



---

Category: Research Article

---

## Customer Satisfaction and Customer Loyalty towards E-Commerce Websites - A study on University Students of Rajarata University of Sri Lanka

<sup>1,\*</sup>Bandara HGKN<sup>1\*</sup>, <sup>2</sup>Thilakarathna GT, and <sup>3</sup>Perera DAM

<sup>1 & 2</sup> Department of Economics, Faculty of Social Science and Humanities, Rajarata University of Sri Lanka, Mihinthale, Sri Lanka

<sup>3</sup> Department of Accountancy, Faculty of Business Studies and Finance, Wayamba University of Sri Lanka, Kuliyaipitiya, Sri Lanka

---

### ARTICLE DETAILS

#### Article History

Received: 10<sup>th</sup> February 2023

Accepted: 25<sup>th</sup> September 2023

Published Online: 15<sup>th</sup> May 2025

#### Keywords

E-commerce; Loyalty; Satisfaction; Websites

#### Email:

[kolithanishshankabandara@gmail.com](mailto:kolithanishshankabandara@gmail.com)

---

### ABSTRACT

E-commerce is one of the rapidly mushrooming industries in the world. and it is important to understand what influences the customers' purchasing decisions on an e-commerce platform, and how those factors contribute to enhancing customer satisfaction and loyalty in the e-commerce industry. According to the research evidence, the majority of academics have named consumer loyalty and satisfaction as crucial factors in online purchases made through e-commerce websites. This study explores the determinants of customer satisfaction and loyalty in an e-commerce context, more specifically towards e-commerce websites. Researchers also proposed a conceptual model of customer satisfaction and loyalty in the online context based on the key factors suggested by previous research and developed hypotheses in accordance with it. Accordingly, the researchers propose that website service quality, efficiency, privacy, trust, and system availability as the important factors of customer satisfaction and loyalty on an e-commerce platform. The final sample consisted of 100 undergraduate e-commerce users of the faculty of social sciences and humanities of the Rajarata University of Sri Lanka. The simple random sampling method was employed to select the sample, and a structured questionnaire was utilized to collect data. The reliability test, correlation analysis, and a multiple regression model were used to analyze the gathered data using SPSS software. Hypotheses were tested using Pearson's correlation coefficient and multiple regression. The findings suggest that there is a strong positive correlation between customer satisfaction and loyalty and privacy, e-service quality (i.e., website service quality), and system availability, while a moderately positive correlation was found between e-commerce website efficiency and trust and customer satisfaction and loyalty. The multiple regression analysis, the quality, efficiency, privacy, and system availability of website services have a positive and significant impact on e-customer satisfaction and loyalty. However, customer satisfaction and loyalty in e-commerce do not affect by online service trust. The study infers that there is a positive and significant impact of customer satisfaction in e-commerce websites on customer loyalty.

---

## 1. INTRODUCTION

At present, the advancement of information technology has made continuous progress and so has modern society [1]. Technology plays a significant role in enhance the quality of service provided by business units [24]. The internet has created an environment suitable for conducting commercial transactions very easily and through this, a wide range of business opportunities have been created based on the improvement of wireless communication. This development allows both consumers and merchants to conduct business transactions effortlessly. One of the technologies that really brought information to the revolution in society is internet technology [24].

In this hyper-competitive business environment, the world as a whole is compelled to use e-commerce services more frequently. E-commerce is about expansion transaction the goods and services electronically. the systems such as the internet, television, computers network. The vital feature of e-commerce is the quantity and quality of the electronic service [30].

### 1.1. Concept and Definition- E-commerce

E-commerce defined in various ways by several authors. According to the definition put forward by Grandon and Pearson (2004) [12] e-commerce is the *"selling and buying products or services can be done through www websites by transmitting electronic data over the internet"*. Using e-commerce, both sellers and buyers can be benefited in multiple avenues, which are obviously higher than those in the traditional business models [31].

Electronic money and data transfer, data storage, and automated data collecting and management are all possible with e-commerce. Online retailers are required to offer customers a better level of customer service than they would in a physical store. Businesses use e-commerce websites as an alternative communication channel that makes their transaction needs easy and comfortable for customers. By developing more effective, user-friendly, and attractive websites, businesses improve customer satisfaction and competitive advantage by providing high-quality communication channels [15].

Further, e-commerce websites provide perks for frequent use by local customers who travel internationally. It opens up new channels for exporting goods and offers a variety of services, which also can be used to raise and increase an organization's degree of efficiency.

### 1.2. E-commerce Service Quality

The magnitude of the discrepancy between buyer preferences and the real service they receive is the essence of service quality. A comparison of consumer awareness of the service they receive can be used to assess service quality. Zeithaml (1998) [32] defined service quality as the customer's judgment of the service's importance or superiority. Therefore, to outperform the competitors, businesses always struggle to create and enhance their customer satisfaction by providing customer service through online business websites.

