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The Role of E-Service Quality and System Efficiency in influencing Customer Satisfaction and Customer Loyalty - A case of Islamic Banking

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ABSTRACT

The current paper is intended to explore the critical role of the two independent variables, e-service quality and system efficiency in customer satisfaction and subsequently, customer loyalty in the Islamic banks working in Pakistan. Since the digital banking has grown up quite rapidly during the past decades, more reliance has been placed on mobile banking apps and web portals by the Islamic banks for providing their services, and hence, become critical determinants of customer experiences in this regard. The current study proposes that customer satisfaction mediates the impact of two independent variables mentioned above. This research has used a quantitative approach to research methodology, and data were gathered from clients of Islamic banks. In this regard, respondents were selected from the clients of Islamic banks operating Pakistan, using non-probability convenience sampling method. In the present study, a structured survey was carried out on the basis of valid scales; however, a sample size of 301 responses were collected, which gave a response rate of 60%. The data obtained were then analyzed using the Partial Least Squares Structural Equation Modeling (PLS-SEM) in SmartPLS, which followed a two-step method including measurement model and structural model assessments. The findings of this study are expected to provide valuable insights for Islamic banks regarding how improvements in e-service quality and system efficiency can enhance customer satisfaction and, in turn, strengthen customer loyalty. The study also contributes to the growing body of literature on digital banking and customer behavior within the context of the Islamic banking sector in Pakistan.

Introduction

The Role of E-service quality and system efficiency on customer satisfaction and customer loyalty in Islamic banks. Since the last two decades, a surge in the use of the internet has now introduced new means of trading and transactions such as e-commerce (Khan et al., 2023). Both the companies and customers have been facilitated in many aspects by this progress in technology, including the field of online banking (Anwarul et al., 2023). The internet is used in online banking to perform all the transactions, including the transfer of funds, payment of bills, and investments (Shabbir, 2017). Customers can avail these services through mobile banking applications and the desktop version as well. The elderly customers who are not very aware of online banking should be educated properly to address their concerns regarding online banking to increase the service quality. "Customer judgment and evaluation of the quality of online services offered by a bank is called online service quality," as referred to by (Hidayat & Idrus, 2023; Khan et al., 2023). In the future, these customers will be using the same mobile banking app or the bank website for transactions and other services.

The developing country of Pakistan is currently dealing with several challenges. In economic development, the banking sector has always played a crucial role (J. Hair & Alamer, 2022). As technology has advanced, many banks in recent years have shifted to electronic banking services to cut their cost, improve efficiency, and strengthen customer relationships. The State Bank of Pakistan (SBP) asserts that there is significant use of digital banking facilities by people in Pakistan due to their reliance on internet banking and mobile banking services for carrying out financial transactions. The constant development of payment channels in the form of electronic banking services has made it vital for service quality, efficiency, security, and reliability to become key factors in the determination of customer satisfaction and loyalty. The rise in the use of digital banking services by customers necessitates that the digital platforms used by Islamic banks should be efficient, safe, and easy to use (State Bank of Pakistan, 2024; Raza et al., 2020). Additionally, there is considerable growth in the Islamic banking sector in the recent past.

As Islamic principles stress transparent and ethical financial dealings, Islamic banks also operate under these laws, which totally prohibit interest (Riba) (Hidayat & Idrus, 2023). As there is a sudden increase in the use of online banking, Islamic banks have also started to invest in advanced online banking systems to meet the expectations of their customers and to compete with conventional banks. The customers of the Islamic banks expect a secure system, efficient banking, and high-quality online banking services apart from the Shariah compliance aspect (Hidayat & Idrus, 2023). The study tries to understand the users in Pakistan who accept and use online banking services. With the fast-paced acceptance of digitized services in the industrial cities, we are considering Pakistan as our area of investigation. In this research, customers of the Islamic banking industry are considered. Data for the empirical analysis have been collected from the customers of the Islamic banks operating Pakistan. The swift adaptation of digital banking services has led to the changing expectations of customers in the Islamic banking industry. Customers now expect digital banking platforms that provide them with secure, efficient, reliable, and convenient means to complete their transactions. The quality of e-services is related to the overall excellence of online banking services regarding usability, responsiveness, reliability, and security while system efficiency implies the speed, accuracy, and effectiveness of transaction processing in digital banking (Chen et al., 2012). Both of these variables are important for the customer's satisfaction, which eventually leads to customer loyalty. While many prior studies have analyzed the effects of the quality of e-services on customers' behavior in the context of traditional banking (Raza et al., 2020), there has been very little empirical analysis of the impact of the combination of the quality of e-services and system efficiency on customer satisfaction and customer loyalty in the

Islamic banking industry (Hidayat & Idrus, 2023). Moreover, the customer behavior in Islamic banking differs from the traditional one since customers consider not only efficiency of service provision but also compliance with Shariah (Mohsin Butt & Aftab, 2013).

