



E-Service Quality and Customer Satisfaction: With Reference to Atm Services of State Banks in Sri Lanka

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ABSTRACT

The purpose of this article is to investigate the quality of e-services and customer satisfaction in relation to ATM banking services, using theoretical foundations as a basis for investigation. The relationship between e-service quality and customer perception has received less attention from researchers, despite the fact that researchers have become increasingly interested in e-services' quality dimensions. There is a clear need for research into both the quality dimensions of e-services and the customer satisfaction dimensions that are relevant in the service context. In this article, quantitative analysis and data from respondents were used in conjunction with a convenient sampling technique. The study discovered that reliability, responsiveness, efficiency, privacy, empathy, and efficiency are all significant factors influencing customer satisfaction when using ATM banking services. As a result, the study concluded that reliability, responsiveness, efficiency, privacy, empathy, and efficiency are all significant factors influencing customer satisfaction when using ATM banking services.

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Introduction

Technological breakthroughs, current industrial procedures, and the ability to create new sectors are all important elements impacting company rivalry (Al-dweeri et al., 2017; Islam et al., 2007). Technology is a collection of knowledge and processes that are carried out through the use of machines. Reduced operational costs, improved quality, and increased innovation are all being achieved through the application of technology, with the ultimate goal of producing new goods and extending existing market prospects (Ghane et al., 2011; Raman et al., 2008). This new infrastructure, as per Aguila et al., (2013), is not only assisting firms in doing things in the right way than they were in previous eras, but it is also open up new forms of control, alignment, and collaboration on activities which are more easily accessible and less expensive than they were before.

In recent years, information and telecommunications technology has had an impact on a wide range of industries. Financial institutions have undergone significant transformations, with many of these transformations being directly related to information and communication technologies (Islam et al., 2007). Every industry is being impacted by technology, and the financial services industry is no exception. The banking industry is a segment of the economy that invests in financial assets in order to increase wealth. One of the most significant investors in technology innovation is the banking industry. Banks currently pay close attention to their clients' perspectives by providing excellent service (Khan et al., 2016; Raman et al., 2008). Each channel via which banks distribute their products has also evolved as a result of technological improvements. Retail banks can now offer alternative distribution channels such as automated teller machines (ATMs), cash deposit machines (CDMs), online banking, and mobile banking, among others (Boateng et al., 2014; Islam et al., 2007). According to Boateng et al., (2014), Several changes have taken place in the banking industry, and one of these changes has been the way customers interact with financial institutions. Technology has played a big role in this. Customers can also use ATMs, cards, internet banking, and mobile banking, as well as the traditional branch channel, to get their money (Islam et al., 2007). In the past, people who wanted to use banking services had to visit banks and wait in long lines. Today, people can use all of the services without having to go to a financial institution. It doesn't matter if people use a cell phone from any place to get connected with their banks (Aguila et al., 2013).

In the lack of concrete facts on which to base quality ratings, Cristobal et al. (2007) suggest that customers must rely on other indicators to discern whether something is of good quality. Technology-enabled service delivery is preferred by the majority of customers. Customers anticipate rapid response, convenience, time-serving, and twenty-four-hour accessibility of services for a variety of reasons (Jamil & Khan, 2016). ATMs offer the convenience of many places, and the ATM card is safeguarded by a PIN, guaranteeing that your transactions are safe. The changing tendency, on the other hand, raises serious issues regarding client satisfaction. According to Boateng et al., (2014), if ATM networks go out of service due to issues such as ATM card cloning fraud, fake ATMs, ATM attacks, and PIN cracking, customers could be left without the ability to conduct transactions until the beginning of their bank's next time of opening hours (Boateng et al., 2014; Islam et al., 2007).

The importance of service quality in influencing customer satisfaction among those who use ATM services, particularly in urban areas, has developed into a leading area of study. Previous research has found that quality is a vital factor that affects satisfaction of customers among those who use ATM services (Boateng et al., 2014). There are operational difficulties with ATM machines, and customers frequently experience difficulties when using the ATM machines on a regular basis. In order to determine whether or not a problem exists within the financial institutions. This study conducted an interview with customers who use ATMs to make money deposits and withdrawals in order to learn

more about their experiences (Jamil & Khan, 2016; Islam et al., 2007). Many clients are unhappy with the level of service they receive from their financial institutions. Therefore, according to Jamil & Khan, (2016), it is critical to identify the issues that create a barrier between the customer and the ATM's service. In order to accomplish this, It's crucial to figure out what factors might motivate people to utilize ATMs (Boateng et al., 2014). Accordingly, this study identifies this as a problem that requires further investigation into these areas to determine the factors that influence customer satisfaction when using an ATM machine in the banking sector. Therefore, the research questions is phrased as "what are the factors affecting customer satisfaction with respect to ATM service in the banking sector in Sri Lanka?" The researcher's goal in this study is to provide answers to the research question stated.

