

Impact of e-banking service quality on e-loyalty through interplay of e-satisfaction, an empirical evidence from commercial banks in Vietnam

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Abstract

This research's objective is to investigate how e-banking service quality influences customer satisfaction and how e-satisfaction impacts e-loyalty in Vietnam's e-banking industry. Based on existing researches, the study creates a conceptual model that demonstrates the link between dependent and independent variables. Using a standardized questionnaire, 300 e-banking users from Vietnam provided the data. Using SPSS V26.0, descriptive statistics including reliability, and correlation analysis are calculated. AMOS V26.0 is then used to evaluate the impact of the mediator variable using confirmatory factor analysis. Results show that there is a positive relation between e-banking service quality and e-satisfaction and between e-satisfaction and e-loyalty. With a better understanding of the connections between service quality, customer satisfaction, and loyalty, particularly banks, may improve the quality of their services, which in turn increases customer satisfaction and loyalty.

Keywords: commercial banks, E- banking service quality, E-loyalty, E-satisfaction, Vietnam

1. Introduction

Surveys of customer satisfaction are used by many businesses to determine how much customers value a given good or service. If customers are not satisfied, decisions are made to improve the product or service to fulfill their needs. Survey data are gathered. Moreover, the competitiveness ratio with rivals is always determined by the final improvement with the foregrounds of client surveys (Md Abdul Bashir et al, 2020). Many studies have been conducted to analyze customer satisfaction and service quality, and they have been assessed by various researchers from measuring to building relationships with regard to various firms. A few writers have highlighted the essential criteria to quantify customer happiness, but few academics have discussed potential methods for doing so. Excellent service delivery is a must-have for e-banking systems. In today's competitive market, customers at banks are constantly welcomed and behave as assets for the institution. The e-banking system places a high priority on customer satisfaction since unhappy customers are more likely to switch banks if they don't receive prompt service or have trouble making or receiving payments. The link between customer happiness and service quality has been the subject of numerous research. Many studies have been done to determine how customer happiness is impacted by service quality. The depth of research being done in the banking sector to raise consumer satisfaction levels with services has grown. Practically speaking, this study makes a number of suggestions to banks regarding which particular e-banking service quality dimensions they should enhance to retain customers for e-banking services. Banks place a lot of work into determining which service quality factors have a substantial impact on customer loyalty to their services (Al-Alak, 2014; Kandampully et al., 2015) because this is a goal they value highly (Coetzee et al., 2013). This study highlights the key e-banking service quality elements that banks can place more emphasis on in order to increase both the customer satisfaction and long-term loyalty of customers to e-banking services.

2. Literature review

2.1. E-service quality

The notion of expectancy disconfirmation, which spread to include service quality, was endorsed by earlier researchers Parasuraman et al. (1985) and Gronroos (1982, 1984). Additionally, the Mentzer et al. (2001) model could be used to evaluate the quality of e-services because customers for e-retailing and logistical services have similar requirements for in-depth knowledge of order convenience and quality, as well as for accuracy in the outcome of online transactions. In truth, the physical distance between the customer and the provider has a big impact on the metrics used to gauge the service's quality.

The service quality model, also known as the e-service quality model, is used in many studies (Rahi and Ghani, 2018; Raza et al., 2015; Akram and Sultan, 2014; George and Kumar, 2014; Clemes et al., 2011), and it is important for defining customers' experiences in an interactive virtual environment in addition to determining a business' success rate. According to Rowley (2016), the quality of e-services is viewed as an interactive information facility that enables businesses to differentiate their offerings and gain a competitive edge (Santos, 2003). According to Parasuraman et al. (1985), the effectiveness of an online transaction and the delivery of products and services are facilitated to a greater or lesser extent by a website.

E-retailers should consider the importance of the e-service quality aspect when constructing online publicizing policies because e-service quality could also be defined as the users' comprehensive assessment and appraisal of the quality of the virtual facility provided by cyber businesses (Santos, 2003). The highest standards of e-service quality reflect the potential advantages of the Internet. By the exceptional effectiveness of the e-service, virtual users can recognize the potential benefits of the internet.