The quick development of digital services in banking after recent technological advancements makes it necessary to study the influence of e-service quality and system efficiency on customer satisfaction and loyalty in Shariah-compliant institutions.

In order to conduct research in the field of stated problem, the following research objectives should be achieved by the current study.

- To investigate the influence of e-service quality on customer satisfaction in the Islamic banking industry.
- To investigate the influence of system efficiency on customer satisfaction in the Islamic banking industry.
- To investigate the influence of e-service quality on customer loyalty in the Islamic banking industry.
- To investigate the influence of system efficiency on customer loyalty in the Islamic banking industry.
- To investigate the mediating influence of customer satisfaction on the association between e-service quality and customer loyalty.
- To investigate the mediating influence of customer satisfaction on the association between system efficiency and customer loyalty.

The results of this study will be useful for Islamic banks as they will know which factors of e-service quality and system efficiency have the strong impact on customer satisfaction and loyalty.

Literature Review

This is because the emergence of electronic banking has transformed the customer-bank relationship in a new manner in terms of mobile applications and other online facilities. In the local banking environment of Pakistan, there is a demand for more efficient, reliable, and secure online facilities so as to facilitate the transactions of customers easily. It has been seen through previous studies that ESQ and system efficiency act as key determinants of CS and loyalty in banking and CS helps to relate service quality and loyalty. E-service quality (E-SQ) refers to the scope to which a digital platform enables efficient and effective completion of banking transactions and service delivery (Parasuraman et al., 2005). Parasuraman et al. (2005) developed the E-S-QUAL scale, a twenty-two-item instrument organized around four dimensions: efficiency, fulfillment, system accessibility, and privacy, which has become the standard measurement tool in digital banking research. The scale captures both the functional and protective aspects of electronic services that customers evaluate when interacting with a bank's digital platform. In the Pakistani banking context, Raza et al. (2020) surveyed 300 bank customers and confirmed through PLS-SEM analysis that all e-service quality dimensions had a significant positive effect on e-customer loyalty, operating through customer satisfaction. Khan et al. (2023) further established, using bootstrapping mediation on Pakistani online banking customers, that e-service quality had a significant direct positive effect on e-loyalty. More recently, Patel and Siddiqui (2024) conducted a comparative study of internet banking customers in India and Pakistan, finding through PLS-SEM on e-service quality dimensions that reliability, responsiveness, accessibility, ease of use, and security all had a significant positive relationship with e-customer loyalty. This shows that customers perceiving quality in the bank's digital platform are more prone to reuse the platform

and make positive referrals; hence, e-service quality is an important source of retention in Islamic banks.

H1: E-service quality has a positive effect on customer loyalty in the Islamic banking industry.

System efficiency measures the efficiency of the technical aspect of a digital bank, which covers such aspects as transaction processing speed, ease of navigation, platform stability, and lack of errors in the system (Parasuraman et al., 2005). Conceptually, system efficiency is narrower in scope than the general ESQ because it focuses on the efficiency of a system in use. According to Abror et al. (2020), service quality, including system performance, had a significant positive impact on CS among customers of an Islamic bank in West Sumatra, Indonesia, when tested with the help of covariance-based SEM. In their study of Pakistani digital banking, Raza et al. (2020) found that the efficiency dimension of digital banking websites was one of those dimensions that significantly predicted loyalty via satisfaction. Established within the context of South African e-banking, ESQ, including its system efficiency components, had a considerable positive impact on CL via satisfaction. When a system processes all transactions in time, it is seen as reliable and competent, which is especially important for business customers.

H2: System efficiency has a positive effect on customer loyalty in the Islamic banking industry.