Santos (2003) [26] well-defined e-commerce - service quality as comprehensive consumer analysis and evaluation of electronic service implementation in the online marketplace. As per Parasuraman *et al.* (2005) [21] all stages of a buyer's engagement with an internet are considered to be e-service quality.

vast majority the businesses are now becoming more and more concerned about the quality of their websites. According to Flavian (2006) [8] the high quality of the websites, a key component of the online shopping businesses that have grown in comparison to it, is one of the variables that can affect the purchasing habits of traditional institutions.

Superior service providers deliver experience. Understanding how customers perceive the service quality of a business is essential knowledge for service providers aimed at improving customer appreciation of service quality business operations, develop the core skills, being more tactically positioned in online market [3], [14]. It also has a high economic return from a consumer base that is quite satisfied [1] In order to benefit from providing cutting-edge service, the search for service providers' competitiveness is refined [18].

### 1.3. Customer Satisfaction and Loyalty

most pressing problems in the commercial world is customer satisfaction. Consumer satisfaction is seen as a prerequisite for consumer retention and loyalty, clearly helping to achieve economic goals such as profitability, and market share returns on investment [27].

E-commerce can play a main role in existence and development high levels of customer satisfaction in the trade sector. many strategies are used by many e-commerce businesses to develop their client base. Businesses provide a large number of details about their website. As a result, both present and potential customers can learn more about their goods and services.

As a result, researchers have concentrated variables which influence satisfaction of the customers and loyalty in e-commerce. For example, Trong, Khanh, and Gim (2014) [30] found that merchandise properties, transactional ability, security, privacy, payment, delivery, and customer service serve as important foreshadows for online customer satisfaction. Similarly, Tandon, Kiran, & Sah's (2017) [27] study discovered that website functionality and usability are factors influencing customer satisfaction with online transactions.

Elevated concentrations of customer satisfaction generally result in long-term loyalty for a business [31]. Loyalty is key essential factors for a firm's continued survival in a given industry. Because loyalty may be identified based on how well and efficiently a service performs, quality is key factor which also can boost the loyalty of consumers in e-commerce. Therefore, both customer satisfaction and loyalty are equally important to online business.

Previous studies have shown that website design elements such as layout, navigation, aesthetics, and usability can significantly influence customer satisfaction and loyalty [8]. But, there may be a lack of comprehensive research that examines the specific design factors and their effects on customer satisfaction and loyalty in the context of e-commerce websites.

Personalized experiences and customization options have been identified as key factors in enhancing customer satisfaction and loyalty [16]. may be a need for more research that investigates the specific mechanisms through which personalization and customization contribute to customer fulfilment and loyalty in e-commerce settings.

Trust and security concerns are critical factors influencing customer satisfaction and loyalty in e-commerce. However, there may be limited research that explores the specific dimensions of trust and security that are most noticeable in the context of e-commerce websites, and how they impact client satisfaction and loyalty.

Effective customer service and support positively affect customer satisfaction and loyalty in several contexts, including e-commerce. However, there may be a lack of research that investigates the specific customer service and support factors that are most influential in shaping customer satisfaction and loyalty.

Social-media platforms and online reviews have gained significant importance in shaping consumer perceptions and behaviour's in the e-commerce domain. However, there may be a need for further research to explore the specific ways in which

social media and online examinations impact customer satisfaction and loyalty towards e-commerce websites.

To address the knowledge gaps, researchers can attempt to understanding the factors that drive customer satisfaction and loyalty in the context of e-commerce websites, thereby providing valuable insights for practitioners to improve their strategies and improve customer experiences.

#### 1.4. Research Objectives

This research paper is structured on two research objectives, which are mentioned below,

- To examine the variables which affect online consumer satisfaction and loyalty on service quality of e-commerce websites.
- To determine how efficiency, privacy, the quality of e-services, trust, and system availability affect undergraduate e-customer satisfaction and loyalty.

#### 1.5 Literature Review

##### Customer Satisfaction Theories and Dimensions:

Dissonance Theory: Focuses on the reduction of cognitive dissonance by ensuring customers' expectations are met or exceeded.

Expectancy-Disconfirmation Theory: Emphasizes the comparison between customers' expectations and their perceived performance of the e-commerce website.

Attribution Theory: Explores how customers attribute their satisfaction or dissatisfaction to specific factors such as website design, functionality, or customer service.

Equity Theory: Examines customers' perceptions of fairness in their interactions with the e-commerce website.

Value Percept Theory: Considers buyers' perceptions to value obtain from using e-commerce website.

Theory of Planned Behavior (TPB) and Theory of Reasoned Action (TRA) Examine how customers' attitudes and intentions towards the e-commerce website influence their satisfaction. [12].

