An Empirical Investigation of E banking Service Quality Customer Trust and Customer Loyalty of Pakistani Banks

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ARTICLE DETAILS

ABSTRACT

Purpose: Technological evolution has transformed businesses in the new era. Modern paradigms shift towards adoption of gadgets that has changed the methods of providing services to clients. Banks provided themselves with the current contrivances to offer creative and dynamic types of assistance to customers. Banks has now offered “advanced and digital banking” through e-banking services to facilitate their customers. However, there are several e-banking services depends on e-service quality that affects loyalty of their customers. The main purpose of the current study is to measure the direct relationship of e-banking service quality on customer loyalty and also indirect effect of trust as mediating variable.

Design/Methodology/Approach: The data was collected from 250 clients using questionnaire from top five commercialized banks of Pakistan. Convenient sampling technique was used to collect the information. PLS-SEM was employed to statistically test the data.

Findings: This study found significant direct effect of e-banking service quality through its three dimensions “reliability, website design and security” on customer loyalty. In addition, the results also supported the mediation of three dimensions of e-banking service quality with customer loyalty.

Implications/Originality/Value: All three dimensions increase the customer loyalty and trust played important role it this mechanism.

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Introduction

Evolution of technology has shifted today’s business in the new era. The new technology has transformed the methods of providing service (Pierri & Timmer, 2021). Modern technology provides e-banking access to people in all over the world. In recent era, clients want ease in doing businesses and making e-banking transactions. Banks are doing their best to facilitate people by providing assistance through Electronic
Banking (e-banking) services (Mamadiyarov, 2020). Now, electric gadgets or services are the main source by which people can use e-banking. By using computers, laptops, and other devices, consumers can make transactions without going to bank personally and save their time (Kumar & Gupta, 2020). No doubt, at initial level e-banking was just the source of information, but now e-banking is transformed into the complete banks. Customer loyalty plays a prominent role in every type of business like banks; it connects people with organization and builds trust between customer and organization. At initial level, customer loyalty was considered only for developing association with the consumers but now it has lot of benefits for organizations. Since the consumers’ perspective, they are aware of technology benefits along with risks associated with new technology. E-banking influences the individuals in their daily lives, they can do all the banking transactions from any part of the world. According to the State Bank of Pakistan (SBP) report, published in 2019, total payments processed through banking channels were 1337.6 million transactions (valued at Rs. 601.9 billion) in which (64%) transactions were through online transaction. In developing economies, consumers are reluctant to adopt e-banking services because of low trust level and customer loyalty. It is very important to get the consumer perspective around the usage of e-banking as it helps the bankers and the top management in making suitable strategies to make it successful. It has been investigated about the physical relation of the customers with business and the result of their behavior in past studies such as the comfort and loyalty of the customers in traditional and digital finance respectively. The criteria of consumers to perceive value of service vary from context to context and customer expectations and perception to perceive service quality can vary in both e-banking and physical banking. Moreover, there is a limited study on the effect of “e-banking service quality” on behavior results like as customer satisfaction, customer objective to use e-banking services, customer loyalty and retention (Wewege et al., 2020). Due to the lack of physical contact with banks it creates deficiency of trust in service delivery People do not say positive words towards the e-banking which creates the lack of trust between people. It is necessary to provide premium services to customers to persuade and retain with e-banking. Therefore, this research intends to determine the impact of “e-banking services quality” practices on consumer’s trust and consumer loyalty. Customers’ trust played a crucial role in building confidence to involve in e-banking services quality offered by the banks. Build trust in turn create customer loyalty to involve in banking services for longer period of time. Therefore, customer trust plays important role between e-banking services quality and customer loyalty. Thus, the current study measured trust as mediator to enhance the customer loyalty with e-banking service quality.

**Literature Review**

In the current era, all banks are providing digital banking explanations and they are providing best services to attain competitive edge and improve organizational performance. E-service quality is explained as customer’s general assessment and evaluation of the services quality of consumers which is provided through e-banking (Haq & Awan, 2020).

**E-Banking Services Quality**

Service Quality drives customer happiness and loyalty towards bank (Haq & Awan, 2020). E-banking service quality is explained through its three facets namely “Website Design, Reliability, and security”. E-banking service through its super quality facilitates business within few seconds, this in turn increase the reliability and speed. Such speedy transaction helps business individuals in accomplishing their business needs, and hence it increase their performance. The fast and trustworthy mechanism is an important features of e-banking that attract more customer and exiting customer loyalty help to gain potential customers (Sleimi & Musleh, 2020). Three dimensions of e-service quality are:

- Reliability is the one of the crucial facet of e-banking service quality. It is the ability of the service provider to deliver on the assured services in a consistent and correct manner. Reliability plays a significant role in digital banking performance. If the services provided to the customers are errors free and meet the requirements of the customers) then it indicates the positive impact of e-banking in the customer’s mind (Islam et al., 2020). A positive response from the customers’ side depends upon the reliability of e-banking.

