfaction Score	Overall Satisfaction score Mean ±SD	P-value
Gender	Male	261	72.3	3.19	(3.03±1.023) 0.000***
	Female	100	27.7	2.62	

N.B.: \*\*\* indicates highly significant (p value < 0.05)

Multiple linear regression was conducted to demonstrate the relative contribution of each service quality dimension and the overall model fitness to explain the variance in customer satisfaction. Table 2 shows the R square value of .346, which indicates that the customers' overall satisfaction varied about 34.6% due to the variations in the service quality dimensions. In addition, the ANOVA of table 3 shows that the overall regression model is significant with F (6, 354) = 31.26, p< .001.

**Table 2: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.588	.346	.335	.834

a. predictors: (constant), strong online banking security, webpage does not crash while purchasing, well-customized website, NID & credit card payment security, ease of using the website, web browsing security

**Table 3:** ANOVA<sup>b</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	130.440	6	21.740	31.256	.000**
	Residual	246.224	354	.696		
	Total	376.665	360			

a. dependent variable: E-ticketing service quality

b. predictors: (constant), strong online banking security, webpage does not crash while purchasing, well-customized website, NID & credit card payment security, ease of using the website, web browsing security

Table-4 represents the result of the Collinearity diagnostic model. The Variance Inflation Factor (VIF) values are less than 10, which determine no significant multicollinearity among the service quality dimensions. Based on the regression coefficient from table 4, five service quality attributes are significantly different from zero and significantly influence customer satisfaction. They are well customized website ( $\beta = .130$ ,  $p$  value < 0.05), Ease of using website ( $\beta = .339$ ,  $p$  value < 0.05), ticket purchasing and website crash ( $\beta = .162$ ,  $p$  value < 0.05), web browsing security ( $\beta = .150$ ,  $p$  value < 0.05) and NID & credit card payment security ( $\beta = .186$ ,  $p$  value < 0.05). Therefore, these five service quality indicators support H1. On the contrary, strong online banking security ( $\beta = -.091$ ,  $p$  value > .05) does not significantly influence customer satisfaction.

**Table 4:** Regression Model

Model	Unstandardized Coefficients			Standardized Coefficients		
	B	Std. Error	Beta	T	Sig	VIF
Constant	.450	.235		1.917	0.056	
Well customized website	.130	.047	.133	2.765	.006**	1.249
Ease of using the website	.339	.044	.365	7.715	.000***	1.210

Ticket purchasing and website crash	.162	.045	.158	3.620	.000***	1.027
Web browsing security	.150	.050	.148	2.995	.003**	1.322
NID & credit card payment security	.186	.053	.165	3.495	.001**	1.236
Strong online banking security	-.091	.050	-.084	-1.833	.068	1.143

N.B.: \*\*\* indicates highly significant (p value < 0.05)

MANOVA was calculated to see the effects of service quality dimensions perceived by male and female customers. Significant effects have been found on user-friendliness (p < 0.05) and fulfillment (p < 0.05). This rejects the null hypothesis and accepts the alternative one for H3 and H5. The table also shows that there is no significant effect of reliability and privacy on gender. This accepts the null hypothesis and rejects the alternative one for H2 and H4. The significance level is 0.000 for the multivariate test as well advocating the difference in terms of perceived service quality of e-ticketing service between male and female. The table finally implies that male customers possess positive notions regarding the user-friendliness and fulfilment factor of service quality in comparison to the female customers.

**Table 5:** Differences in the Perception of Male and Female Customers Regarding Service Quality Factors Of E-Ticketing

Variables	Number of Items	F-ratio	P-value	Group Means	
				Male	Female
Reliability	3	3.492	0.062	2.96	3.11
User Friendliness	4	28.363	0.000***	3.00	2.62
Privacy	4	0.012	0.911	3.12	3.22
Fulfillment	3	6.440	0.012*	2.93	2.74

N.B.: \*\*\* indicates highly significant (p value < 0.05)

A discriminant function analysis has been done to examine the categorical variances regarding service quality dimensions and see the correct classification of cases. The equality of group means reveals the Wilks'λ value, which indicates the intensity of the



service quality dimensions on the discriminant function. It conveys similar findings as MANOVA that user-friendliness of the e-ticketing service has the highest discriminant effect on the group perception since the lowest Wilks'  $\lambda$  value presumes the highest importance. The canonical correlation (R) is 0.371, which shows an association of groups with the discriminant function. The canonical correlation square ( $R^2$ ) is 0.1376, which denotes that 13.76% variation between groups has been explained within the given discriminant function.