2.2. E-banking service quality

According to Bauer, Falk, and Hammerschmidt (2006), Liao, Yen, and Li (2011), Parasuraman, Zeithaml, and Malhotra (2005), Santos (2003), and Zeithaml, Parasuraman, and Malhotra (2002), e-service quality is defined as a consumer's overall assessment and judgment of the quality of the services that are delivered through the internet. This has led to the conceptualization of e-service quality as the foundation for interactive information service (Ghosh, Surjadaja, & Antony, 2004). For this reason, it has been suggested (Rolland & Freeman, 2010) that the conceptualizations of e-service quality need to be expanded to the global level and that e-service quality needs to be taken into account for every aspect of the transaction, such as service delivery, customer service, and support.

Numerous researchers have created concepts for service quality up to this point in various industries and nations (Aagja, 2010; Akram & Sultan, 2014; Arasli, Katircioglu, & Mehtap-Smadi, 2005; Arasli, Mehtap-Smadi, & Katircioglu, 2005; Collier & Bienstock, 2006; George & Kumar, 2014; Gounaris, Dimitriadis, & Stathakopoulos, 2010). For instance, (Carlson & O'Cass, 2011) point out that consumers assess several aspects of an e-delivery service's in order to create an overall rating of the quality of the e-service. According to the research, environment quality, delivery quality, and outcome quality are all antecedents to measuring the worldwide quality of e-services. Four characteristics of E-ServQual were found in the online banking business (Herington & Weaven, 2009): individual demands, website organization, user-friendliness, and accessibility.

2.3. E- satisfaction

Customer satisfaction was defined by Zeithaml and Bitner (2000) as the customers' assessment of a good or service in terms of whether it matched their wants and expectations. It has been demonstrated that satisfaction is positively correlated with loyalty, and this effect is also present in online settings. According to Shankar, Smith, and Rangaswamy's 2003 research, loyalty is more strongly influenced by satisfaction online than it is offline.

Customers who are satisfied are more likely to use the service more frequently, have stronger repurchase intentions, and are frequently quick to promote the good or service to their friends. Also, disgruntled customers are less likely to build a personal relationship with the merchant and are more likely to look for alternative information and switch to another retailer.

Consumer satisfaction is regarded as an antecedent of trust and is closely tied to interpersonal trust. Although there is little empirical study in this area, it is reasonable to assume that contentment has a beneficial impact on trust in the online world as well. Consumers' propensity to make additional online purchases from a particular e-tailor (loyalty) and their confidence in the online medium as a whole are anticipated to rise as a result of their pleased experiences with that e-tailor. Confidence in the e-tailor as a whole will rise if a particular application is satisfied.