Literature Review and Hypotheses Development

Zeithaml et al., 2002, came up with one of the most basic definitions of e-service quality. This means that e-service quality is a field in which it is possible to provide efficient and effective services to users through electronic media and communication. As highlighted by Parasuraman et al. (2005), customers' impressions of e-service quality are vastly different when compared to other media. This is due to people's differing opinions and beliefs about technology, its adoption, and its use. According to Santos (2003), the general views, judgements, and assessments of customers concerning services that will be supplied by electronic media are considered the quality of e-services.

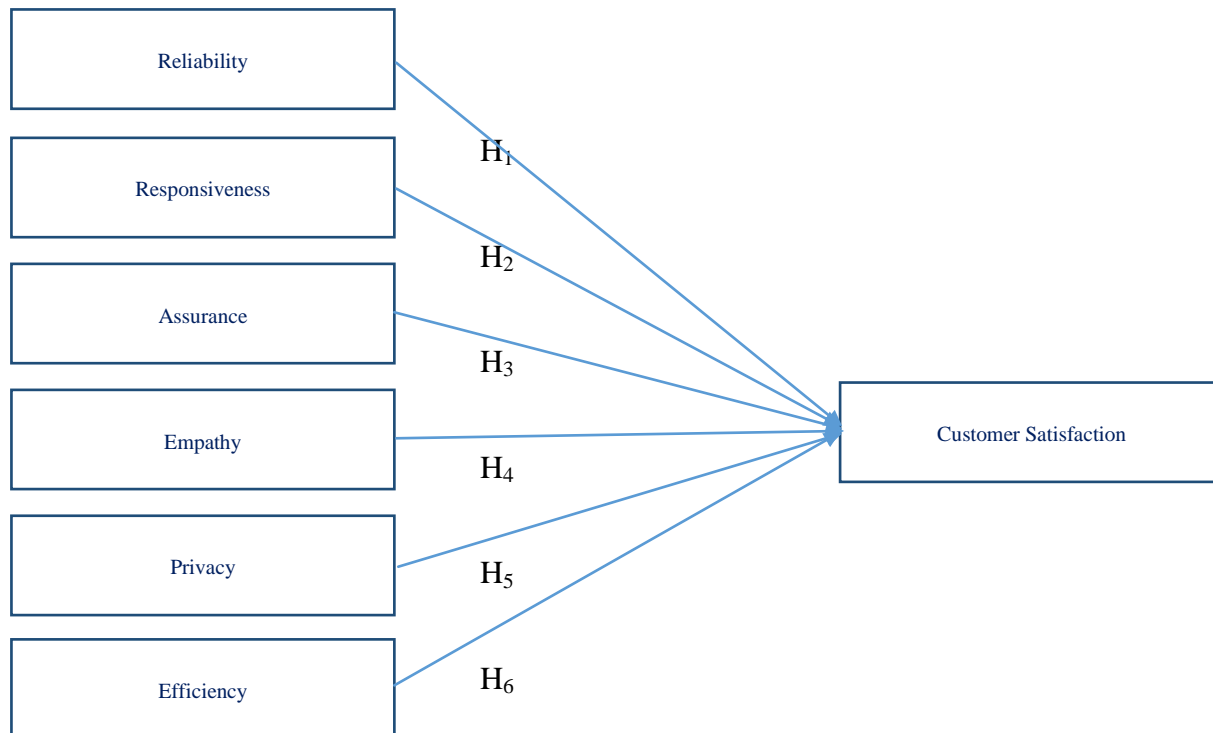
SQ scales have been used for many years, but the SERVQUAL scale has been the most widely adopted. Its dimensions were tangibles, dependability, responsiveness, assurance, and empathy. There were ten factors that determined service process quality on this scale, and these ten factors were later refined into five dimensions, which became known as the RATER Scale. The SERVQUAL scale has been used to derive the majority of the dimensions that are used to measure eservice quality measurement.