**Table 6:** Significance of the Service Quality Factors On the Difference of Male and Female Customer Perception.

Variables	The Wilks' $\lambda$	P-value
Reliability	0.990	0.062
User-friendliness	0.927	0.000***
Privacy	1.000	0.911
Fulfilment	0.982	0.012*

N.B.: \*\*\* indicates highly significant (p-value < 0.05)

The Wilks'  $\lambda$  value of .863 results in the chi-square value of 52.56 with 4 degrees of freedom, which ascertains the discriminant function's model significance (P-value<0.05). The classification result of table 7 exhibits the model hit ratio referred to 73.7% group cases are correctly classified.

**Table 7:** Classification Result of the E-Ticketing Service

Actual group	Cases	Predicted group	
		Male	Female
Male	238	243 (93.1%)	18 (6.9%)
Female	162	77(77%)	23 (23%)

The percentage of group cases correctly classified is 73.7%.

## DISCUSSION

E-ticketing service has brought significant changes in the ticket purchasing system across the globe and in Bangladesh. Constant progress in the service quality dimensions positively motivates the perception of the customers. That is because the present digitized service has reduced time consumption and excessive hassle of buying tickets (Hoque et al. 2017). The result section demonstrates that improvement in the customization

of the website, ease of using the website, improvement in online payment and web browsing security, and strong network in the server consequently improve the customers' satisfaction. In addition to that, introducing the e-ticketing system has reduced the workload of the employees working in the station.

The statistics also show that the perception of male and female customers barely varies in the reliability dimension. It shows that both of the parts have an average level of satisfaction in this regard. This implies that they perceive an average view regarding the fees charged by railway while purchasing e-ticket and the supportive features of the website to solve inquiries. The significance of the finding is that it is not the fees that make a variation in the level of satisfaction.

One of the most significant findings of the paper is that male and female perception regarding e-ticketing varies when it comes to user-friendliness. If customers have difficulty accessing the technological hardware and software, their satisfaction will be low (Chowdhury 2015). Suppose we discuss this in the present context. In that case, we will see that women's participation in education and the workplace is relatively low (Asian Development Bank 2017), which makes it less easy for them to access electronic devices. It results in making them less tech-friendly. Furthermore, thus their perception varies in user-friendliness, and they find the e-ticketing service less user-friendly.

Another finding of the paper is the non-variation in the perception of the male and female customers regarding privacy. Both male and female customers think that privacy is maintained in this service, including the customers' information and the information required for ticket purchasing. Their satisfaction is comparatively high in this dimension. So it can be said that the government is more or less successful in ensuring the customers' privacy in this particular digitized service.

Another finding shows that there is variation in the perception regarding the fulfilment dimension. However, the satisfaction rate is comparatively low in this dimension. One of the reasons is that only 25% of the total tickets were sold online. Moreover, tickets can be purchased only at a fixed time of the day rather than purchasing 24/7. Therefore, the unavailability of the tickets causes less satisfaction of the customers in the fulfilment dimension. In a broader sense, it implies that customers are not satisfied as they think tickets are not always available in the online service of Bangladesh Railway whereas, they are moderately satisfied with the service's privacy.