Based on these theories, potential dimensions for customer satisfaction towards e-commerce websites may include:

- Website design and aesthetics
- Website functionality and ease of use

- Product information and presentation
- Customer service and support
- Order fulfillment and delivery process
- Perceived value for money

Perceived security and privacy [28].

#### Customer Loyalty Theories and Dimensions:

**Expectancy-Disconfirmation Theory:** Customers' satisfaction with the e-commerce website influences their loyalty.

**The Relationship Marketing Theory:** Highlights the importance of building and keeping long-term relations with customers through personalized experiences, trust, and loyalty.

**Brand Equity Theory:** Examines how customers' perceptions of the e-commerce website's brand equity impact their loyalty.

**Social Exchange Theory:** Considers the social interactions and benefits customers receive from their engagement with the e-commerce website.

- Repeat purchases
- Word-of-mouth recommendations
- Brand advocacy
- Trust and credibility
- Emotional attachment to the brand
- Perceived value for loyalty
- Switching costs

#### Service Quality Theories and Dimensions:

**SERVQUAL Model:** Focuses some dimensions of the service quality such as \* reliability, \* responsiveness, \* assurance, \* empathy, and \* tangibles.

**Technology Acceptance Model (TAM):** Explores customers' perceptions of the technology-related aspects of the e-commerce website, such as system availability as well as efficiency.

**WebQual Model:** Identifies some dimensions of website quality, \* usability, \* information quality, \* service interaction, and \* trust.

Potential dimensions for service quality towards e-commerce websites may include:

- Reliability of Website and performance
- Responsiveness of the website and customer service
- Assurance of secure transactions and privacy protection
- Empathy towards customers' needs and preferences
- Tangible elements, such as website aesthetics and appearance
- Usability and ease of navigation
- Information accuracy and relevance

- Trustworthiness and credibility

Based on these dimensions, you can develop a conceptual framework that outlines the relations with customer satisfaction, customer loyalty, and also service quality towards e-commerce websites. Hypotheses can be formulated based on the expected relationships, and these hypotheses can be justified by referring to empirical literature that supports the relationships found in previous studies. The conceptual framework and hypotheses will serve as the foundation for your deductive research study [28].

## 2. METHODOLOGY

In this study, an inductive qualitative approach was used. Respondents were contacted for interviews using closed-ended questions. The interviews were conducted one-on-one to gather opinions, attitudes, experiences, processes, and behaviors, in order to delve deeply into the facts.

### 2.1. Sample

A total of 100 undergraduate students who involve in e-commerce transactions made up this sample. 25 undergraduate students from each batch (i.e., year 1 to year 4) from the faculty of social science and humanities of the Rajarata University of Sri Lanka, were selected as the sample using the simple random approach. The total number of students of Rajarata University is counted here and 25 of them are selected for the sample to represent each year. In the random sampling method, the sample is taken to represent about 1% of the total population.

as sample, students were selected for a number of reasons. Comparatively, students are very active online consumers, they have a lot of expertise in e-commerce, and it has been established that young educated people conduct more online transactions than traditional customers. Finally, businesses offer a variety of tools for young people to communicate and conduct e-commerce transactions.

### 2.2. Data collection

Current study used both primary and secondary data. The questionnaire served as the primary design tool for the measuring scale items for this research. To address the statistical issue of severe skewness, a 5-point Likert scale (with anchors ranging from strongly disagree to strongly agree) was utilized in the questionnaire's design.

### 2.3. Research Hypothesis

Researchers constructed hypotheses based on the fundamental theories and the thorough literature review.

H<sub>1</sub>: There is a positive impact of Efficiency on Online customer satisfaction and loyalty.

H<sub>2</sub>: There is a positive impact of Privacy on Online customer satisfaction and loyalty.

H<sub>3</sub>: There is a positive impact of E-Service Quality on Online customer satisfaction and loyalty.

H<sub>4</sub>: There is a positive impact of Trust on Online customer satisfaction and loyalty.

H<sub>5</sub>: There is a positive impact of System Availability on Online customer satisfaction and loyalty.

$x_2$  = Privacy

$x_3$  = E-service quality

$x_4$  = Trust

$x_5$  = System availability

$\mu i$  = Error term

### 3. RESULTS AND DISCUSSION

#### 3.1. Respondent's profile

It is evident from the fact that males made up the majority of responders (76% vs. 24% of females). The primary explanation for this is that it is generally believed that the use of IT has increased among male undergraduate students, while women are more resistant to utilizing and embracing modern technology for their day-to-day buying process. Interestingly, a 45% higher proportion of undergraduate students admitted that they use e-commerce websites to achieve educational goals. 10% of undergraduate students accepted that they occasionally use e-commerce websites for other purposes, other than educational purposes.