Customer satisfaction in banking is defined as the inclusive evaluative judgment customers form regarding the degree to which their service experience meets or exceeds expectations. In the digital banking environment, this evaluation is primarily shaped by the quality of the electronic service interface (Chauhan et al., 2022). The positive relationship between e-service quality and CS is one of the most consistently replicated findings in banking research. Raza et al. (2020) demonstrated through their Pakistan-based study that all e-service quality dimensions user-friendliness, website efficiency, personal need fulfillment, and site organization had a significant positive influence on CS. Within Islamic banking specifically, Ahmed et al. (2021) examined 334 customers of Islamic banks in Bangladesh and found that Shariah-compliant service quality positively and significantly influenced CS. Suhartanto et al. (2019) similarly confirmed in Indonesian Islamic banking that service quality strengthened customer satisfaction, establishing the quality-satisfaction link as the most robust pathway in Islamic financial services. Furthermore, Gazi et al. (2024) evaluated 280 online banking customers in Bangladesh following the COVID-19 pandemic and found that online banking service quality dimensions positively and significantly predicted CS, confirming the robustness of this relationship across different post-pandemic digital banking contexts.

H3: E-service quality has a positive effect on customer satisfaction in the Islamic banking industry.

In addition to composite e-service quality, system efficiency denotes the performance of the banking digital system including speed of transactions, ease of use, system stability, and accessibility. Previous literature suggests that an efficient digital banking system contributes to improved CS as clients prefer digital banking systems that are reliable, fast, and mistake-free. Khan et al. (2023b) noted that dimensions of system performance had a positive impact on e-satisfaction among online banking services. Likewise, Kazmi and Fatima (2024) noted that system-specific characteristics such as responsiveness and website efficiency positively influenced customer satisfaction among Pakistani bank customers.

Nevertheless, there is a possibility that system efficiency may not be a determinant of CS because of varying banking context and customer requirements. In certain cases, customers might see system efficiency as a basic necessity without contributing to customer satisfaction in any way. In the case of Islamic banking, customers may value factors such as trust, security, Shariah

compliance, and overall reliability more than system efficiency. For this reason, further research needs to be conducted to investigate the impact of system efficiency on customer satisfaction among Islamic bank customers.

H4: System efficiency positively affects customer satisfaction in the Islamic banking industry.

The concept of customer satisfaction can be explained in terms of how the customer perceives the gap between what was expected and what he/she receives. Customer satisfaction arises when expectations are fulfilled or exceeded. The clients are thus expected to continue utilizing the services, make recommendations about them, and avoid changing their banking institutions. This implies that customer satisfaction can act as a mediator between the quality of e-service and customer loyalty. Studies carried out between 2020 and 2026 have confirmed this hypothesis. According to Raza et al. (2020), satisfaction acts as the mediator in relation between service quality and customer loyalty in Pakistani digital banking. According to Khan et al. (2023), satisfaction is the full mediator in relation between e-service quality and e-loyalty in Islamic banks. In addition, Kazmi & Fatima (2024) have established that satisfaction mediates the relationship between service quality and customer loyalty in Pakistani banks.

H5a: Customer satisfaction significantly mediates the relationship between e-service quality and customer loyalty in the Islamic banking industry.

With efficient operation of a digital banking system, users experience positive micro-experiences in terms of speedy transaction completion, easy navigation, and accessibility that cumulatively contribute to their overall satisfaction decision. This satisfaction, rather than the actual efficiency of the operation of digital banking systems, influences the commitment decisions that lead to customer loyalty. Mediation effect has been established in Indonesian Islamic banking where customer satisfaction was found to be a significant mediator for the impact of service quality, which includes its technical efficiency dimensions, on CL. In the structural model, the presence of indirect effect via satisfaction made the direct effect insignificant, showing full mediation effect. Similar mediation effect was also noted in Pakistan where e-satisfaction fully mediated the relationship between e-service quality and e-loyalty (Khan et al., 2023).

H5b: Customer satisfaction significantly mediates the relationship between system efficiency and customer loyalty in the Islamic banking industry.

It is evident from the research literature that there exists a positive correlation between customer satisfaction and customer loyalty, and it takes importance in the Islamic banking where the customers select the bank on the basis of similar religious values. It is quite clear that customer loyalty in banking sector is defined as behavioral commitment towards using the same bank with positive attitude towards recommending it to others. The literature review through several pieces of research between the year 2020 and 2025 suggests that CS plays important role in creating customer loyalty in Islamic banking institutions. According to Suhartanto et al. (2019), the researchers have analyzed the impact of CS on CL in 412 customers of Indonesian Islamic banks using SEM and identified that CS positively influences CL. Ahmed et al. (2021) proved that in Shariah compliant banks, satisfaction with service quality and values results in increased loyalty. Satisfaction becomes the stage when the service experience transforms into customer retention (Basten et al., 2025). Thus, it can be said that CS increases the possibility of CL in Islamic banks.

