MEDIATING EFFECTS OF CUSTOMER SATISFACTION IN THE RELATIONSHIP BETWEEN SERVICE QUALITY AND CUSTOMER LOYALTY IN E-BANKING SERVICES

R. RAGU PRASADH1 AND C. JOE ARUN2

Abstract: The advancement in web technology and the consumer’s preference for online usage for purchase and transactions has led to the emergence of e-service businesses. In the highly competitive online environment, service providers find it challenging to provide quality services and convert their customers into satisfied and loyal ones. Hence, it is essential to understand the relationship between service quality, customer satisfaction and customer loyalty in e-services. The role of service quality and customer satisfaction in loyalty formation have found ample attention and been widely researched over the past decade. However, when it comes to e-services, very few researchers have explored the relationship between these three variables. The present research aims to explore the role of customer satisfaction in the relationship between service quality and customer loyalty in the context of e-banking services which is one of the most widely used e-service in recent times.

Keywords: E-Services- E-Banking, Service Quality, Customer Satisfaction, Customer Loyalty

INTRODUCTION

Several commercial banks started moving towards digital customer services leading to stiff competition to attract prospects and customers, especially the young and educated community. India, with a large population and an increasing literacy rate provides a huge scope for e-banking services compared to other service sectors. To understand customers’ specific needs, banks first need to identify the customers’ attribute to judge service quality. Hence, customer-based studies will help banks to capture these prospects and keep them loyal in this competitive environment. Customer satisfaction through improved service quality has become the mantra for success and it helps to develop a close relationship with the customers.

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than ever before. Considerable academic research has been done to explore what degree customer satisfaction can influence customer loyalty which will have a positive influence on the market share and profit margin of the company. However, there has been very few studies which explored the relationship between service quality, customer satisfaction and customer loyalty in internet banking services. Keeping this objective, this research tries to answer the important question of whether the e-banking services are able to connect to their customers and deliver to their satisfaction level. How far internet banking customers are truly loyal to their banks? To answer these questions, it becomes imperative to delve into the current perception of the e-banking customers in India. The study begins with an identification of relevant variables and then moves to relationship testing. The results show that service quality has a direct positive effect on the word of mouth and indirect effect through customer satisfaction. The study establishes customer satisfaction as a mediator in a service quality-word of mouth relationship in the context of the health care industry in Syria.

**REVIEW OF LITERATURE**

The literature related to this study was reviewed to trace the trends of historical research involving customer loyalty, service quality and customer satisfaction in the context of e-services and more specifically e-banking services.

**CUSTOMER LOYALTY**

Earlier, there have been studies investigating loyalty of customers in retail banking like that of Bloemer et al. (1998) where they investigated the bank service loyalty and its antecedents. They expressed bank loyalty as a combination of commitment and repeat purchasing behaviour. Without commitment, it is a spurious loyal relationship directed by inertia (Bloemer et al., 1998) which is in line with the traditional loyalty’s multidimensional nature with attitude and preference along with behavioral component (Day, 1969; Dick & Basu, 1994). Derived from Jacoby and Chestnut (1978), Bloemer et al. (1998) defined bank loyalty as the biased (i.e. non-random) behavioral response (i.e. revisit), expressed over time, by some decision-making unit with respect to one bank out of a set of banks, which is a function of psychological (decision-making and evaluative) processes resulting in brand commitment”. The research by Jones & Taylor (2007) included psychological aspects like altruistic behaviour, advocacy, etc. is similar to that of a commitment concept presented by Bloemer et al. 1998. The Behavioral intentions scale developed by Zeithaml et al. (1996), which is one of the most widely used conceptualizations of loyalty used in banking studies, is a 13-item scale that includes loyalty and complaining behavior. According to Zeithaml et al. (1996), loyalty can be manifested in many ways; for instance – by expressing a preference for a company over others, by continuing to purchase from it or by increasing business with it in
In his research, Caruana (2002) analyzed service loyalty in retail banking using 12-item measurement scale suggested by Gremler and Brown (1996) that capture their conceptualization. There have been studies where qualitative analysis was performed to identify the content of the loyalty to construct and develop the questionnaire. One such study was by Lewis and Soureli (2006) where they conducted in-depth interviews with managers in leading Greek banks. They discussed their perceptions of how both consumer attitudes to banks and dimensions of loyalty had developed over time. They also had outlined their attempts to retain customers and enhance loyalty. There are studies where loyalty was a single-item measure like in the study of Fragata and Muñoz Gallego (2009) where a single self-created item was used to measure the future behavior of the customers.