- Service Quality “Timely transaction and accurate billing system” are the main elements that attract the customers and keep them in touch with the e-banking services providers (EBSQ). Past study found a positive and significant association reliability as a measure of e-banking service quality has a significantly positive impact on e-banking customer intention (Khatoon et al., 2020). Based on above discussion, the
following hypothesis is proposed:

**H1:** “Reliability of e-banking services has a significant positive impact on customer loyalty”

The extent to which customers believe the site is secure and that personal information shared on the platform is kept private. Security also an important factor in e-banking service quality (EBSQ) as customers are concerned about the personal information, they are providing on the website is safe). According to Hong Kong and Shanghai Banking Corporation Limited (HSBC) many users stop using e-banking services when the cyber bank site was attacked so it is mandatory to ensure the safety and confidentiality of customers. As there is no physical interaction in e-banking, therefore, consumers are most anxious about the monetary transactions while using the website when e-banking services providers ensure the safety of customers’ personal data then they are more willing to employ these services instead of using offline (Garg et al., 2021). Based on above discussion, the following hypothesis is proposed: **H2:** “Security of e-banking services has a significant impact on customer loyalty.”

Researchers recommend that “it is essential for the victory of an online organization to evaluate the standard of website they offering to compete in the industry and also to upgrade their reputation in operational system (Pal Kapoor & Vij, 2020). Banks must pay attention to the appearance of their websites. According to AI take on website design as significant factor of their research and more stated that it grants more faithfulness of customers. It indicates that more users are happy with e-banking, the more positive connection they will build with banks and eventually users will be more loyal with them. Based on above discussion, the following hypothesis is proposed:

**H3:** “Web-Site Design of e-banking services has a positive impact on customer loyalty.”

**H4:** “Customer Trust has positive impact on Customer Loyalty”

Mediation effect of trust in e-banking

In e-banking facilities customers didn’t easily trust online services until or unless they get some definite reason to use this e-banking service which provides the ease and fulfill their basic requirement of the customer. When customers start enjoying e-services then the number of e-service users will also increase as their trust on e-banking also increase (Trivedi & Yadav, 2020). When e-banking suppliers come up with a reliable e-banking policy, strong participants perceive more trust and loyalty with banks than weak participants users do. When strong participants assess the precision and authenticity of the assistance provided, it builds loyalty when banks fulfill their word of honor. Trust raised users’ long-term loyalty to e-banking suppliers, by that increasing adherence of service providers (Kaur et al., 2021).

Trust plays significant role in increasing customer loyalty and builds a long-lasting association between users and service providers. If the clients are happy with the services, they are getting they become a loyal customer to the company. Customers will incline toward e-banking is secure if it is encrypted performs an important role on trust in e-banking likewise on time e-banking’s and accurate answer increase trust of the clients on e-banking is becoming more popular, and customers’ trust in it is growing. “Website design” also plays significant role in gaining client’s trust as it involves presentation, appropriate content, precise data, consistent improvement of information, and quick dealings these all factors strengthen customer trust in banking service providers (Bjørnstad & Ulleberg, 2021).

Based on above discussion, the following hypothesis is proposed:

**H5:** “Trust mediates the relationship between Reliability and Loyalty”

**H6:** “Trust mediates the relationship between Security and Loyalty”

**H7:** “Trust mediates the relationship between Website design and Loyalty”

**Methodology**

This research was conducted in Pakistan as are facing major e banking issues in adoption of e banking. Clients of five major Pakistani banks who use e-banking services are: “Allied bank, United bank, Muslim Commercial Bank, Bank Alfalah, Habib bank” operating in South Punjab. This study was carried out during second wave of Covid-19 and gather information through distributing or sending questionnaire through email as well as personally (Hair Jr et al., 2020). The questionnaire used in this study comprised of two sections. First section consisted of demographic information about the respondents. Second section consisted of dependent and independent variables that were adopted from well-established previous studies. The current study used “Five-point Likert scale” in this research non probability (purposive) sampling technique is used. The sample size was selected based on the rule of thumb i.e. 250 samples
that is sufficient to get valid outcome (Hilkenmeier et al., 2020).