H6: Customer satisfaction positively influences customer loyalty in the Islamic banking industry.

While there has been some literature that has investigated e-service quality, system efficiency, customer satisfaction, and CL in Islamic banking, very little empirical evidence can be seen from

Pakistan. The existing studies were done in the context of Indonesia or Bangladesh, where the circumstances of banking and other factors are different from those prevailing in Pakistan. Furthermore, system efficiency was seldom analyzed independently with respect to e-service quality in any one empirical model. Hence, the current study aims at filling this research gap by analyzing both the constructs together along with customer satisfaction and CL.

Based on the above literature, the present study proposes the following theoretical framework. E-service quality and system efficiency are hypothesized to directly influence both customer satisfaction and customer loyalty. Customer satisfaction is additionally hypothesized to mediate the relationship between each independent variable and customer loyalty.

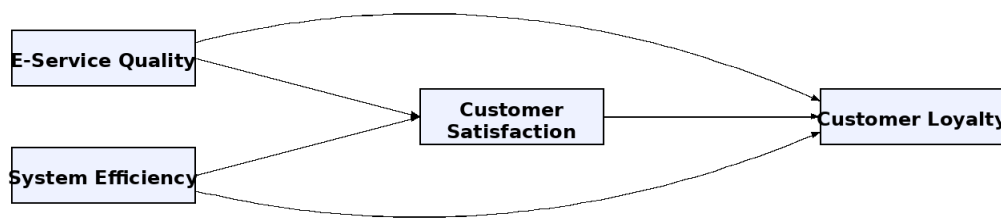


Figure 1: Theoretical Model

Research Methodology

The purpose of the current study is to investigate the effects of electronic service quality and system efficiency on customer satisfaction and customer loyalty (CL) among Islamic banks in Pakistan. The target population in the current research is the customers of the Islamic banks who use the digital banking services, comprising mobile banking and online banking services. Some of the target respondents include customers of the Islamic banks such as Meezan Bank, Bank Islami, and Dubai Islamic Bank. It is believed that the above-mentioned respondents will be ideal for this research due to the fact that they have direct experience about the quality of the digital banking services and system efficiency which affects their satisfaction and loyalty. Data was collected from clients using the services of Islamic banks in Pakistan, to make sure that there is some representation of banking clients in an urban area where the services of Islamic banking are prevalent. Non-probability sampling through convenience sampling was used for data collection purposes. The reason why this type of sampling was used is that it was needed that respondents have first-hand experience of the quality of e-services, system efficiency, customer satisfaction, and customer loyalty in their Islamic bank.

The sample size calculation was done based on Cochran's formula for large population. With a 95 percent confidence level, 5 percent margin of error and 50 percent response distribution, the minimum number of respondents required was 301. In order to accommodate the possibility of non-responses and partially completed questionnaires, approximately 500 questionnaires were distributed to the customers of Islamic banks. This sample size was considered to be sufficient for quantitative analysis and also fulfills the criteria set forth for SEM as it facilitates the analysis of both the direct relationships among the variables and mediating effect of customer satisfaction. Data was collected through the use of a structured questionnaire given to the customers of the selected Islamic banks. Complete responses only were used in the data analysis, thus the total number of 301 questionnaires was obtained. The research variables were measured by validated

measurement scales taken from existing literature to increase reliability and validity of the research instrument. The use of validated scales ensures more accurate, reliable, and comparable findings from various researches. All research constructs were measured on a 5-point Likert scale varying from 1 = Strongly Disagree to 5 = Strongly Agree. E-Service Quality (ESQ) as the independent variable was measured with the help of four items adopted from Malc et al. (2023). The measurement items are provided in Table A1.

The independent variable E-Service Quality (ESQ) is assessed through four validated measures that have been derived from Malc et al. (2023). These measurement items are elaborated in Appendix A. The System Efficiency (SE) was measured based on five validated items adapted from Raza et al. (2020). Measurement items used are elaborated in Appendix A. Customer Satisfaction (CS) was assessed as mediating variable through four validated items taken from Mwiya et al. (2022). These measurement items are elaborated in Appendix A. Customer Loyalty (CL) was used as the dependent variable and was measured through three validated measures adapted from Sasikumar and Sundaram (2023). Measurement items are elaborated in Appendix A.