Zeithaml et al. (2002) conducted a study on e-service with the assistance of four focus groups comprised of people who had previous experience with online shopping. It was discovered through this investigation that there are eleven quality dimensions for e-services, which are as follows: reliability; responsiveness; access; and flexibility; ease of navigation; efficiency; assurance and trust; security and privacy; price knowledge; site aesthetics; and customization and personalization. Zeithaml et al, (2002) provided a revised version of the e-SQ model, with the number of e-service quality dimensions reduced from nine to seven. Some of the dimensions evaluated were efficiency, dependability, fulfillment, privacy, responsiveness, compensation, and contact. Parasuraman et al., (2005) improved on their prior work to create a more sophisticated and detailed e-SQ scale. After the researchers selected and assessed the components of service quality existent in the current literature of e-SQ, they went through a number of revisions. The final scale, which was the most recent in the e-SQ industry, included of 22 elements on four dimensions: efficiency, fulfillment, system availability, and privacy, as a result of this iterative process. The first four dimensions were referred to as ES-QUAL (core scale), and the remaining three, namely responsiveness, compensation, and contact, were referred to as E-RecS-QUAL (e-SQ recovery).

Using the SERVQUAL scale as a guideline, Yang et al., (2004) proposed seven online service quality dimensions: dependability, responsiveness, and access, ease of use, attentiveness, credibility, and security. More researchers have come up with models and dimensions that are tailored specifically to electronic services. Using SERVQUAL as a frame work, Kaynama & Black (2000) proposed seven quality dimensions to evaluate the service quality of the websites and e-services of numerous travel agencies. These dimensions are: responsiveness, content and purpose (derived from reliability), accessibility, navigation, design and presentation (all of which are derived from tangibles), background (assurance), personalization and customization (derived from empathy).

The researcher has built a conceptual model to explore the relationship between electronic service quality and customer satisfaction based on a review of the literature. Customer satisfaction is a dependent variable in the banking industry, with independent variables such as responsiveness, reliability, assurance, empathy, privacy, and efficiency as independent variables. The researcher attempted to create a relationship between the various characteristics of e-service quality and customer satisfaction while conceptualizing the variables given above.

Figure 1: Conceptual Framework



Model Adopted and modified from (Al-Dweeri et al., 2018; Rita et al., 2019)

It is vital to generate hypotheses based on the review of the literature and the conceptualization of the research problem. Finally, those hypotheses are examined to establish whether they are acceptable or not. In connection with this work, the following hypotheses have been developed.

H₁: There is a positive relationship between reliability and customer satisfaction.

H₂: There is a positive relationship between responsiveness and customer satisfaction.

H₃: There is a positive relationship between assurance and customer satisfaction

H₄: There is a positive relationship between empathy and customer satisfaction.

H₅: There is a positive relationship between privacy and customer satisfaction.

H₆: There is a positive relationship between efficiency and customer satisfaction.

1. Research Methodology

1.1. Research design

The design of research is the process of arranging the settings for data collection and analysis in such a manner that they achieve a balance between relevance to the study purpose and ease of collection and analysis of data (Sekeran & Bougue, 2016). Research design is important because it helps the different research operations run smoothly, which makes sure that research is as efficient as possible, resulting in the most information with the minimum of effort, time, and money (Kothari, 2004). The research in this study is quantitative, and it is associated with the positivism paradigm.

Researchers can define and use research methodologies in an effective manner if they use a systematic approach to their research. An inductive or deductive approach to research can be used to conduct the investigation. The technique is deductive when the theory and hypotheses are formed and a research strategy is devised to test the hypotheses; however, the approach is inductive when the data is collected and the theory is developed as a result of data analysis (Sekeran & Bougue, 2016).

This study was conducted in a natural setting with no predetermined outcomes. It refers to a study that is conducted in the natural environment with the least amount of interference from the researcher. When data was collected at a bank ATM booth in Sri Lanka, the researcher had no control over the variables, which was the case in this study. As a result, the research environment is not fabricated. The researcher determined that the environment was appropriate for conducting this research.

1.2. Population and Sampling

The term "population," as defined by Sekeran & Bougue (2016), refers to the total group of people, events, or other objects of interest that the researcher desires to investigate. This study's participants represent the whole population of ATM users.

A sample is a subset of a population that is taken from a larger population. It is made up of some members who were chosen from among them. By examining the sample, the researcher should be able to draw conclusions that are applicable to the entire population under consideration (Kothari, 2004). A total of 150 bank ATM customers are selected from a larger population, and these 150 customers serve as the study's sample, which was selected using a simple random sampling technique.