In their research about customer loyalty in e-banking services, Ramya et al. (2013) investigated various e-services provided by banks and the way loyalty is created. According to them, loyalty is considered a positive evaluation of, or a felt commitment to a latent mental state which is reflected in the behavior of the object. El-Manstrly and Harrison (2013) and Harris and Goode (2004) have adopted a four-phase sequential loyalty concept developed by Oliver (1997) but developed a new scale using scale development process by Delphi technique and Churchill’s (1979) scale-development procedure.

**SERVICE QUALITY**

With the increasing importance of services and growing competition both consumers and managers should pay special attentions to the service quality (Gupta and Bansal, 2012). Speed of response, offer updates, site effectiveness and so forth, refers to technical quality (Rust and Lemon, 2001). Interactive communication, personalization of the communication and of the service, as well as new forms of customer access refers to functional aspect of quality. The package given to the customer must contain both technical and functional qualities to be more competitive. To measure service quality expectations and to measure perceptions, Parasuraman et al. developed SERVQUAL and RATER gap analysis models which were tested and validated in service industries of various countries (Parasuraman et al. 1988). Parasuraman et al. (1988) noted that early researches projected service quality as an attitude shaped based on the disparity between customers’ expectations regarding a service to be received and perceptions of the service being received. This approach to measuring service quality is popularly referred as, “Disconfirmation Paradigm”. When Cronin and Taylor (1992) developed the SERVPERF scale for measuring service quality he claimed it to be more efficient than SERVQUAL scale.

Regarding service quality in banking and specifically e-banking, there have been studies that developed exclusive scales for measuring service quality for
e-banking. Jun and Cai (2001) defined Internet banking as the use of the Internet as a delivery channel for banking services which include opening a deposit account, transferring funds, electronic bill presentment and payment. Joseph et al. (1999) in their study identified convenience and accuracy, feedback and complaint management, efficiency, queue management, accessibility and customization as six dimensions of the internet banking service quality. Jun and Cai (2001) identified seventeen dimensions of service quality in Internet banking which were grouped into three major categories such as customer service quality, online systems quality, and banking service product quality. Siu and Mou (2005) examined the customers’ service quality perceptions in Internet banking in Hong Kong and identified four key dimensions - credibility, efficiency, problem handling and security.

Thus, irrespective of various conceptualizations and operational measures adopted for service quality in the past, it is undoubtedly one of the most important determinants of customer loyalty and behavior intentions validated by numerous studies (Parasuraman et al., 1994; Anderson et al., 1994; Fornell et al., 1996; Dabholkar, 2000; Cronin et al., 2000).

CUSTOMER SATISFACTION

Satisfaction can be described as an evaluation of the perceived discrepancy between prior expectations... and the actual performance of the product (Oliver, 1999). In other words, satisfaction is a person's feeling of pleasure or disappointment resulting from comparing a product’s perceived performance (or outcome) in relation to his or her expectations (Kotler, 2000). With various definitions evolving from different studies, however, one view has in common that customer satisfaction is one of the primary antecedents of customer loyalty (Cronin and Taylor, 1992; Cronin et al., 2000; Dabholkar, 1995).

As per Fornell et al. (1996), satisfied customers are economic assets generating superior returns at lower systematic risks. They believe that the economic value of satisfied customers is undervalued and investments based on customer satisfaction produce substantial excess returns and net cash flows with low volatility. Thus, satisfied customers should be regarded as an asset and incorporated as such in the balance sheet (Anderson and Fornell, 2000). The findings of Tuli and Bharadwaj (2009) put forth that consumer based satisfaction measures offer beneficial details to financial markets and further propose that companies should publish their customer satisfaction scores in their annual reports and disclose them in public forums to amplify its impact on stock returns risk. This has again been substantiated by O’Sullivan and McCallig (2009), who state that customer satisfaction scores are of importance to the stock market and the market views the satisfaction data as a reliable indicator of future performance of the firms.