Measurement model is employed to assess reliability and validity of constructs and their measurement items. For this reason, the researcher considers indicator reliability, internal consistency reliability, convergent validity, and discriminant validity. The former is tested based on the outer loadings of all the measurement items. According to J. Hair and Alamer (2022), loading values of at least 0.70 are acceptable. Those items whose values are lower should be carefully assessed and eliminated from the construct in case removal contributes to the improvement of reliability and validity of the latter.

Internal consistency reliability is tested on the basis of Cronbach's alpha and composite reliability. Values of both measures above 0.70 prove satisfactory reliability (J. F. Hair et al., 2020). Convergent validity is determined based on the Average Variance Extracted (AVE). At the same time, a value of at least 0.50 proves that the construct explains more variance than half in its indicators (J. F. Hair et al., 2017). Discriminant validity is determined by applying the Fornell-Larcker criterion, cross-loadings, and Heterotrait-Monotrait (HTMT) ratio. HTMT values below 0.85 or 0.90 prove adequate discriminant validity between constructs of the research (J. F. Hair et al., 2014).

The evaluation of the structural model is carried out after confirming the reliability and validity of the measurement model. The structural model analyzes the direct relationship among variables as well as the mediating effect of customer satisfaction (CS) on the relationships of study variables. Path coefficients, t-statistics, and p-values are assessed using the bootstrapping method in SmartPLS. The bootstrapping method with 5,000 resamples is used to test the statistical significance of the relationships that have been postulated. According to J. F. Hair et al. (2020), hypotheses with p-values less than 0.05 are said to be statistically significant.

Research findings

From the findings, it is evident that all constructs exhibit measurement reliability and convergent validity. The factor loadings range from 0.678 to 0.867, and all values are higher than the required 0.70 threshold, showing that the measurement items sufficiently capture the constructs they are supposed to measure. The Cronbach's alpha values range from 0.620 to 0.785, indicating that there is good internal consistency among the constructs. Likewise, the composite reliability values fall within the range of 0.808 to 0.876, and most of them exceed the 0.70 threshold, indicating measurement reliability of constructs. Furthermore, the Average Variance Extracted (AVE) values fall within the range of 0.536 to 0.752, all of which are higher than the required threshold of 0.50.

This implies that each construct captures more than half of the variance in its related indicators. These findings, therefore, prove that there is measurement reliability and convergent validity in the measurement model and that the model is suitable for structural model analysis.

Table 1: Convergent Validity

Constructs	Items	Factor loading	Alpha	CR	AVE
E-Service Quality	ESQ1	0.720	0.637	0.808	0.584
	ESQ2	0.803			
	ESQ3	0.767			
System Efficiency	SE1	0.678	0.709	0.822	0.536
	SE2	0.754			
	SE3	0.761			
	SE4	0.732			
Customer Satisfaction	SC1	0.857	0.785	0.876	0.536
	SC2	0.818			
	SC3	0.838			
Customer loyalty	CL1	0.867	0.620	0.858	0.752
	CL2	0.867			

The Fornell-Larcker test criterion has been applied to determine the discriminant validity of the measurement model. This criterion involves comparing the square root of the average variance extracted (AVE) with correlations between the respective construct and other constructs within the measurement model. According to this test criterion, discriminant validity occurs when the square root of the average variance extracted of a construct is larger than its maximum correlation with any of the constructs. As shown in Table 6 below, the values on the diagonals which represent the square root of the average variance extracted of Customer Retention (CR: 0.865), Customer Satisfaction (CS: 0.837), Electronic Service Quality (ESQ: 0.764), and System Efficiency (SE: 0.730) are greater than those of the off-diagonal correlations. From these results, it is evident that each construct is more strongly correlated with its measurement items compared to the other constructs in the measurement model. Thus, the results confirm satisfactory discriminant validity of all constructs.