The figures presented in Table 01 demonstrate that the highest buying frequency of e-customer is three months and its value is 30 percent. The lowest number of respondents representing e-commerce users once a year and its frequency is 11 percent.

#### 3.2. Validity and Reliability

Validity measures indicate whether the instrument actually measures intended outcomes or is too large to be used in factor analysis alone [07]. Therefore, Sekaran (2013) [25] argues that measurement properties should be assessed by ensuring at least content validity and construct validity or criterion-related validity.

Reliability is measure of identifying the extent to measure is free from bias and measurement consistency across questionnaire time and this helps in measuring the goodness of the instrument. It is tested using Cronbach's alpha value. Sekaran (2013) [25] emphasizes that 'Cronbach alpha is a reliability coefficient that is used to measure the extent to which the statements of an instrument are positively correlated'. Cronbach's alpha should be 0.7 or higher if the general acceptance level of measurement reliability values of about 0.7 are acceptable and values above 0.8 are good.

The Cronbach's alpha values for both dependent and independent variables are shown in Table 02.

**Table 01: Frequency Distribution**

| Measure                     | Items                | Frequency | Cum. Frequency |
|-----------------------------|----------------------|-----------|----------------|
| Gender                      | Male                 | 76%       | 76%            |
|                             | Female               | 24%       | 100%           |
| Academic year               | 1 <sup>st</sup> Year | 25%       | 25%            |
|                             | 2 <sup>nd</sup> Year | 25%       | 50%            |
|                             | 3 <sup>rd</sup> Year | 25%       | 75%            |
|                             | 4 <sup>th</sup> Year | 25%       | 100%           |
| Purpose of using e-commerce | Education            | 45%       | 45%            |
|                             | Businesses           | 22%       | 67%            |
|                             | Entertainment        | 17%       | 84%            |
|                             | Other                | 16%       | 100%           |
| Frequency of use            | Once a week          | 13%       | 13%            |
|                             | Once a month         | 22%       | 25%            |
|                             | Once in three months | 30%       | 55%            |
|                             | Once in six months   | 24%       | 79%            |
|                             | Once a year          | 11%       |                |

#### 2.4. Data Analysis Method

The descriptive methodology was followed to presenting the information primarily to analyse the primary data. An Excel sheet was used to summarize the research results, and a multiple-multiple regression analysis model was used to investigate impact of the independent variables on e-consumer satisfaction and their loyalty using SPSS software. correlation analysis was used to measure the relationship between the dependent and the independent variables.

Researchers proposed the following regression model:

$$Y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \beta_5 x_5 + \mu i$$

$Y$  = Dependent variable (e-customer satisfaction & loyalty)

$\beta_0$  = Intercept

$\beta_i$  = Beta values for independent variables ( $i=1-5$ )

$x_1$  = Efficiency of websites

**Table 02: Reliability Coefficient**

| Variable                        | No of Question | Cronbach's alpha | Comment          |
|---------------------------------|----------------|------------------|------------------|
| <b>Independent Variables</b>    |                |                  |                  |
| Efficiency                      | 05             | 0.718            | Acceptable       |
| Privacy                         | 04             | 0.766            | Acceptable       |
| E-service quality               | 06             | 0.715            | Acceptable       |
| Trust                           | 05             | 0.732            | Acceptable       |
| System Availability             | 04             | 0.749            | Acceptable       |
| <b>Dependent Variable</b>       |                |                  |                  |
| Customer Satisfaction & Loyalty | 07             | 0.853            | Good Reliability |

Cronbach's alpha values given following Table 02 are greater than 0.7, and therefore they are considered to be good.

**Table 03: ANOVA table**

|                   | Sum of Squares | Df   | Mean Square | F      | Sig. |
|-------------------|----------------|------|-------------|--------|------|
| Between People    | 1274.637       | 99   | 12.875      |        |      |
| Within People     |                |      |             |        |      |
| Between Items     | 1004.828       | 30   | 33.494      | 38.550 | .000 |
| Residual          | 2580.463       | 2970 | .869        |        |      |
| Total             | 3585.290       | 3000 | 1.195       |        |      |
| Total             | 4859.928       | 3099 | 1.568       |        |      |
| Grand Mean = 3.62 |                |      |             |        |      |

All the variables in the questionnaire, including customer satisfaction and loyalty, effectiveness, privacy, e-service quality, trust, and system availability have a significant value of less than 0.005. Since the internal consistency was good and satisfactory, it provided trustworthy results on the validity of the research instrument.

**Table 04: Correlation Analysis**

| Variables           | Pearson Correlation | Sig Value (2-tailed) |
|---------------------|---------------------|----------------------|
| Efficiency          | 0.497               | 0.000                |
| Privacy             | 0.724               | 0.000                |
| E-service quality   | 0.744               | 0.000                |
| Trust               | 0.462               | 0.000                |
| System Availability | 0.736               | 0.000                |

The association e-customer satisfaction and loyalty, and five independent variables (i.e., effectiveness, privacy, e-service quality, trust, and system availability) are measured using Pearson correlation analysis, and findings are summarized in Table 04.