1.3. Data Collection and Analysis

During the data collecting procedure, primary and secondary data collection approaches were employed to gather information. A standard questionnaire was utilized to obtain information throughout the primary data collecting process. The surveys' questions were brief and easy to comprehend. Closed-ended questions were developed for this investigation. It is simpler to demonstrate the relationship between variables, and it is also simpler to obtain an answer. A total of three sections make up this questionnaire. There are questions about personal information in the first section of the survey. The third section dealt with the items related to customer satisfaction surveys, whereas the second section dealt with the items related to ATM services. All of the items were evaluated on a Likert-type scale with a five-point response.

Multivariate analysis is carried out through the use of regression analysis and correlation analysis, among other methods. For the purpose of determining the relationship between service quality and customer satisfaction, correlation was used. It was determined that using the automated teller machine service had an impact on customer satisfaction through the use of regression analysis.

2. Data Presentation and Analysis

2.1. Descriptive analysis of personal profile of respondent

The gender of the respondent was one of the demographic factors taken into consideration for the study. The gender of the customers has a significant impact on their level of satisfaction with the ATM service they receive.

According to the data analysis, there were (59.3 %) females and (40.7 %) males among those who participated. The ages of those who answered the survey questions ranged from under 20 to over 45 years old. According to the findings of the study, the most important age group among customers is between the ages of 20 and 30 years, which accounts for the highest percentage (85.7 %) of the total. The age group between 30 and 40 years is the one with the lowest number of participants (3.6 %). The age group of people under the age of 20 years is referred to as (6.4 %). The age group above 45, which reveals the bank's senior citizens customers, constitutes a percentage of 4.3 percent of the total customer base. When it comes to marital status, the majority of respondents (83.6%) are single, followed by married respondents (15%), separated, divorced, and widowed respondents (1.4 %).

The dominant level of education among the respondent was degree level which constitute (60.7%). Primary level of education is (11.4%). Secondary level of education is 25 (17.9%). Certificate and other education level of customer constitute (5.0%), which mean most of the respondents were highly literate.

When the occupations of the respondents were studied, it is obvious that students were the most important occupation category among respondents, with the biggest number of 47.9 %. Households make up the smallest group, with only 8.6%. Employees in the service sector account for 20.7 %. The business sector accounts for 22.9 %.

One of the most crucial profile characteristics for clients is their monthly income. The majority of the customer's monthly income was in excess of Rs. 40,000, which made up a significant portion of 33.1%. There was a range of 10,001 to 20,00. (15.5%). Between the ranges of 20,001 and 30,00 (10.6%). Customers with monthly salaries of less than 10,000 and between 30,001 and 40,000 were 20.4%

2.2. Reliability Analysis

Using data from the study, the Cronbach's alpha of the independent variable Reliability was found to be 0.772, Responsiveness to be 0.743, Assurance to be 0.608, Empathy to be 0.789, Privacy to be 0.736, and Efficiency to be 0.652. Cronbach's alpha values for all of the variables in the instrument were higher than 0.6 in the aggregate. Inferring that the instrument's internal consistency is questionable There was a higher perception of product availability and that it was satisfactory, and the strength of the association was moderate.

2.3. Analysis of Correlation

Table 1: Correlation Coefficients

		Reliability	Responsiveness	Assurance	Empathy	Privacy	Efficiency	Customer Satisfaction
Reliability	Pearson Correlation	1						
	Sig. (2-tailed)							
Responsiveness	Pearson Correlation	.361**	1					
	Sig. (2-tailed)	.000						

Assurance	Pearson Correlation	.220**	.465**	1				
	Sig. (2-tailed)	.000	.000					
Empathy	Pearson Correlation	.554**	.560**	.509**	1			
	Sig. (2-tailed)	.000	.000	.000				
Privacy	Pearson Correlation	.270**	.370**	.537**	.260**	1		
	Sig. (2-tailed)	.000	.000	.000	.000			
Efficiency	Pearson Correlation	.413**	.525**	.632**	.642**	.481**	1	
	Sig. (2-tailed)	.000	.000	.000	.000	.000		
Customer Satisfaction	Pearson Correlation	.652**	.641**	.583**	.768**	.671**	.570	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.0000

It is shown in the preceding table that there are positive correlations between customer satisfaction and reliability (.652), responsiveness (0.641), assurance (0.583), empathy (0.768), privacy (0.671), and efficiency (0.671). (.570). As a result, customer satisfaction is positively related to each of the six predictors of electronic service quality.

The correlation coefficient (r) between independent variables is in the range of 0.3 to 0.7, which is less than 0.85. The possibility exists that there is no problem with multicollinearity.