While many studies have found a positive relationship between satisfaction and loyalty (Bloemer and De Ruyter, 1998; Fornell et al., 1996), other researchers have not found a significant relationship (Bowen and Chen; 2001; Cronin and Taylor, 1992). Reichheld (1996) studied different types of businesses and found that
60 to 80 percent of customers who defected had stated that they were satisfied or very satisfied just prior to defecting. Therefore, while dissatisfaction may lead to switching, satisfaction may very well contribute to customer loyalty, but does not guarantee loyalty even at high levels of satisfaction (Salegna and Goodwin, 2005). Bennett and Rundle-Thiele (2004) also report that high levels of satisfaction does not equate to high loyalty and concluded that this relationship is moderated by relationship involvement and personal characteristics. Despite these few contradictory views, most studies show customer satisfaction as a prime antecedent of customer loyalty.

The most widely used customer satisfaction models are the customer satisfaction indices developed for different countries like the American Customer Satisfaction Index (ACSI), European Customer Satisfaction Index (ECSI), Swedish Customer Satisfaction Barometer (SCSB), etc. which had one aspect in common. The customer loyalty, which is a primary consequence of customer satisfaction across all these models, has been validated even later by numerous application studies. Fornell (1992) emphasized that high customer satisfaction will lead to improved loyalty for the firm which will also decrease customers’ sensitivity towards competitive offers. Thus, all these empirical researches have postulated and validated the role of customer satisfaction as one of the primary antecedents of customer loyalty.

However, there have been conceptual issues raised by certain researchers on whether service quality and customer satisfaction are the same or different constructs. Researchers have not always been able to differentiate the constructs empirically (Dabholkar, 1993; Oliver, 1993). Dabholkar (1995) found that two constructs were distinct for recent customers, but overlap in meaning for long-term customers as customer satisfaction evaluations grew increasingly cognitive overtime. While others were able to separate the service quality and customer satisfaction constructs easily, since one construct was defined at transactional level and latter at a global level. Hence, it will be an interesting research to explore the distinctiveness of service quality and customer satisfaction constructs as antecedents of customer loyalty.

The Relationship among Service Quality, Customer Satisfaction and Customer Loyalty

There is ample evidence indicating both service quality and customer satisfaction as significant antecedents of customer loyalty i.e. a direct positive effect on customer loyalty. The next step is to explore the relationships among service quality and customer satisfaction that has been explored in the past. Assuming that the two concepts are distinct, the logical question is about the order of their occurrence in the consumer’s mind. Traditionally, researchers suggested that customer satisfaction with a given experience would lead to an overall evaluation or attitude about service quality over time (Parasuraman et al., 1988). However, later the opposite view appears to have a strong favor that service quality will be an antecedent of customer satisfaction regardless of whether these constructs were measured
for a given experience or over time. (Oliver, 1993; Spreng and Mackoy, 1996). The latter view of service quality being an antecedent of customer satisfaction has been empirically validated by a number of researchers (Bloemer et al., 1998; Caruana, 2002; Lewis and Soureli, 2006; Fragata and Muñoz Gallego, 2009).

The next aspect to be explored is the relationship of service quality with customer loyalty in the presence of customer satisfaction. If service quality and customer satisfaction has direct positive effects on customer loyalty, then what is the role of customer satisfaction – an independent or mediating one? Dabholkar (1995) found that service quality was a predictor of customer satisfaction that was a predictor of behavioral intentions, a proxy of loyalty. Thus, service quality is found not to impact behavioral intentions directly. The mediating effect of customer satisfaction on customer loyalty from service quality has been proved empirically by some researchers (Caruana, 2002; Lewis and Soureli, 2006). Consumers evaluating the factors to judge service quality, deciding if one's satisfied and then making a decision about patronizing and recommending the service in the future seems to be a logical sequence (Dabholkar, 1995). However, empirical evidence suggests that service quality too has a direct positive effect on customer satisfaction as well as customer loyalty. Brady et al. (2005) argued that though various studies are focusing on drivers of loyalty, a clear understanding of them are still lacking among the scholars and practitioners. Similarly, exploring the relationship among service quality, customer satisfaction and loyalty is an area that demands more research and empirical validation.