However, overall an unusual disparity has been found in the perception of the male and the female customers across the service quality dimension. The masculine culture and high uncertainty avoidance culture do not support the mass adoption and active participation in internet usage and consider it sensitive to the status quo, especially for women (Nath & Murthy 2004). The lower participation of women in education and in the workplace and their inability to make decisions are barriers in this regard (Asian Development Bank 2017). As a result, women's mobility is still low, and they have lower accessibility to resources, information, technology, and support systems than men. The poor environment of the platforms and no separate compartments for women in trains affect women's satisfaction resulting in choosing alternative transportation service.

However, an internet diffusion rate below 1% and the exclusion of many significant mobile operators in the payment system negatively influence the customers' overall satisfaction (Nath & Murthy 2004). Because of these reasons, males and females have different perceptions and females are less satisfied with the online ticket service of Bangladesh Railway. On the other hand, as a consequence of introducing this computerized system, corruption and unusual demands have reduced significantly, and transparency in the ticket purchasing system has been ensured. It also alleviates the chances of being harassed physically or mentally due to not going to ticket booths to purchase railway tickets.

## **POLICY IMPLICATIONS**

The study suggests some policy implications for government and concerned organizations. The results show that women are less satisfied with the service in comparison to men. It demands a gender-sensitive policy that will help to increase the satisfaction level of women and make the service effective for both male and female customers. To make women more interested in railway service, reserved compartments should be provided, followed by the Railway Act, 1890. On the other hand, by increasing the availability of seats on the website, providing the service 24/7, including more mobile operators for payment, is how the dimensions of service quality can be improved.

In order to conduct further studies in this particular service, this study will be insightful for the researchers. They can focus on the variation of customer satisfaction based on their age and location, and other demographic characteristics. It will also be useful to researchers or even practitioners to take holistic planning regarding any development in the e-ticketing service. The paper will also help the government understand the satisfaction level of both male and female customers and get a better understanding of the areas that need to be focused on increasing the customers' satisfaction.

## **CONCLUSION**

The quality of service provided by e-ticketing has been improving; nonetheless, it is not fully successful in fulfilling the unique needs of its customers as of yet. As an online ticket booking service is characterized by a lack of physical communication and intangible control mechanism, the service provider needs to ensure appropriate technical support and privacy protection to satisfy customer needs and demands (Swamy 2010). Moreover, the service quality dimensions of Bangladesh Railway E-ticketing service do not influence its male and female customers equally. Suppose Bangladesh Railway fails to increase the current satisfaction level. In that case, it might lose a considerable amount of its female customers as well as fail to tap into the potential female market. Hence, providing a good quality service in this online platform makes it possible to provide efficient public service delivery in the railway sector.

Though the study's findings are significant and interesting, the study is not out of

limitations. Data was collected from a particular district and could not incorporate other districts because of time and resource constraints. In addition to that, the E-S-QUAL model has been used in this study to measure service quality for which other significant models were compromised.

## ACKNOWLEDGEMENT

Heartfelt gratitude to Israt Jahan Suchie, Hasibul Hossen Santo, Md. Shazzad Hossain, Md. Akhlas Uddin for their support in data collection and inspiration for this study purpose.

## CONFLICT OF INTEREST

There has been no conflict of interest of the authors regarding the materials incorporated in this paper.