2.4. E- loyalty

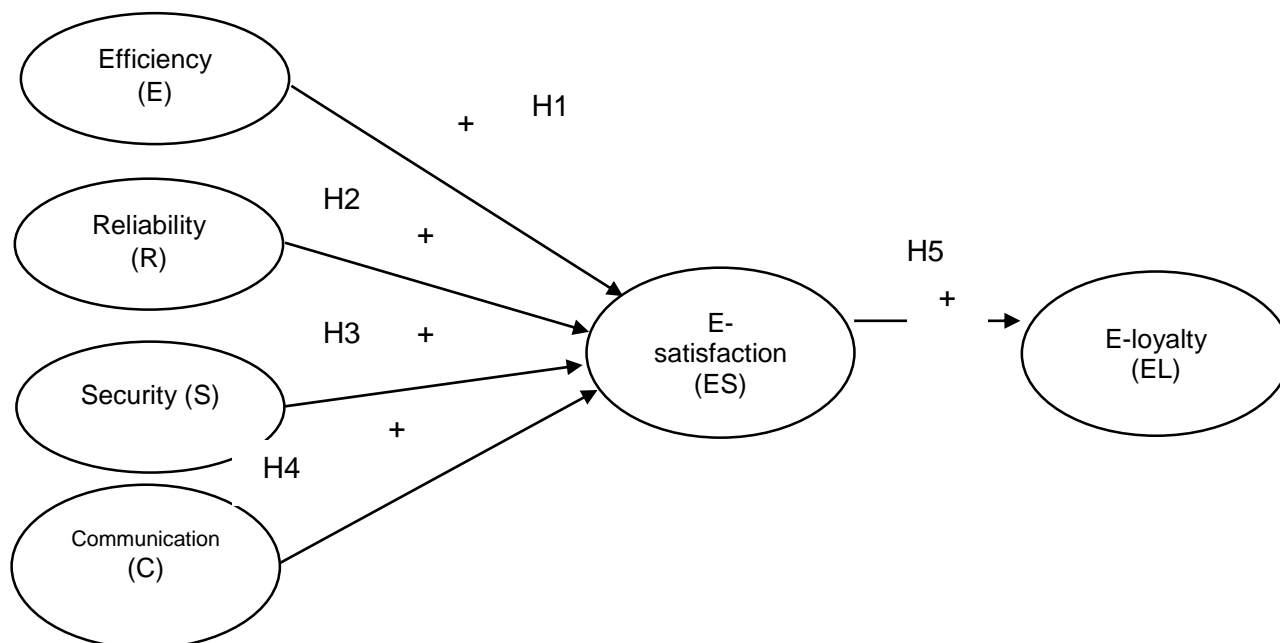
Customer retention is a challenging procedure that is crucial to an organization's success (Bowen and Chen McCain, 2015). Loyal consumers influence potential customers to utilize a certain provider's services by spreading favorable word of mouth and are less sensitive to pricing adjustments (Akbar and Parvez, 2009). As a result, devoted customers are valued as a resource by businesses. According to Jeong and Lee (2010), Kaur et al. (2012), and Amin (2016), customer loyalty in the context of e-banking can be described as "consumer predisposition to frequently visit the bank's website, regularly avail of e-banking services, and share a favorable word of mouth about e-banking services." In instance, devoted e-banking users often promote good word of mouth via electronic devices and social media sites, influencing other users' perceptions of e-banking (Kaur et al., 2012). Also, they will favor online banking over conventional banking methods (Kandampully et al., 2015). According to Gera (2011), if customers receive high-quality interactive services from an e-banking website, they will return to this platform to use banking services and encourage others to do the same. For banks to keep their ties with customers and draw in new ones, focusing on e-banking loyalty is essential (Amin, 2016). Hence, banks should create marketing plans to give customers better value in order to win their loyalty to e-banking services (Kotler et al., 2014). It is possible to understand consumer loyalty from both an attitude and a behavioral perspective (Oliver, 1999; Zeithaml, 2000). According to the behavioral perspective, customer loyalty can be defined as the proportion of consumers who use a certain service more frequently than the total number of services offered in that category (Neal, 1999). Customer loyalty can be defined as "the customer tendency to maintain a relationship with a service provider" from an attitudinal standpoint (Zeithaml, 2000). To understand consumer loyalty, both perspectives have been merged in this study.

3. Research method

3.1. Conceptual model and hypotheses

Based on the setting of this research and with reference to earlier empirical investigations, the E-service quality aspects have been classified and evaluated as independent variables that influence satisfaction. Using the numerous mergers indicated in the technique section, we determine the aspects of E-service quality that have an impact on E-satisfaction, and we then propose the following hypothesis.

Figure 1. Conceptual model



H1: Efficiency is positively related to E-satisfaction.

H2: Reliability is positively related to E-satisfaction.

H3: Security is positively related to E-satisfaction.

H4: Communication is positively related to E-satisfaction.

H5: E-satisfaction is positively related to E-loyalty.

3.2. Research design

This section has provided more information on the study's chosen research methodology. This inquiry is quantitative in character. The survey research was designed using a quantitative approach. This study also employed a single-method survey methodology. The primary method for acquiring data is structured surveys with open-ended questions and a range of potential responses.

Moving on, it should be emphasized that Vietnamese internet users who have used online banking solutions are included in the group from whom researchers expect to evaluate Service quality levels and the relationship between E-service quality, E-customer satisfaction, and E-Loyalty.

For this investigation, convenience sampling was used as the sample strategy. Because of the data collection's apparent homogeneity, relative unpredictability, and sizable sample size, convenience sampling was chosen. Internet and broadband users received the questionnaires electronically through emails and social media. In terms of sample size, the researchers gave questionnaires to 300 individuals, and 275 of them gave valid responses, resulting in an 91,67 percent response rate. Additionally, AMOS has been used for data analysis and structural equation modeling to test the hypotheses (SEM). The scales used in this study were developed by modifying those from other studies on the subject. Responses were gathered using a Likert scale on a 5-point scale. Strongly Agree: 5, Strongly Disagree: 1, and so forth.