The correlation coefficient of the connection between efficiency and e customer satisfaction and loyalty is 0.497, which is significant at the 0.01 level (0.000<0.01). Therefore, it can be decided that

moderate positive and important connection between efficiency and online customer satisfaction, and loyalty. Also, the correlation coefficient for the connection with privacy and online customer satisfaction and loyalty is 0.724 which is also significant at (0.000<0.01).and there is a good positive relationship between privacy and online customer satisfaction and loyalty.

According to the results, the correlation coefficient for the association between e-service quality and online customer satisfaction and loyalty is 0.744 which is significant at (0.000<0.01) and there are a high positive association with these two variables. A moderate level of a positive relationship between trust and online customer satisfaction and loyalty. The correlation coefficient is 0.462 which is significant at (0.000<0.01). 0.01 level and the result showed that there is a moderate relationship between these two variables

According to that system, availability and online e-customer satisfaction and the loyalty correlation coefficient is 0.736 which is significant at (0.000<0.01) level indicating that there is a high positive relationship between these two variables. Finally, it can be decided that the same five variables. Significant at the 0.01 level.

**Table 05: Coefficients of determinants**

| Model Summary <sup>b</sup>   |                   |           |                 |                   |               |
|--|-------------------|-----------|-----------------|-------------------|---------------|
| Model  | R                 | R squared | Adjusted Square | Change statistics | Durbin-Watson |
|  |                   |           |                 | Sig. F Change     |               |
| 1  | .850 <sup>a</sup> | .722      | .707            | .000              | 2.32          |
| a: Predictors: (constant), Efficiency, Privacy-service quality, Trust, System availability |                   |           |                 |                   |               |
| b: Dependent variable: Customer satisfaction and loyalty                                   |                   |           |                 |                   |               |

Table 05 displays the R-squared value, significance value, and Durbin-Watson value for the research model employed in this study. The adjusted R-value for the model stands at 0.707, indicating that approximately 70.7% of the variation in e-customer satisfaction and loyalty rate can be accounted for by the fitted regression model. This assertion finds support in the significant F Change (P<0.05) and a Durbin-Watson value of 2.32 (1 < Durbin-Watson < 3)

**Table 06: Results of the Regression Analysis**

| Model               | Coefficients <sup>a</sup>   |            |                          |       |           |
|---------------------|-----------------------------|------------|--------------------------|-------|-----------|
|                     | Unstandardized coefficients |            | Standardized coefficient | T     | Sig value |
|                     | B                           | Std. error | Beta                     |       |           |
| Constant            | .407                        | .364       |                          | 1.118 | .266      |
| Efficiency          | .143                        | .056       | .155                     | 2.540 | .013      |
| Privacy             | .201                        | .082       | .210                     | 2.467 | .015      |
| E-service quality   | .338                        | .073       | .354                     | 4.628 | .000      |
| Trust               | .029                        | .098       | .019                     | 0.293 | .770      |
| System availability | .256                        | .071       | .300                     | 3.290 | .000      |

a: Dependent variable: Customer satisfaction and loyalty

Results confirm that other than “trust” the other four independent variables positively and significantly affected e-customer satisfaction and loyalty. The regression coefficient of trust shows that there is no significant effect on online customer satisfaction and loyalty. But there is a confident impact on “trust” to online customer satisfaction and loyalty.

### 3.2. Hypotheses Test for Regression Analysis.

The regression coefficient of efficiency indicates that it has a positive and significant effect on online customer satisfaction and loyalty (B=0.143, P>0.05 P=0.013) and the result also supports the hypothesis (H1)

The regression coefficient of Privacy is shown to be a significant effect on online customer satisfaction and loyalty (B=0.201, P>0.05 P=0.015 and the results also support the hypothesis (H2)

The regression coefficient of E-service quality indicates that it has a significant effect on online customer satisfaction and loyalty (B=0.338, P<0.05 P=0.000) and supports the hypothesis (H3) of the study.

The regression coefficient if Trust shows that there is no significant effect on online customer satisfaction and loyalty (B=0.029, P<0.05 P=0.770). The result does not support the fifth hypothesis (H4). But there is a positive effect on Trust to Online customer satisfaction and loyalty.