**Data Analysis**

Descriptive results of the respondents were: regarding gender, out of 250 respondents 21.6% were females while 78.4% were male. The majority of the respondents, 41.9 percent, are between the ages of 20 and 26, accounting for 38.4 percent of the total are in the fraction of 26-32 and 18.7% are in fraction of 33 and above years. Education status showed that larger part of the respondents are studying in the bachelor program 60.6% while in the master program There are some 54.8% had 1-3 months of experience, 29.5 percent had 4-6 months of e-learning experience, whereas 13.7 percent had more than 6 months of e-learning experience program.

**Measurement Model Results**

In the current study, sixteen items are used to assess five constructs to measure the outer model “measurement model” results. "Confirmatory Composite Analysis (CAA)" is carried out through fractional smallest modelling of structural equations utilizing PLS-SEM software (Hair et al., 2020) for the estimation of the model as displayed in the Figure 2. The constructs investigated in the current study are reflective, as evidenced through writings and reflective exercises estimation. Internal consistency is measured by "Composite Reliability (CR)", the normal normality of validity is through "Average Variance Extracted (AVE)" While Fornell and Larcker provide discriminatory legitimacy technique (Fornell & Larcker, 1981).

**Assessment of Measurement model**

![Figure 1](image)

The results of “measurement model” showed in measurement model table obtained through running Smart-PLS algorithm, the item loadings of all constructs are greater than 0.60, indicated the reliability, the values for CR are greater than 0.70 demonstrated the internal consistency of the model. Furthermore, each construct's AVE is greater than 0.50, represented convergent validity of the model.

**Measurement Model Results**

<table>
<thead>
<tr>
<th>Construct</th>
<th>Items</th>
<th>Loadings</th>
<th>CR</th>
<th>AVE</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Service Quality Dimensions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reliability</td>
<td>RL1</td>
<td>0.723</td>
<td>0.891</td>
<td>0.673</td>
<td>0.837</td>
</tr>
<tr>
<td></td>
<td>RL2</td>
<td>0.830</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RL3</td>
<td>0.661</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
In the current study, discriminant validity is calculated using Fornell and Larcker's criteria, which is the most widely used method for determining how different models are from one another. According to Fornell and Larcker (1981), the AVE's foundation is in a slanting position, and it should be higher than other structures connecting values. In addition, all diagonal values are larger than the correlation values in the table mentioned below, indicating that the model is extremely valid.

### Criterion of Fornell and Larcker

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Customer Loyalty</th>
<th>Customer Trust</th>
<th>Reliability</th>
<th>Security</th>
<th>Website Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer Loyalty</td>
<td>0.825</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer Trust</td>
<td>0.647</td>
<td>0.825</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reliability</td>
<td>0.649</td>
<td>0.815</td>
<td>0.820</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Security</td>
<td>0.551</td>
<td>0.752</td>
<td>0.810</td>
<td>0.857</td>
<td></td>
</tr>
<tr>
<td>Website Design</td>
<td>0.677</td>
<td>0.790</td>
<td>0.811</td>
<td>0.791</td>
<td>0.811</td>
</tr>
</tbody>
</table>

### Structural Model
Structural results Table reported the results of hypothesized direct relationships of e-banking service quality three dimensions with customer trust and customer loyalty. In H1 proposed a positive relationship between reliability and customer trust that means a notably positive relation exists between reliability and trust as shown by the results where (β= 0.438, t-value= 5.402, p-value= 0.000) and the hypothesis is support with significant positive association. Similarly, H2 proposed a positive relationship between security and customer trust. The result supported a significant positive relationship with the values (β= 0.143, t-value= 2.056, p-value= 0.000). H3 proposed a significant positive relationship between website design and customer trust. The results obtained supported a significant positive association between the variables (β= 0.322, t-value= 4.188, p-value= 0.000). H4 proposed a significant positive relationship between customer trust and customer loyalty. The obtained result supported the direct significant positive association between customer trust and customer loyalty with (β= 0.647, t-value= 9.677, p-value= 0.000).

The value of R² values 0.419 and 0.719 for exogenous variables customer trust and customer loyalty are greater than Cohen's recommended value of 0.27 that showed the significance of the current model. The value of Q² of service quality dimensions are above zero that showed, the model can be used to predict the future relevance.