The original forms of the scales were translated in two steps from English to Vietnamese. First, two academics and two translation experts with excellent English language skills independently translated all scales into Vietnamese. The finest translations were then selected for acceptance after being reviewed by a researcher and a translation expert. After being double-checked by two academicians who are subject-matter experts, the scale phrases were eventually authorized.

4. Data analysis and findings

4.1. Frequency & descriptive analysis of demographic factors

Table 1. Frequency & descriptive analysis of demographic factors

| Criteria | | Frequency | Percent |
|------------------------|----------------------------|-----------|---------|
| Gender | Male | 112 | 40.7% |
| | Female | 163 | 59.3% |
| Average monthly salary | 1 – 5 Million VND | 34 | 12.4% |
| | 5 – 10 Million VND | 42 | 15.3% |
| | 10 – 15 Million VND | 97 | 35.3% |
| | 15 – 30 Million VND | 82 | 29.8% |
| | Higher than 30 million VND | 20 | 7.3% |
| Age of respondents | 15-20 age group | 27 | 9.8% |
| | 20-25 age group | 43 | 15.6% |
| | 25-30 age group | 52 | 18.9% |
| | 30-35 age group | 40 | 14.5% |
| | 35-40 age group | 33 | 12.0% |
| | 40-45 age group | 70 | 25.5% |
| | 45-50 age group | 10 | 3.6% |

(Source: research of the authors)

Table 4.1 lists the characteristics of the respondents, including gender, age, and monthly wage, from which the data were taken. Considering the research sample's demographic data, female users accounted for 59.3% while male made up 40.7%. Furthermore, 35.3% of survey respondents have an average monthly income of 10 - 15 million VND, however, only 7.3% of respondents have an income of over 30 million VND per month. Also, respondents are mainly in the age groups of 40-45 years old and 25-30 years old.

4.2. Reliability Testing

The Cronbach alpha coefficient can be used to evaluate reliability. The reliability is good if the alpha value exceeds 0.7; medium reliability is indicated by a value of alpha between 0.5 and 0.7. If the alpha value is less than 0.5, the questionnaire is not credible. In this study, the reliability of the questionnaires was evaluated using the Cronbach alpha coefficient and SPSS version 26.

Table 2. Reliable testing

| Variable | Indicator | Factor Loading | Valid |
|---|-----------|----------------|-------|
| Efficiency (E) Cronbach Alpha = 0.761 | E1 | 0.401 | Valid |
| | E2 | 0.344 | Valid |
| | E3 | 0.415 | Valid |
| | E4 | 0.331 | Valid |
| | E5 | 0.347 | Valid |
| | E6 | 0.356 | Valid |
| Reliability (R) Cronbach Alpha = 0.801 | R1 | 0.405 | Valid |
| | R2 | 0.331 | Valid |
| | R3 | 0.367 | Valid |
| | R4 | 0.413 | Valid |
| | R5 | 0.469 | Valid |
| Security (S) Cronbach Alpha = 0.775 | S1 | 0.404 | Valid |
| | S2 | 0.399 | Valid |
| | S3 | 0.401 | Valid |
| | S4 | 0.531 | Valid |
| | S5 | 0.355 | Valid |
| Communication (C) Cronbach Alpha = 0.698 | C1 | 0.476 | Valid |
| | C2 | 0.312 | Valid |
| | C3 | 0.551 | Valid |
| | C4 | 0.540 | Valid |
| | C5 | 0.437 | Valid |
| E-Satisfaction (ES) Cronbach Alpha = 0.832 | ES1 | 0.369 | Valid |
| | ES2 | 0.347 | Valid |
| | ES3 | 0.422 | Valid |
| | ES4 | 0.377 | Valid |
| E-Loyalty (EL) Cronbach Alpha = 0.715 | EL1 | 0.421 | Valid |
| | EL2 | 0.358 | Valid |
| | EL3 | 0.467 | Valid |
| | EL4 | 0.329 | Valid |

(Source: research of the authors)

Cronbach Alpha is more than 0.6 for each scale. This result illustrates the suitability and acceptance of the reliability of the questionnaire. This value is shown in the table below. Structural equation modeling was used to assess the research model.