HYPOTHESIZED RESEARCH MODEL

Based on the review of theoretical and empirical literature, a conceptual model has been hypothesized for this research which is aimed to explore customer loyalty and its antecedents in Indian e-banking services. Customer loyalty has been taken as the key dependent variable. Service quality and customer satisfaction have been hypothesized as the antecedents of customer loyalty. Service quality has direct effect on customer loyalty along with an indirect effect through customer satisfaction. Thus, customer satisfaction acts a mediator in service quality – customer loyalty relationship. The hypothetical research model has been presented in Figure 1.

![Figure 1: Hypothesized Research Model](image-url)
RESEARCH HYPOTHESES

The following hypotheses were developed for this research:

$H_1$: Customer Satisfaction has a direct positive effect on Customer Loyalty in e-banking services;

$H_2$: Service Quality has a direct positive effect on Customer Loyalty in e-banking services; and

$H_3$: Service Quality has an indirect positive effect on Customer Loyalty through Service Quality which acts as a mediator in the Customer Satisfaction–Customer Loyalty relationship.

TARGET POPULATION

The target population includes the set of people to which the researchers wish to generalize the results of their study. The target population for this study included all Indian e-banking users who have been customers for at least one year and have used e-banking in the past three months. Since the total number of e-banking customers is unknown, it is assumed that the population is infinite. Since, it is not feasible to reach customers of all e-banks from all over India; an appropriate sampling technique has been adopted that best represents the target population.

SAMPLE SELECTION

Due to feasibility constraints, the sample site selected for the study was the Chennai city in Tamil Nadu, India. However, the sample included the customers who use all the banking channels and maintain bank accounts both within and outside Tamil Nadu. Those who maintain their bank accounts outside Tamil Nadu originally hail from various parts of the country, but are currently staying in Chennai for education, employment and business opportunities. This ascertains the representativeness of the population of bank customers from all over India.

SAMPLING TECHNIQUE

The convenience sampling technique was used to draw the sample respondents. This technique involved approaching people who were conveniently available to participate in the study (Saunders et al., 2009; Farrokhi and Mahmoudi-Hamidabad, 2012). The rationale behind choosing convenience sampling over other techniques was the higher chance of obtaining good responses. Since the respondents chosen were bank customers who were available based on their convenience and free time, the probability of erroneous responses and the poor response rate was believed to be comparatively lower.

SAMPLE SIZE

The minimum sample size required for stable, rigorous analysis and precise results was computed based on the sample size determination formula developed by Cochran (1963) for a large population.
where
\[ n_0 = \frac{Z^2pq}{e^2} \quad (3.1) \]

\( n_0 \) – sample size
\( Z^2 \) – the desired confidence level
\( e \) – the desired level of precision
\( p \) – the variability in population

For this study, the researcher assumed the following values for the three parameters:

\( Z^2 \) – Confidence level is the statistical measure of the number of times out of 100 the result is expected to be within the specified range of precision. For this study, the confidence level of 95 percent was assumed. Hence, the corresponding \( Z \) score for 95 percent of the area under the normal curve is 1.96 i.e. \( Z = 1.96 \).

\( e \) – The level of precision, also known as the sampling error, is the range in which the true value of the population is estimated to be. It is the margin of error allowed in estimation. For this study, the level of precision was taken as \( \pm 5 \) percent (i.e. \( e = 0.05 \)).

\( p \) – The degree of variability refers to the distribution of the attributes of the population. High variance means a more heterogeneous population which requires a large sample size to obtain the given precision level. Lower the variance, lower is the required sample size. Since the target population and its variance are unknown in this study, the proportion of 50 percent was assumed to be indicating maximum variability in a population, and with that, the most infallible sample size is determined. Hence, \( p = 0.5 \) and \( q = 1-0.5 = 0.5 \).

Substituting the assumed values for the parameters in equation 3.1 as follows:

\[ n_0 = \frac{Z^2pq}{e^2} = \frac{(1.96)^2 (0.5)(0.5)}{(0.05)^2} = 384 \]

This was the most conservative sample size needed which implied that at least 384 valid responses were required to obtain the desired level of precision and confidence in this research.