## REFERENCES

- Adhikary, TS 2019, 'Poor Service Despite Huge Investment,' *The Daily Star*, 4 December. <<https://www.thedailystar.net/frontpage/bangladesh-railway-poor-service-despite-huge-investment-1835461>>
- Ali, MH 2012, 'E-S-QUAL Model in Internet Banking: A Study from Customer's Perspectives,' *Journal of International Management Studies*, vol. 7, no. 2, pp.75-78.
- Asian Development Bank 2017, 'Bangladesh Gender Inequality Diagnostics of Selected Sectors' <<http://dx.doi.org/10.22617/TCS179121-2>>
- Bansal, SP, Singh, R & Gangotia, A 2014, 'Measuring the impact of sales promotion, service quality and customer experience: A case of e-ticketing,' *Transnational Corporations Review*, vol. 6, no. 4, pp.419-428.
- Boshoff, C 2007, 'A psychometric assessment of ES-QUAL: a scale to measure electronic service quality,' *Journal of Electronic Commerce Research*, vol. 8, no. 1, pp.101.
- Budi, K 2010, 'Factors affecting customer satisfaction in purchase decision on ticket online: A case study in Air Asia,' p.p. 1-84 <[https://www.researchgate.net/profile/imran-kays/publication/303913227\\_a\\_comparative\\_study\\_of\\_operational\\_performance\\_of\\_bangladesh\\_railway\\_with\\_selected\\_regi](https://www.researchgate.net/profile/imran-kays/publication/303913227_a_comparative_study_of_operational_performance_of_bangladesh_railway_with_selected_regi)>
- Chowdhury, NT 2015, 'An Empirical Investigation on Customer Satisfaction towards Online Ticketing in Malaysia,' *The International Journal of Business & Management*, vol. 3, no.3, pp.1.
- Creswell, JW & Creswell, JD 2017, 'Research design: Qualitative, quantitative, and mixed methods approaches,' *Sage publications*.
- Cronk, BC 2008, 'How to Use SPSS: A step by step guide to analysis and interpretation,' *Glendale: Pyrczak Publishing*.
- Du, J, Lu, J, Wu, D, Li, H & Li, J 2013, 'User acceptance of software as a service: Evidence from customers of China's leading e-commerce company, Alibaba,' *Journal of Systems and Software*, vol. 86, no. 8, pp.2034-2044.

- Guan, Y, Wu, B & Jia, J 2020, 'Does online ticket booking system make people better off? An empirical study on railway service,' *Transportation Research Part F: Traffic Psychology and Behaviour*, vol. 73, pp.143-154.
- He, R, Ai, B, Wang, G, Guan, K, Zhong, Z, Molisch, AF, Briso-Rodriguez, C & Oestges, CP 2016, 'High-speed railway communications: From GSM-R to LTE-R,' *Ieeevehicular technology magazine*, vol. 11, no. 3, pp.49-58.
- Hoque, MR, Ahmed, E, Sharmin, R, Mahmud, M, Roy, MC & Hassan, M 2017, 'Assessing E-ticketing Service of Bangladesh Railway through the Tunnel of TCV+ Model,' *International Journal of Management and Applied Science*, vol. 3, no. 7, pp.70-75.
- Hossain, B & Islam, MS 2013, 'Determinants of Customer Satisfaction on Service Quality of Railway Platforms in Bangladesh: A Study on Chittagong and Dhaka Railway Platforms,' *Journal of Business*, vol. 34, no. 1, pp. 63-84.
- Kays, HI 2013, 'A comparative study of operational performance of Bangladesh railway with selected regional countries and its present constraints, potentials & future prospects,' pp. 1-156. <[https://www.researchgate.net/publication/303913227\\_a\\_comparative\\_study\\_of\\_operational\\_performance\\_of\\_bangladesh\\_railway\\_with\\_selected\\_regional\\_countries\\_and\\_its\\_present\\_constraints\\_potentials\\_future\\_prospects](https://www.researchgate.net/publication/303913227_a_comparative_study_of_operational_performance_of_bangladesh_railway_with_selected_regional_countries_and_its_present_constraints_potentials_future_prospects)>
- Kibria, A 2020, 'Need for Ensuring Women's Safety in Train,' *The Financial Express*, January, 2020. <<https://thefinancialexpress.com.bd/views/opinions/need-for-ensuring-women-safety-in-train-1578067849>>
- Landau, S 2019, 'A handbook of statistical analyses using SPSS,' *Chapman & Hall*.
- Lee, HJ, Fairhurst, A & Cho, HJ 2013, 'Gender differences in consumer evaluations of service quality: Self-service kiosks in retail,' *The Service Industries Journal*, vol.33, no. 2, pp.248-265.
- Mitchell, BR 1964, 'The coming of the railway and United Kingdom economic growth,' *Journal of Economic History*, pp.315-336.
- Nanggong, A & Rahmatia, R 2018, 'Gender Differences of Sustainable Consumer Behavior in Technology Adoption: Evidence From Indonesia,' *In Journal of International Conference Proceedings*, Vol. 1, no. 2, pp. 1-10.
- Nath, R & Murthy, NR 2004, 'A study of the relationship between Internet diffusion and culture,' *Journal of International Information Management*, vol. 13, no. 2, pp.5.
- Nithya, N & Kiruthika, R 2020, 'Factors Determining the Service Quality of E-Ticketing Process in Indian Context—An Empirical Study'.
- Oliveira, L, Bruen, C, Birrell, S & Cain, R 2019, 'What passengers really want: Assessing the value of rail innovation to improve experiences,' *Transportation Research Interdisciplinary Perspectives*, vol. 1, pp. 100014.
- Oliver, RL 1980, 'A cognitive model of the antecedents and consequences of satisfaction decisions,' *Journal of marketing research*, vol. 17, no. 4, pp. 460-469.
- Parasuraman, A, Zeithaml, VA & Berry, LL 1985, 'A conceptual model of service quality and its implications for future research,' *Journal of marketing*, vol. 49, no. 4, pp. 41-50.
- Parasuraman, A, Zeithaml, VA & Malhotra, A 2005, 'E-S-QUAL: A multiple-item scale for assessing electronic service quality,' *Journal of service research*, vol. 7, no. 3, pp. 213-233.