The convergent validity value is the factor loading value of the study variable indicators. Convergent validity is necessary for indicators with outer loading values greater than 0.7. Below is a list of the results of each indicator's convergent validity test for the study variable. On the basis of the aforementioned facts, it is claimed that all indicators are reliable. The subsequent study can therefore make use of all signals. The value of discriminant validity is indicated by the cross-loading factor, which is used to compare the loading values of the desired construct and other constructs (which must be greater) to determine if a construct has the proper discriminant.

As a result, the Cronbach Alpha coefficient for all scales falls between 0.698 to 0.832. As a result, the reliability of the scales is frequently high (Nunnally, J.C., and Bernstein, I.H. (1994).

4.3. Exploratory factor analysis

Table 3. Exploratory factor analysis

| Indicator | Variable | | | | | |
|-----------|----------|---|---|---|----|----|
| | E | R | S | C | ES | EL |
| E1 | 0.541 | | | | | |
| E2 | 0.783 | | | | | |
| E3 | 0.611 | | | | | |
| E4 | 0.545 | | | | | |

| Indicator | Variable | | | | | |
|-----------|----------|-------|-------|-------|-------|-------|
| | E | R | S | C | ES | EL |
| E5 | 0.721 | | | | | |
| E6 | 0.749 | | | | | |
| R1 | | 0.469 | | | | |
| R2 | | 0.555 | | | | |
| R3 | | 0.714 | | | | |
| R4 | | 0.675 | | | | |
| R5 | | 0.789 | | | | |
| S1 | | | 0.403 | | | |
| S2 | | | 0.506 | | | |
| S3 | | | 0.611 | | | |
| S4 | | | 0.721 | | | |
| S5 | | | 0.547 | | | |
| C1 | | | | 0.564 | | |
| C2 | | | | 0.478 | | |
| C3 | | | | 0.553 | | |
| C4 | | | | 0.698 | | |
| C5 | | | | 0.741 | | |
| ES1 | | | | | 0.612 | |
| ES2 | | | | | 0.579 | |
| ES3 | | | | | 0.487 | |
| ES4 | | | | | 0.555 | |
| EL1 | | | | | | 0.531 |
| EL2 | | | | | | 0.654 |
| EL3 | | | | | | 0.743 |
| EL4 | | | | | | 0.569 |

(Source: research of the authors)

According to the data in the above table, all indicators are reliable. The subsequent study can therefore make use of all signals. The table above indicates that all research variables have high reliability under the aforementioned parameters. As a result, based on the results of the tests that have been run. When all observable variables are included in the study, the findings reveal that they are split into 6 categories. All variables that have been observed have factor loading coefficients larger than 0.4 (Hair et al, 2010).

4.4. Hypothesis analysis

The goodness of fit indices that were examined in the study included the Chi-square fit test and degree of freedom, CFI (Comparative Fit Index), RMSEA (Root Mean Square Error of Approximation), TLI (Tucker-Lewis Index), RNI (Relative Noncentrality Index), NNFI (Non-Formed Fit Index), and IFI (Incremental Fit Index).

Table 4. Values of Fit and Goodness

| Fit Index | Value | Good Fit Values | Acceptable fit values | Result |
|---------------|------------------|-----------------|-----------------------|------------|
| Chi square/df | 2153.149/576=3.7 | <3 | <5 | Acceptable |
| CFI | 0.906 | >0.95 | >0.90 | Acceptable |
| RMSEA | 0.075 | <0.050 | <0.080 | Acceptable |
| TLI | 0.918 | >0.95 | >0.90 | Acceptable |
| RNI | 0.917 | >0.95 | >0.90 | Acceptable |
| NNFI | 0.905 | >0.95 | >0.90 | Acceptable |
| IFI | 0.915 | >0.95 | >0.90 | Acceptable |

(Source: research of the authors)

Table 4 presents the study's goodness of fit values. The analysis of the outcomes reveals that all goodness of fit metrics show an excellent fit. This situation shows that the collected data and the proposed model are consistent (Hair et al, 2010).