Direct Relationships

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Relationships</th>
<th>Beta-Coefficient</th>
<th>t-value</th>
<th>p-values</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>RL -&gt; TR</td>
<td>0.438</td>
<td>5.402</td>
<td>0.000</td>
<td>Supported</td>
</tr>
<tr>
<td>H2</td>
<td>SC -&gt; TR</td>
<td>0.143</td>
<td>2.056</td>
<td>0.040</td>
<td>Supported</td>
</tr>
<tr>
<td>H3</td>
<td>WD -&gt; TR</td>
<td>0.322</td>
<td>4.188</td>
<td>0.000</td>
<td>Supported</td>
</tr>
<tr>
<td>H4</td>
<td>TR -&gt; LO</td>
<td>0.647</td>
<td>9.677</td>
<td>0.000</td>
<td>Supported</td>
</tr>
</tbody>
</table>

Mediation Analysis

Current study used indirect effects to report the mediation analysis as suggested by Preacher & Hayes, (2004). H5 proposed the mediation of customer trust between security and customer loyalty. The result supported the partial mediation of customer trust on e-banking as direct and indirect both are significant and positive with (β= 0.283, t-value= 4.130, p-value= 0.000, Low limit= 0.162, Upper limit= 0.419). H6 proposed the mediation of customer trust between security and customer loyalty. The result supported the partial mediation of customer trust as proposed in hypotheses 6 with value (β= 0.092, t-value= 2.124, p-value=0.000, Lower limit= -0.003, Upper limit= 0.168). Similarly, H7 proposed mediation of customer trust between web site design and customer loyalty. The result supported the mediation of customer trust between web site design and customer loyalty with values (β= 0.208, t-value= 3.768, p-value= 0.034, Lower limit= 0.111, Upper limit= 0.318). The indirect effect LL= 2.50% and UL=97.5% of H5, H6, and H7 is not zero hence proving the mediation effect.

Indirect Effect Results

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Relationship</th>
<th>Beta-Coefficient</th>
<th>t-value</th>
<th>p-values</th>
<th>2.50%</th>
<th>97.50%</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>H5</td>
<td>RL -&gt; TR -&gt; LO</td>
<td>0.283</td>
<td>4.130</td>
<td>0.000</td>
<td>0.162</td>
<td>0.419</td>
<td>Supported</td>
</tr>
<tr>
<td>H6</td>
<td>SC -&gt; TR -&gt; LO</td>
<td>0.092</td>
<td>2.124</td>
<td>0.000</td>
<td>-0.003</td>
<td>0.168</td>
<td>Supported</td>
</tr>
<tr>
<td>H7</td>
<td>WS-&gt; TR -&gt; LO</td>
<td>0.208</td>
<td>3.768</td>
<td>0.034</td>
<td>0.111</td>
<td>0.318</td>
<td>Supported</td>
</tr>
</tbody>
</table>

Discussion

The current study empirically tested H1, H2, and H3 that measured the direct relationship of e-banking service quality dimensions: “reliability, security, website design” with loyalty of customer using e-banking service facility. The study found a significant positive relationships of e-banking service quality dimensions with customer loyalty. The result indicated that reliability of e-banking site fundamentally affects trust of customers who use e-banking services through bank. The results also indicated that security of e-banking services essentially affects the trust of customers while utilizing their services via e-banking facilities. The direct effect of e-banking service quality dimensions “reliability, security, and web-site design” are in lined with the results of prior study (Reddy et al., 2020). H4 measured the direct effect of
customer trust with customer loyalty and found a significant positive association between the relationships. The H4 signified that customer that have trust on the bank are loyal to customers. Service quality of banks increase the trustworthiness and then their trust leads to increase in loyalty. Moreover, the current study also empirically examined H5, H6, and H7 that have empirically tested the indirect relationship of customer trust between the direct relationships proposed as H1, H2, and H3. The results of current research supported the direct and indirect (mediation) effects of customer trust as an important factor in the process of reliability, security and web site design and customer loyalty. The result supported the partial mediation of customer trust on e-banking services. The mediation or indirect effect of online customer trust is also synchronized with the result of previous study (Federal & Retrieved, 2021). There are absolute three indirect hypotheses that are associated with the facilitating impact of belief among various independent variables and trust of clients utilizing online banking services. Then, results showed that security of e-banking site affects the trust of clients utilizing benefactors’ e-banking facilities (Raza et al., 2020). The reliability and design features of web site also mediated with the trust that in turn increase the loyalty.

**Implications of Study and Suggestions for Future Research**

Current research takes various efforts. First, this research has investigated a model with mediation utilizing TAM Theory. The study employed a mediated model of trust and loyalty among e-banking consumers that has been empirically investigated by few studies in e-banking environment, especially in Pakistan. Present research contributed the facilitating effect of trust between website design, reliability, security and loyalty of customers using e-banking facilities. Next, the current research was conducted in Pakistan. Pakistan is the world's fifth most populous country, and there are various public sectors in Pakistan that provide e-learning services. Future studies can measure the model in other sector like hospital, other financial institutions with moderating and mediating variables. There is still need of further studies about e-learning in Pakistan's background to increase the generalizability of results that will more insights concerning e-learning in Pakistan's context.

**References**