- Perera, RASA & Bandara, ABDM 2016, 'Foreign Travelers' Perspective towards Service Quality of Railway Service in Sri Lanka; a Study Based on Kandy Railway Travelers'.
- Pradhan, RP & Bagchi, TP 2013, 'Effect of transportation infrastructure on economic growth in India: the VECM approach,' *Research in Transportation Economics*, vol. 38, no. 1, pp. 139-148.
- Qteishat, MK, Alshibly, HH & Al-ma'aitah, MA 2014, 'The impact of e-ticketing technique on customer satisfaction: an empirical analysis,' *Jistem-journal of information systems and technology management*, vol. 11, no. 3, pp. 519-532.
- Rahaman, KR & Rahaman, MA 2009, 'Service quality attributes affecting the satisfaction of railway passengers of selective route in southwestern part of Bangladesh,' *Theoretical and Empirical Researches in Urban Management*, vol. 4, no. 12, pp. 115-125.
- Shahabuddin, AM 2014, 'E-service Quality For Customer Satisfaction Measurement: A Case Study On Islami Bank Bangladesh Ltd,' *Global Disclosure of Economics and Business*, vol. 3, no. 1, pp. 31-38.
- Siddiqi, KO 2011, 'Interrelations between service quality attributes, customer satisfaction and customer loyalty in the retail banking sector in Bangladesh,' *International Journal of Business and Management*, vol. 6, no. 3, pp. 12.
- Smith, AA, Smith, AD, Gopalakrishna-Remani, V & Offodile, OF 2012, 'Gender preferences concerning identity theft and technology-related issues with sports e-ticketing,' *International Journal of Services and Operations Management*, vol. 13, no. 3, pp. 279-309.
- Swamy, RN 2012, 'Popularity of E-Ticketing System of Indian Railways: A Survey Based Approach,' *Indian Journal of Public Administration*, vol. 58, no. 1, pp. 69-81.
- Tanrikulu, Z & Celilbatur, N 2013, 'Trust factors affecting E-ticket purchasing,' *Procedia-Social and Behavioral Sciences*, vol. 73, pp. 115-119.
- Thompson, CB 2009, 'Descriptive data analysis,' *Air medical journal*, vol. 28, no. 2, pp. 56-59.
- Turki, AMJ, Pemberton, L & Macpherson, H 2017, 'Adoption and acceptance of mobile commerce in Saudi Arabia: the case of e-ticketing in the airline industry' (Doctoral dissertation, University of Brighton).
- Uddin, MK & De, M 2014, 'Service Quality of the Bangladesh Railway as Perceived by the Passengers,' *Bangladesh Journal of Psychology*, vol. 20, pp. 137-152.