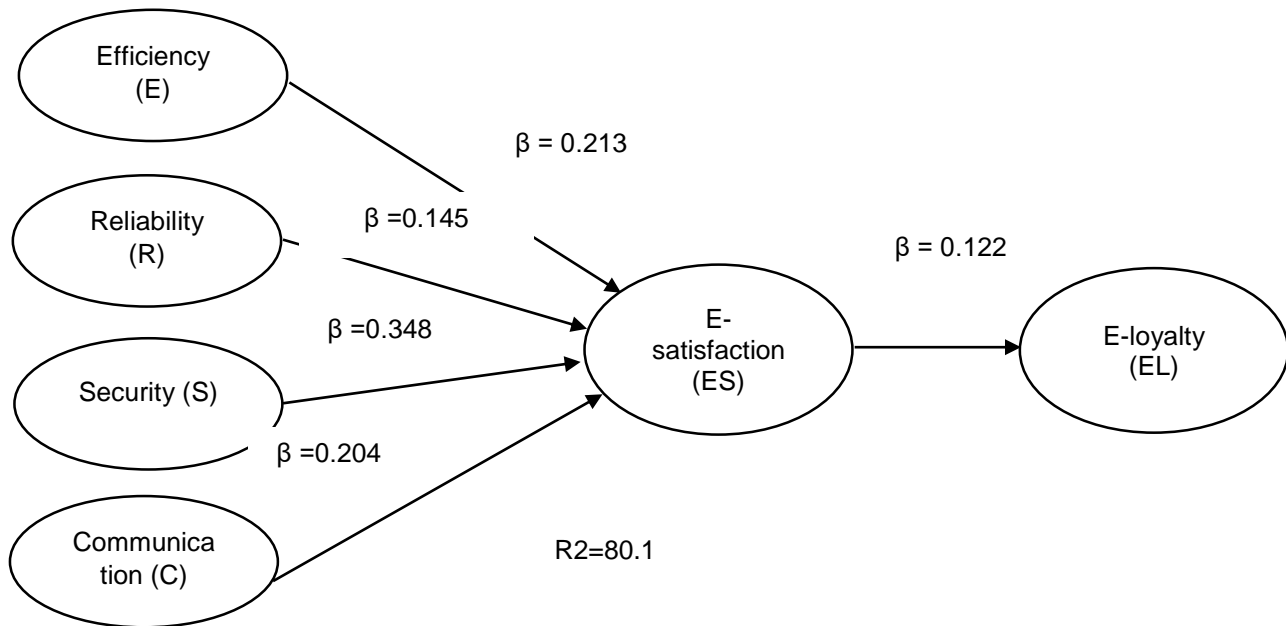
Table 5. Structural Equation Model Analysis

| Hypothesis | Standardized β | p | Support/ Rejection |
|--|----------------------|-------|--------------------|
| H1: Efficiency is positively related to E-satisfaction. | 0.213 | 0.001 | Supported |
| H2: Reliability is positively related to E-satisfaction. | 0.145 | 0.002 | Supported |
| H3: Security is positively related to E-satisfaction. | 0.348 | 0.000 | Supported |
| H4: Communication is positively related to E-satisfaction. | 0.204 | 0.000 | Supported |
| H5: E-satisfaction is positively related to E-loyalty. | 0.122 | 0.001 | Supported |

(Source: research of the authors)

If the coefficient value is positive and the p-value is less than 0.05 in the structural model in Table 5, the hypothesis may be accepted. The results suggest that H1, H2, H3, H4, and H5 were acceptable since they had positive coefficient values and a p-value of less than 0.05.

Figure 2. Structural Equation Model



(Source: research of the authors)

The correlations between the variables and the R2 value are shown in Figure 2 (**p 0.05, ***p 0.001). As a consequence, 80.1% of satisfaction is accounted for by efficiency, reliability, security, and communication ($R^2 = 80.1$). While these parameters accounted for 80.1% of the variance in satisfaction ($R^2 = 80.1$), additional variables accounted for 19.9% of the variance.

5. Conclusion

The study's conclusions suggest that phenomena in the internet banking environment can be explained using the conventional theory of mediation, which links service quality, customer satisfaction, and loyalty. The elements of electronic service quality that, in the case of commercial banks in Vietnam, influenced electronic loyalty by mediating electronic satisfaction were efficiency, reliability, security, and communication. According to research findings, consumer satisfaction is positively impacted by all aspects of e-service quality, including efficiency, reliability, security, and communication. Security has the highest impact on customer satisfaction, followed by efficiency and communication. However, reliability has negligible effect on e-satisfaction. Moreover, consumer loyalty is positively impacted by e-satisfaction.

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