Table 2: Fornell-Larcker Criterion

	CL	CS	ESQ	SE
CL	0.865			
CS	0.612	0.837		
ESQ	0.575	0.512	0.764	
SE	0.617	0.485	0.588	0.730

Cross-loadings analysis was used for assessing the discriminant validity of the proposed measurement model. Specifically, based on this method, the loading of every measurement item must be larger on the assigned latent variable compared to loadings on all other latent variables included in the measurement model. As shown in Table 7, the measurement indicators for Customer Retention (CR1, CR2), Customer Satisfaction (CS1-CS3), Electronic Service Quality (ESQ1-ESQ3), and System Efficiency (SE1-SE4) have the highest values of loading on the relevant latent variables. In addition, all indicators have high loading values above the recommended level of 0.70, which are larger than cross-loadings on the remaining latent variables. This means that every indicator is more highly correlated with the assigned latent variable

compared to all other latent variables in the measurement model. Thus, these results indicate that there is discriminant validity of the measurement model.

Table 3: Cross-Loading

	CL	CS	ESQ	SE
CL1	0.814	0.351	0.405	0.515
CL2	0.912	0.663	0.569	0.553
CS1	0.530	0.859	0.475	0.453
CS2	0.454	0.800	0.361	0.399
CS3	0.548	0.851	0.441	0.367
ESQ1	0.381	0.438	0.697	0.354
ESQ2	0.471	0.327	0.809	0.475
ESQ3	0.461	0.421	0.781	0.505
SE1	0.523	0.414	0.498	0.737
SE2	0.409	0.295	0.426	0.721
SE3	0.410	0.373	0.392	0.727
SE4	0.442	0.320	0.386	0.736

Heterotrait-Monotrait (HTMT) Ratio

The HTMT ratio was applied to test the discriminant validity of the measurement model. According to Table 9 below, the values of HTMT lie in the range of 0.249 to 0.885. It can be observed that most of the construct pairs have values below the conservative limit of 0.85, thus implying satisfactory discriminant validity. However, in the case of the relationship between Customer Loyalty (CL) and Customer Satisfaction (CS), the value of HTMT is 0.885, whereas in the case of the relationship between ESQ and CS, the value of HTMT is 0.860, both of which are above the conservative limit. Nevertheless, the result implies that the measurement model has satisfactory discriminant validity.

Table 4: Heterotrait-Monotrait Ratio

Constructs	CL	CS	ESQ	SE
CL				
CS	0.885			
ESQ	0.793	0.860		
SE	0.370	0.249	0.389	

Research Findings: Structural Model Path Analysis

The structural model was tested to examine the hypothesized relationships between ESQ, SE, CS, and CL. Path coefficient, t-statistic, and p-value for the variables were obtained using the bootstrapping method for 5,000 samples as shown in Table 10. It can be observed that Customer Satisfaction (CS) has a significant positive influence on Customer Loyalty (CL) ($\beta = 0.590$, $t = 5.906$, $p < 0.001$). Similarly, Electronic Service Quality (ESQ) has a significant positive influence on both Customer Loyalty (CL) ($\beta = 0.221$, $t = 2.129$, $p < 0.05$) and Customer Satisfaction (CS) ($\beta = 0.622$, $t = 8.572$, $p < 0.001$). On the contrary, there is no statistically significant effect of SE on CS ($\beta = 0.068$, $t = 0.772$, $p > 0.05$) indicating that the proposed hypothesis for this relationship is rejected.