2.4. Regression Analysis and Hypotheses Testing

The overall model explains how the research fits into the overall model. This is illustrated in the table below by the number R^2 . The coefficient R^2 in a simple linear equation is an extension of the coefficient of determination R^2 in a simple linear equation to multiple regression. This coefficient serves as a gauge for how well the regression equation matches the data set. Table 2 shows that the correlation coefficient (R^2) is 0.530 (53%), indicating that the regression equation appears to have a perfect fit with the data. It can be predicted that the six independent variables have a significant impact on the variance (R-square) of the dependent variable, which accounts for 53 percent of the variance. In this case, the p-value is 0.000 0.05, and the ANOVA table reveals that the F value of 42.521 is statistically significant at the 0.000 level. As a result, the model is significant, and the model actually exists.

When the individual variables were focused, at first, the reliability is considered; $p = 0.020 < 0.05$, hence, highly significant and explain a much about the dependent variable. responsiveness values; $p = 0.034 < 0.05$, highly significant to the model. Assurance, $p = 0.037 < 0.05$, significant to the model. Empathy values; $p = 0.000 < 0.05$ highly significant to model, privacy, $p = 0.000 < 0.05$ and efficiency $p = 0.000 < 0.05$, which are very significant to the model.

Table 2: Results of Regression Analysis

Predictors	Beta	P	t	VIF
Reliability	.087	.020	.300	1.420
Responsiveness	.392	.034	.463	1.117
Assurance	.085	.037	1.842	1.412
Empathy	.386	.000	5.176	1.160
Privacy	.284	.000	.303	2.279
Efficiency	.243	.000	1.324	1.253
Dependent Variable: Customer Satisfaction				

Notes: Constant = 0.743, $F=42.521$, $P < 0.05$, $R^2 = .530$, Adjusted $R^2 = .426$,

The results of the regression analysis show that the VIF is less than 5, which indicates that there is no significant multicollinearity problem and that the regression coefficients are well estimated.

Table 3: Hypotheses Testing

Variables	Hypothesis (Null + Alternative)	P – Value	$\alpha = 5\%$	H ₀	H _A
Reliability	H ₁₀ , H _{1A}	0.010	0.05	Reject	Accept
Responsiveness	H ₂₀ , H _{2A}	0.044	0.05	Reject	Accept
Assurance	H ₃₀ , H _{3A}	0.047	0.05	Reject	Accept
Empathy	H ₄₀ , H _{4A}	0.000	0.05	Reject	Accept
Privacy	H ₅₀ , H _{5A}	0.000	0.05	Reject	Accept
Efficiency	H ₆₀ , H _{6A}	0.000	0.05	Reject	Accept

According to the above table, all the hypotheses accepted, means, electronic service quality dimensions have positive significant impact on customer satisfaction.

3. Findings and Conclusions

The goal of this study was to identify the factors that influence customer satisfaction when it comes to using ATMs for banking purposes. As a result, six independent variables were selected under the ATM service (service quality dimension) in order to identify the factors that influence customer satisfaction when using ATM banking, including reliability, responsiveness, efficiency, empathy, privacy, and assurance. The dependent variable was customer satisfaction, which was measured using the dependent variable. The significance of each individual variable was also tested by comparing the p value of each independent variable with the alpha value of the variable (0.05). The fact that the p values of the independent variables were less than 0.05 leads to the conclusion that variables related to electronic service quality have a statistically significant positive relationship with customer satisfaction. So the group of independent variables has an association with the dependent variable that is statistically significant.

4. Limitations and Direction for Future Research

These limitations can be divided into several categories, including limitations resulting from the literature review, limitations resulting from the research methodology, and limitations resulting from respondents and the researcher herself. Although the findings of this research and its implications for the banking industry may be generalizable, they cannot be applied to the entire financial industry. Information and published articles about the factors that influence customer satisfaction when using ATM banking services are scarce. Furthermore, it is possible that the generation of an entire population will be difficult. As a result, the sample size was insufficient to allow the findings to be extrapolated to the entire population. Finally, when it comes to data collection, the researcher uses only a single type of data collection method, which is the questionnaire. Customers' information is collected through the use of questionnaires surveys with fixed alternatives, in which customers must choose an answer from the alternatives provided in the questionnaires and are therefore unable to provide answers freely in the survey. Due to time constraints, this study was limited to a single bank rather than the entire banking industry. The time period and cost associated with conducting the study are both limitations of this investigation.

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