During the data collection process, the researcher first briefed the respondent on the study and checked if he/she satisfied the criteria of being a bank customer for at least one year and also an active user of both e-banking and traditional banking. If affirmative, then the respondent was requested to fill the questionnaire.
With a target of 384 sample responses to accomplish, convenience sampling method was applied to select a total of 550 respondents. Out of 550 questionnaires administered, 385 valid responses were obtained which account for a response rate of 85.5 percent. The study used a set of statistical techniques of linear regression to test the research hypotheses and to validate the hypothesized CSI model.

**Instrumentation**

The process of development of the instrument is a crucial step of any research. For this study, the instrument for data collection is a structured questionnaire which has been designed based on existing, validated scales. The aim of the study is to explore the relationship among service quality, customer satisfaction and customer loyalty. Hence, the questionnaire is focused on gathering customer perceptions of service quality, their level of satisfaction and their loyalty towards e-banking services. the measurement scale developed and validated by Young Chu et.al (2012) to measure service quality, customer satisfaction and customer loyalty, was being used in this study.

The scale consists of eight dimensions of service quality in e-banking grouped in three categories of Products and services, Convenience, and Interactive support. For customer satisfaction and customer loyalty the scale consists of three and five dimensions respectively.

**Customer satisfaction as a Predictor of Customer Loyalty**

Test of H1: Customer satisfaction has a direct positive effect on Customer Loyalty in e-banking services.

In order to test if customer satisfaction is a predictor of customer loyalty, the linear regression has been employed and the results have been presented in table 51 and 52.

<table>
<thead>
<tr>
<th>Attributes</th>
<th>Regression Coefficients</th>
<th>t-value</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unstandardized</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
<td>1.38**</td>
<td>3.78</td>
<td>0.00</td>
</tr>
<tr>
<td>Customer satisfaction</td>
<td>0.63**</td>
<td>7.47</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Note: ** Significance at one percent level

<table>
<thead>
<tr>
<th>Model Statistic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>R</td>
<td>0.59</td>
</tr>
<tr>
<td>R Square</td>
<td>0.35</td>
</tr>
<tr>
<td>Adjusted R Square</td>
<td>0.34</td>
</tr>
<tr>
<td>Std. Error of the Estimate</td>
<td>0.67</td>
</tr>
<tr>
<td>F-Value</td>
<td>55.78**</td>
</tr>
</tbody>
</table>

Note: ** Significance at one percent level
The results show the simple regression model built to test customer satisfaction as a predictor of customer loyalty show a good fit (considering that there is only a single predictor) with R Square of 0.35 and adjusted R Square of 0.34. The F-value of 55.78 is significant at one percent level indicating that the regression model is a good fit.

It can be inferred that the independent variable (customer satisfaction) explained about 34 percent of variation in the dependent variable (customer loyalty towards e-banking services). The results of model coefficients show that customer satisfaction is positively and significantly influencing customer loyalty. For every unit increase in customer satisfaction, a 0.63 unit increase in overall customer loyalty is predicted. Thus, customer satisfaction is a significant antecedent of customer loyalty in e-banking services. Hence, hypothesis 'H1' that customer satisfaction has a direct positive effect on customer loyalty is accepted.

![Figure 2: Hypothesis H1 - Customer satisfaction as Predictor of Customer Loyalty](image)

**Service Quality as a Predictor of Customer Loyalty**

Test of H2: Service Quality has a direct positive effect on Customer Loyalty in e-banking services

In order to test if service quality is a predictor of customer loyalty, the linear regression has been employed and the results have been presented in table 1 and 2

<table>
<thead>
<tr>
<th>Attributes</th>
<th>Regression Coefficients</th>
<th>t-value</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unstandardized</td>
<td>Standardized</td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
<td>1.98</td>
<td></td>
<td>3.82</td>
</tr>
<tr>
<td>Service Quality</td>
<td>0.536**</td>
<td>0.37</td>
<td>4.08</td>
</tr>
</tbody>
</table>

Note: ** Significance at one percent level
Table 4: Model Statistics – Customer Satisfaction as Predictor of Customer Loyalty