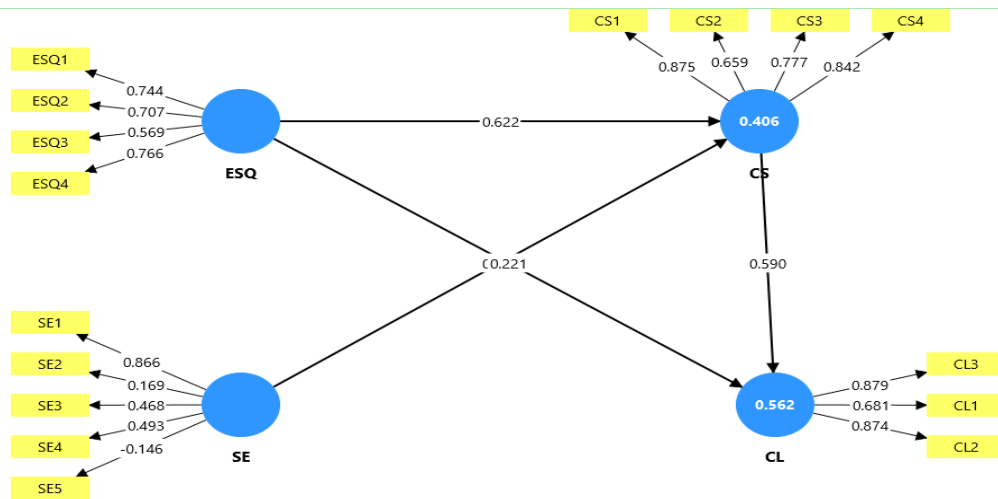


Figure 2 : Heterotrait-Monotrait (HTMT) Ratio

Table 5: Path Coefficients and Significance

Path	Original sample	T-Statistical	p-value	Results
CS-CL	0.590	5.906	0.000	Supported
ESQ-CL	0.221	2.2129	0.033	Supported
ESQ-CS	0.622	8.572	0.000	Supported
SE-CS	0.068	0.772	0.440	Not-supported
ESQ-CS-CL	0.876	3.310	0.003	Supported
SE-CS-CL	0.352	3.043	0.012	Supported

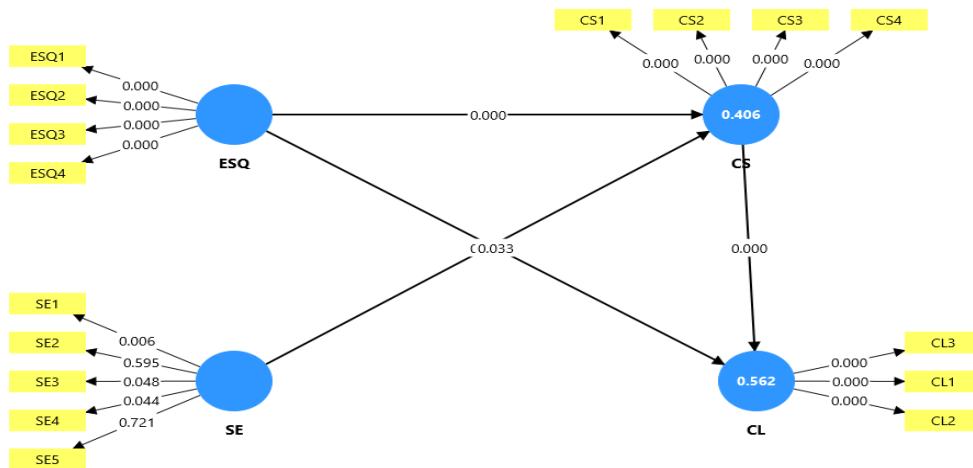


Figure 3 Path Coefficients and Significance

Discussions

The results of this study bring out important aspects of how Electronic Service Quality and System Efficiency affect Customer Satisfaction (CS) and Customer Loyalty (CL) in Islamic Banking industry in Pakistan. As per the results obtained from the structural model, it can be said that most

of the hypotheses made were accepted in this study, showing the increasing importance of electronic banking services for developing customer experiences and customer relationships.

It was found out that there exists a significant positive correlation between the Electronic Service Quality (ESQ) and the Customer Satisfaction (CS). This shows that the customer satisfaction levels increase when the Islamic banks provide digital banking services that are reliable, secure, responsive and usable. The users of electronic and mobile banking services expect a smooth transaction process, convenient access to banking services, information accuracy and secured environment. When these needs of customers are met, then their satisfaction levels increase significantly. This result is also in line with the previous researches on electronic banking services where it was found that good quality electronic services increase customers' satisfaction levels (Parasuraman et al., 2005).

The findings reveal the following additional information about the influence of Electronic Service Quality (ESQ) on Customer Loyalty (CL). As the positive path coefficient shows, clients that find the digital banking services reliable and efficient are more likely to stay loyal to their Islamic banks. From the viewpoint of digital banking services, it is generally preferable for the clients to be loyal to the banks which constantly offer convenient and reliable services to them. It corresponds to the research conducted by Suhartanto et al. (2019).

Moreover, CS was found to positively and strongly influence CL. The implication of this finding suggests that happy customers would want to maintain long-term relationships with their banks as well as refer their banking services to other people. Relationship marketing theory states that customer satisfaction is an important base for building loyalty of the customer and his intention to return (Oliver, 1999). In the context of Islamic banking industry, customer satisfaction plays a very important role because, along with the efficiency of services, there are many other variables that the customers consider in establishing long-term relationship with the bank.