The regression coefficient of System Availability is shown to be significant effect on online customer satisfaction and loyalty (B=0.256, P<0.05 P=0.000 and the results also supports the hypothesis (H5)

According to the results of the regression analysis, it is evident that the Efficiency, Privacy, E-service Quality, Trust and System Availability have unstandardized coefficients of 0.143, 0.201, 0.338, 0.181, 0.029 and 0.256 respectively. And following regression equation can be derived from the available data for predicting the customer

satisfaction and loyalty from e- service quality factors.

$$Y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \beta_5 x_5 + \mu_i$$

$$Y = 0.407 + (0.143) X_1 + (0.201) X_2 - (0.338) X_3 + (0.181) X_4 + (0.256) X_5$$

## 4. Discussion of the Results

This study was directed to explore the impact of e-commerce service quality on online customer satisfaction with special reference to faculty of social science and humanities of Rajarata University of Sri Lanka.

According to Results of the regression analysis the first hypothesis (H1) there is a significant impact of efficiency on e-customer satisfaction and loyalty of undergraduates of faculty of social science and humanities at Rajarata University of Sri Lanka. That is, efficiency has a positive effect on e-customer satisfaction depending on the selected context.

That is, privacy has a positive effect on e-customer satisfaction and loyalty of undergraduates of faculty of social science and humanities at Rajarata University of Sri Lanka. Some parameters of online privacy include security credentials, online store privacy [19]. According to Park and Kim (2003) [22], Consumers expect that customers 'personal and transactional information is thoroughly secured before disclosing their personal data when purchasing from online marketplaces. Informative consumers always think that their privacy can be compromised by online methods. Hence, strict attention is paid to the security of their transactions. [2]. As e-retailers have a high level of customer satisfaction as they have built many security features into their websites. [19]. Several researches have been interested in studying how the concept of privacy affects customer satisfaction. Many research studies have confirmed that significant and positive relationship between privacy and online customer satisfaction. [2], [5], [6], [9], [13], [16], [23], [19], [28], [30].

That is, e-service quality has a positive impact on e-customer satisfaction depending on the selected context. Many conducted on e-service quality have found that the core element of e-service quality is customer satisfaction. It supports the idea that there is a significant association with e-service quality and customer satisfaction [17]. In addition, some previous studies results indicated that e-service quality has a positive effect on customer satisfaction.

H4: There is a no significant effect of Trust on e-customer satisfaction and loyalty of undergraduates of faculty of social science and humanities at Rajarata University of Sri Lanka. But there is

positive impact of Trust on e-customer satisfaction and loyalty depending on the selected context.

That is, system availability has a positive impact on e-customer satisfaction loyalty of undergraduates of faculty of social science and humanities at Rajarata University of Sri Lanka. These findings are largely similar previous study findings of Szymanski and Hise (2000) [28], Park and Kim (2003) [22], Ranjbarin et al., (2012) [23], and Evanschitzky et al., (2004) [6].

#### 4.1. Conclusion

today's context, several factors influence the variation in e-customer satisfaction and loyalty. Usually when organizations achieve their goal, they ignore some factors of their customers. Fluctuations in e-customer satisfaction seriously affect the number of unit sales, which leads to a decrease or increase in the level of revenue as well as decreases or increases in the company's profit. This research finding was able to identify the impact of e-commerce service quality on e-customer satisfaction and loyalty in faculty of social science and humanities at Rajarata university of Sri Lanka.

The process helped research explore more criteria with different frequencies of use. After Five criteria with the highest frequency evaluated the most commonly cited previous research papers was chosen to construct the conceptual model. These five criteria such as: Efficiency, Trust, E-service quality, Privacy and system availability. A conceptual framework was formulated to illustrate the interrelationship among the identified variables concerning online customer satisfaction and loyalty. Building upon this framework, the researchers put forward five hypotheses for examination in this study.

These five hypotheses tested instruments using Reliability analysis, Correlation analysis and Multiple Regression analysis. Under the Statistical package for social sciences (SPSS) version 22. According to correlation analysis all independent variable (Efficiency, Trust, E-service quality, Privacy and system availability) has significant and positive relationship with e-customer satisfaction and loyalty. Moreover, considering the results of multiple regression analysis, the regression coefficient of efficiency(H1), privacy(H2), e-service quality(H3) and system availability (H5) shows that it has a significant impact on e-customer satisfaction and loyalty and supports the first, second, third and fifth hypothesis of the study. The regression coefficient of trust (H4) shows that it has no significant effect on e-customer satisfaction and loyalty and this result does not support the fourth (H4) hypothesis of the study.

The research described aims to generate new knowledge by investigating the variables that affect customer satisfaction and customer loyalty towards e-commerce websites, specifically concentrating on the role of service quality. Here's how this research can contribute to generating new knowledge:

**Identification of specific dimensions and factors:** The research will identify and delineate specific dimensions of customer satisfaction, customer loyalty, and service quality towards e-commerce websites based on relevant theories. By conducting a comprehensive literature review and theoretical analysis, the study can contribute to the identification and clarification of key factors and dimensions that influence customer satisfaction and loyalty.