<table>
<thead>
<tr>
<th>Model Statistic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>R</td>
<td>0.37</td>
</tr>
<tr>
<td>R Square</td>
<td>0.14</td>
</tr>
<tr>
<td>Adjusted R Square</td>
<td>0.13</td>
</tr>
<tr>
<td>Std. Error of the Estimate</td>
<td>0.77</td>
</tr>
<tr>
<td>F-Value</td>
<td>16.63**</td>
</tr>
</tbody>
</table>

Note: ** Significance at one percent level

The results show the simple regression model built to test service quality as a predictor of customer loyalty show a good fit (considering that there is only a single predictor) with R Square of 0.14 and adjusted R Square of 0.13. The F-value of 16.63 is significant at one percent level indicating that the regression model is a good fit.

Inference: It can be concluded that about 13 percent of variation in the dependent variable (customer loyalty towards e-banking services) is explained by the independent variable (Service Quality). The results of model coefficients show that service quality is positively and significantly influencing customer loyalty. For every unit increase in service quality, a 0.536 unit increase in overall customer loyalty is predicted. Thus, service quality is a significant antecedent of customer loyalty in e-banking services. Hence, hypothesis ‘H2’ that service quality has a direct positive effect on customer loyalty is accepted.

Figure 3: Hypothesis H2 –Service quality as Predictor of Customer Loyalty

Relationship between Customer Loyalty, Customer Satisfaction and Service Quality

Test of H3: Customer satisfaction has an indirect positive effect on Customer Loyalty through service quality which acts as a mediator in the Customer Satisfaction– Customer Loyalty relationship.

Given that service quality and customer satisfaction are significant antecedents of customer loyalty individually, there is a need to test both these antecedents together on customer loyalty for which multiple linear regression has been employed and results are presented in table 55 and 56 respectively.
Table 5 - Coefficients - Service Quality and Customer Satisfaction as Antecedents of Customer Loyalty

<table>
<thead>
<tr>
<th>Attributes</th>
<th>Regression Coefficients</th>
<th>t-value</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unstandardized</td>
<td>Standardized</td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
<td>1.26</td>
<td>2.68</td>
<td>0.01</td>
</tr>
<tr>
<td>Customer Satisfaction</td>
<td>0.602**</td>
<td>0.57</td>
<td>5.80</td>
</tr>
<tr>
<td>Service Quality</td>
<td>0.06</td>
<td>0.04</td>
<td>0.43</td>
</tr>
</tbody>
</table>

Note: ** Significance at one percent level

Table 6: Model Statistics – Service Quality and Customer Satisfaction as Antecedents of Customer Loyalty

<table>
<thead>
<tr>
<th>Model Statistic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>R</td>
<td>0.59</td>
</tr>
<tr>
<td>R Square</td>
<td>0.35</td>
</tr>
<tr>
<td>Adjusted R Square</td>
<td>0.34</td>
</tr>
<tr>
<td>Std. Error of the Estimate</td>
<td>0.67</td>
</tr>
<tr>
<td>F-Value</td>
<td>27.76**</td>
</tr>
</tbody>
</table>

Note: ** Significance at one percent level

The results of model coefficients show that customer satisfaction is positively and significantly influencing customer loyalty. For every unit increase in customer satisfaction, a 0.602 unit increase in overall customer loyalty is predicted. However, service quality which was a significant lone predictor earlier loses its significance in the presence of customer satisfaction as shown in Figure 4.

![Figure 4: Service Quality and Satisfaction as Direct Predictors of Customer Loyalty](image)
This indicates that while customer satisfaction has a significant direct effect on customer loyalty, service quality cannot have significant a direct effect on customer loyalty. The next step is to analyze the correlation among the three variables.

**Correlation Analysis:**

The correlation coefficients have been presented in table 57 which shows that there is a significant positive correlation between the two predictors i.e. service quality and customer satisfaction.