On the contrary, the relation between SE and CS proved to be insignificant. This indicates that system efficiency is not enough for influencing customer satisfaction on its own. The reason why is that customers take efficient operation of the system as granted because they believe that a bank should provide such services for sure and do not find any value in it. Customers take for granted the fact that a system works well, operates efficiently, does its job fast and does not have any technical problems. Thus, efficiency does not have a significant impact on customer satisfaction unless it is combined with other service quality dimensions such as responsiveness, security, reliability, and effective customer support (Shabbir, 2017).

In summary, the results show that Electronic Service Quality (ESQ) is a crucial factor for enhancing both CS and CL in Islamic banks. It underlines the increasing significance of providing quality e-services because they greatly affect customers' attitudes and behavioral intention in Islamic banks of Pakistan (Hassan & Aliyu, 2018).

Theoretical Contribution

Former studies have mainly focused on conventional banking systems; however, limited research has explored these relationships within Islamic banking contexts in Pakistan. Therefore, the present study extends the understanding of digital banking behavior in Islamic financial institutions. The study also contributes theoretically by supporting relationship marketing theory and ESQ models. The significant relationship between ESQ and CS supports the argument that customers evaluate banking services not only through physical interactions but also through digital experiences (Banu et al., 2019). In addition, the insignificant relationship between system efficiency and CS contributes a new perspective to the literature. The finding suggests that

technical efficiency alone may not guarantee CS in Islamic banking environments. Customers may place greater importance on trust, security, reliability, and overall service quality rather than only system speed and technical performance.

Practical Implications

Several practical implications of this research are drawn from the research findings. Firstly, Islamic banks in Pakistan need to concentrate on the improvement of the quality of their electronic banking services as an effective means of customer satisfaction and loyalty increase. It is necessary to create user-friendly, secure, responsive and available to the customers online banking applications. Also, it is recommended to the Islamic banks to maintain technically stable and efficient systems as the customers' perception of system efficiency is an integral part of the quality of digital banking services. These suggestions are aligned with the State Bank of Pakistan's efforts aimed at improving digital financial services, payment systems, and security of the electronic banking in the country (State Bank of Pakistan, 2024). Moreover, as the e-service quality had a statistically significant positive impact on the customer loyalty, it is recommended to the Islamic banks to keep updating their mobile banking application and online transaction services. The statistically significant connection between customer satisfaction and customer loyalty implies that the banks have to pay attention to customer-centered strategies, including the promptness of responses and availability of information through reliable digital services.

Limitations and Future Directions

This study has several limitations that need to be acknowledged. Firstly, the data used in the research was obtained from only the clients of Islamic banks Pakistan. Thus, the results may not be generalizable in totality for clients in other cities in Pakistan. Further research can include obtaining data from other cities to increase the generalizability of the results. Secondly, the study used cross-sectional data, which only depict customer perceptions at a specific point in time. Thirdly, the study depends on self-reported responses, which may introduce a bias in the responses. Future studies should consider using longitudinal data and hence a larger sample size to improve the generalizability and reliability of the findings. Future researchers may also look at additional variables such as trust, perceived security, digital literacy, and observed usefulness to better understand customer behavior in Islamic digital banking environments. Comparative studies between Islamic and conventional banks may also provide a deeper insight into CS and loyalty in Pakistan's banking sector.

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Appendix A

Table A1: E-Service Quality Scale

Items	Questions	Sources
ESO1	It is easy to find the products you are looking for on the app.	(Malc et al., 2023)
ESQ2	The product descriptions on the app were accurate and helpful.	
ESQ3	The customer service team was responsive and helpful to my inquiries.	
ESQ4	The banking app has a secure payment process.	

Table A2: System Efficiency Scale

Items	Questions	Sources
SE1	This site makes it to find what I need.	(Raza et al., 2020)
SE2	It is easy to get anywhere on the website.	
SE3	I can complete a transaction quickly.	
SE4	Information at this site is well organized.	
SE5	It loads its pages fast.	

Table A3: Customer Satisfaction Scale

Items	Questions	Sources
CS1	I am satisfied with online banking service.	(Mwiya et al., 2022)
CS3	I am satisfied with the staff's help in accessing online.	
CS4	I made a good decision when I chose my bank for online services.	

Table A4: Customer Loyalty

Items	Questions	Sources
CL1	I intend to continue using this bank's online banking services.	(Saikumar & Sundaram, 2023)
CL2	I feel emotionally attached to this bank.	
CL3	I would recommend this bank's online banking services to others.	