**Understanding the associations between variables:** The research will establish a conceptual framework that outlines the relations with customer satisfaction, customer loyalty, and service quality towards e-commerce websites. By formulating hypotheses and conducting empirical analysis, the study can deliver insights into the causal associations and interactions among these variables. This will contribute to a deeper understanding of how service quality impacts customer satisfaction and loyalty in the e-commerce domain.

**Validation and extension of existing theories:** The research will test and validate the applicability of existing theories, such as dissonance theory, expectancy-disconfirmation theory, and service quality models, in the context of e-commerce websites. By examining the relationships between variables and assessing the empirical support for these theories, the study can contribute to the validation and extension of existing theoretical frameworks, providing a stronger foundation for understanding customer satisfaction and loyalty in the e-commerce context.

**Practical implications for e-commerce businesses:** The research will have practical implications for e-commerce businesses by providing insights into the factors and dimensions that drive customer satisfaction and loyalty. The findings can inform e-commerce companies on how to improve their service quality, website design, customer support, and overall customer experience to enhance customer satisfaction and foster customer loyalty. This knowledge can help businesses develop effective strategies and tactics to gain a competitive edge in the e-commerce market.

Overall, the research aims to generate new knowledge by shedding light on the specific variables, dimensions, and relationships that effect



customer satisfaction and loyalty towards e-commerce websites. It contributes to theoretical understanding, practical implications, and the advancement of knowledge in the field of e-commerce and customer behaviour.

Lastly, it can be decided that, among the above factors, efficiency, privacy, e-service quality, trust and system availability are some of the main factors that influence and positively increase customer satisfaction and loyalty.

#### 4.2. Suggestions and Recommendations

The issue that arises regarding consumers in today's context is the legal level of e-customer satisfaction. It should be increased in implementing e-commerce service quality procedures as soon as possible. The following recommendations are provided here to improve online customer satisfaction and loyalty advance the profitability of organizations.

- Designing and testing new procedures, systems and other tools in the e-commerce service to improve customer satisfaction and loyalty.
- Properly maintain product distribution programmes that deliver products to customers on time.
- As new customers are attracted to the service, it is essential to provide an introduction for them to adapt the product ordering procedure. It will motivate new customers to buy from the same company again and again.
- Implementations of plans in such a way that customers can have sufficient confidence in using the website
- To delight and satisfy customers by offering various discounts during purchase thereby improving their loyalty.

The findings of this study demonstrate a positive correlation between E-commerce service quality and the adoption of E-customer satisfaction measures, which should be properly implemented to improve customer retention and customer loyalty. This in turn helps in increasing productivity. Online Customers can feel safe in the industry to be happy with their e-commerce service provider.

Online customer satisfaction and loyalty has a positive impact on the online customer satisfaction of the undergraduate's students of the faculty of social science and humanities, Rajarata University of Sri Lanka and ensure the profitability and survival of the organization. Hence, it is imperative for e-commerce service providers to uphold a high standard of e-commerce service quality to both entice new customers and retain existing ones.

#### References

1. Aaker, D. A., & Jacobson, R. (1994). The financial information content of perceived quality. *Journal of Marketing Research*, 31(2), 191-201.
2. Chang, H. H., & Chen, S. W. (2009). Consumer perception of interface quality, security, and loyalty in electronic commerce. *Information and Management*, 46(7), 411-417. <https://doi.org/10.1016/j.im.2009.08.002>
3. Cronin, J., & Taylor, S. A. (1992). Measuring Service Quality: A Reexamination and Extension. *Journal of Marketing*, 56-67.
4. Devellis, R. F. (1991). Scale Development: Theory and Applications. Newbury Park: SAGE Publications.
5. Dharmesti, M. D. D., & Nugroho, S. S. (2012). The Antecedents of online customer satisfaction and customer loyalty. *The Business & Management Review*, 7(2), 57-68.
6. Evanschitzky, H., Iyer, G. R., Hesse, J., & Ahlert, D. (2004). E-satisfaction: A re-examination. *Journal of Retailing*, 80(3), 239-247. <https://doi.org/10.1016/j.jretai.2004.08.002>
7. Field, A. (2009). Discovering Statistics Using SPSS (3rd ed.). SAGE Publications.
8. Flavia'n, C., Guinali'u, M., & Gurrea, R. (2006). The role played by perceived usability, satisfaction and consumer trust on website loyalty. *Information and Management*, 43(1), 1-14.
9. Gelard, P., & Negahdari, A. (2011). A new framework for customer satisfaction in electronic commerce. *Australian Journal of Basic and Applied Sciences*, 5(11), 1952-1961.
10. Gilbert, G. R., & Veloutsou, C. (2006). A cross-industry comparison of customer satisfaction. *The Journal of Services Marketing*, 20(5), 298-308.
11. Gilbert, G. R., Veloutsou, C., Goode, M. M. H., & Moutinho, L. (2004). Measuring customer satisfaction in the fast food industry: A cross-national approach. *Journal of Services Marketing*, 18(5), 371-383.