**Table 7: The Correlation among Customer Loyalty, Satisfaction and Service Quality**

<table>
<thead>
<tr>
<th>Pearson Correlation Coefficient (r)</th>
<th>Customer Loyalty</th>
<th>Service Quality</th>
<th>Customer Satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer Loyalty</td>
<td>1.00</td>
<td>.371**</td>
<td>.591**</td>
</tr>
<tr>
<td>Service Quality</td>
<td>.371**</td>
<td>1.00</td>
<td>.581**</td>
</tr>
<tr>
<td>Customer Satisfaction</td>
<td>.591**</td>
<td>.581**</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Note: ** Correlation is significant at the 0.01 level

Thus, the presence of both the predictors leads to insignificance of service quality which had a lesser effect on customer loyalty directly. Since, service quality has turned an insignificant predictor of customer loyalty in the presence of customer satisfaction; it implies that customer satisfaction is completely mediating the relationship between service quality and customer loyalty.

Thus, the hypothesis ‘H3’ that service quality is the mediator in customer satisfaction – customer loyalty relationship has been rejected.

**Testing the Effect of Service Quality on Customer Satisfaction**

Since service quality has an insignificant direct effect on customer loyalty, this relationship will no longer exist. Instead, the direct effect of service quality on customer satisfaction is being tested. For this, a simple linear regression has been employed and results have been presented in table 58 and 59.

**Table 8: Coefficients - Service Quality as an Antecedent of Customer Satisfaction**

<table>
<thead>
<tr>
<th>Attributes</th>
<th>Regression Coefficients</th>
<th>t-value</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unstandardized</td>
<td>Standardized</td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
<td>1.20</td>
<td>2.81</td>
<td>0.01</td>
</tr>
<tr>
<td>Service Quality</td>
<td>0.79**</td>
<td>0.58</td>
<td>7.28</td>
</tr>
</tbody>
</table>
Thus, service quality has a significant direct effect on customer satisfaction indicated by the model statistics (R Square – 0.34 and significant F-value – 53.06) showing a good model fit.

The significant relationships between three variables have been presented in Figure 5.

### Table 9: Model Statistics – Satisfaction Service Quality as an Antecedent of Service Quality Customer Satisfaction

<table>
<thead>
<tr>
<th>Model Statistic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>R</td>
<td>0.58</td>
</tr>
<tr>
<td>R Square</td>
<td>0.34</td>
</tr>
<tr>
<td>Adjusted R Square</td>
<td>0.33</td>
</tr>
<tr>
<td>Std. Error of the Estimate</td>
<td>0.64</td>
</tr>
<tr>
<td>F-Value</td>
<td>53.06**</td>
</tr>
</tbody>
</table>

Figure 5: **Significant Relationships between Service Quality, Customer Satisfaction and Customer Loyalty**

Based on the statistical results from all the data analysis carried out, the following inferences can be derived.

- Service Quality turns an insignificant predictor of Customer Loyalty in the presence of Customer Satisfaction as another predictor.
- Customer Satisfaction and Service quality are significantly and positively correlated.
- Service Quality has a direct positive effect on Customer Satisfaction.
As per above inference, Service quality has an indirect effect on customer loyalty through customer satisfaction forming a complete mediation model.

![Diagram of Mediation Model]

**Figure 6: Complete Mediation Model Derived Based on Empirical Results**

Thus, contradictory to the framed hypothesis ‘H3’ which has been rejected, the result shows that customer satisfaction acts as a complete mediator in service quality – loyalty relationship.

**CONCLUSION**

The following important conclusion regarding the antecedents of customer loyalty is derived which is the central idea of this research:

- Both service quality and customer satisfaction are important antecedents of Customer Loyalty.
- Customer Loyalty is positively and indirectly influenced by the Service quality through Customer satisfaction.
- Customer Satisfaction acts as a complete mediator in Service quality– Customer Loyalty relationship.

This mediating role of customer satisfaction is in alignment with the earlier traditional view of the researchers who suggested that customer satisfaction with a given experience would lead to an overall evaluation or attitude about service quality over time (Parasuraman et al., 1988) which eventually leads to behavioural intentions and loyalty. This study was limited to examine the relationships among customer loyalty, customer satisfaction and service quality. In further study, other significant variables such as perceived value and brand image may be added to the hypothesized research model. This study was focused on e-banking services. In the future, it is advised that other e-services may be incorporated in the study to gain better generalization of results.

**References**


Mediating Effects of Customer Satisfaction in the Relationship Between ...