12. Grandon, E. E., & Pearson, J. M. (2004). Electronic commerce adoption: an empirical study of small and medium US business. *Information and Management*, 42(1), 197-216.
13. Guo, X., Ling, K. C., & Liu, M. (2012). Evaluating factors influencing consumer satisfaction towards online shopping in China. *Asian Social Science*, 8(13), 40-49. <https://doi.org/https://doi.org/10.5539/ass.v8n13p40>
14. Jain, S. K., & Gupta, G. (2004). Measuring Service Quality: SERVQUAL vs. SERVPERF Scales. *Vikalpa*, 29(2), 25-37.
15. Karatepe, O. M., Yavas, U., & Babuskus, E. (2005). Measuring service quality of banks: Scale development and validation. *Journal of Retailing and Consumer Services*, 12, 373-383.
16. Kim, H. R. (2005). Developing an index of online customer satisfaction. *Journal of Financial Services Marketing*, 10(01), 49-64. <https://doi.org/10.1057/palgrave.fsm.4770173>
17. Kitapci, O., Akdogan, C., & Dortyol, I. T. (2014). The impact of service quality dimensions on patient satisfaction, repurchase intentions and word-of-mouth communication in the public health care industry. *Procedia - Social and Behavioral Sciences*, 148, 161-169.
18. Lee, S., Klim, Y., Hemminglom, N., & Yun, D. (2004). Competitive service at quality improvement (CSQI): A case study in the fast food industry. *Food Service Teach.*, 4, 75-84.
19. Maditinos, D. I., & Theodoridis, K. (2010). Satisfaction determinants in the Greek online shopping context. *Information Technology and People*, 23(4), 312-329. <https://doi.org/10.1108/09593841011087789>
20. McKnight, D. H., Choudhury, V., & Kacmar, C. (2002). The impact of initial consumer trust on intentions to transact with a web site: a trust building model. *Journal of Strategic Information Systems*, 11(2002), 297-323. [https://doi.org/10.1016/S0963-8687\(02\)00020-3](https://doi.org/10.1016/S0963-8687(02)00020-3)
21. Parasuraman, A., Zeithaml, V. A., & Malhotra, A. (2005). E-SQUAL: A multiple item scale for assessing electronic service quality. *Journal of Service Research*, 7(3), 213-234.
22. Park, C. H., & Kim, Y. G. (2003). Identifying key factors affecting consumer purchase behavior in an online shopping context. *International Journal of Retail & Distribution Management*, 31(1), 16-29. <https://doi.org/10.1108/09590550310457818>
23. Ranjbarian, B., Fathi, S., & Rezaei, Z. (2012). Factors influencing on customers' E-satisfaction: a case study from Iran. *Interdisciplinary Journal of Contemporary Research in Business*, 3(9), 1496-1511.
24. Sekaran. (2013). *Research Methods for Business: A Skill-Building Approach (6th ed.)*. New Delhi: Wiley India Pvt. Ltd.
25. Sntos, J. (2003). E-service quality: A model of virtual service quality dimensions. *Managing Service Quality: An International Journal*, 13(3), 233-246.
26. Sureshchander, G. S., Rajendran, C., & Anantharaman, R. N. (2015). The Relationship between Service Quality and Customer Satisfaction-A Factor Specific Approach. *Journal of Service Marketing*.
27. Szymanski, D. M., & Hise, R. T. (2000). E-satisfaction: An initial examination. *Journal of Retailing*, 76(3), 309-322. [https://doi.org/10.1016/S0022-4359\(00\)00035-X](https://doi.org/10.1016/S0022-4359(00)00035-X)
28. Tondon, U., Kiran, R., & Sah, A. (2017). Analysing customer satisfaction: User's perspective towards online shopping. *Nakai Business Review International*, 8(3), 266-288. <https://doi.org/10.1108/NBRI-04-2016-0012>
29. Trong, V. H., Khanh N. T. V., & Gim, G. (2014). Evaluating factors influencing consumer satisfaction towards online shopping in Viet Nam. *Journal of Emerging Trends in Computing and Information Sciences*, 5(1), 67-71. <https://doi.org/10.5539/ass.v8n13p40>
30. Williams, P., & Naumann, E. (2011). Customer satisfaction and business performance: A firm-level analysis. *Journal of Services Marketing*, 25(1), 20-32. <https://doi.org/10.1108/08876041111107032>

31. Zeithaml, V. A. (1988). Consumer perceptions of price, quality, and value: A means-end model and synthesis of evidence. *Journal of Marketing*, 52(3), 2-22.