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RESEARCH PAPER

Impact of E-Banking Services on the Use of Technology in Context of Islamic Banks in Pakistan

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ABSTRACT

This study's objective was to investigate and ascertain the impact of electronic banking services on the use of technology by customers of Islamic banks in Pakistan. The Islamic banking system (IB) initially emerged in the global financial scenario in the 1970s. Over the time the SBP was asked to design a plan for the advancement of Islamic-banking in Pakistan. As a result, Al Meezan Investment Bank known as Meezan Bank received its 1st license as an Islamic commercial bank from the SBP in 2002. Moreover, in order to collect the data about 221 Islamic Bank's, customers were selected from MCB Islamic Bank, Al-Baraka Bank, Meezan Bank, Bank Islami, and Dubai Islamic Bank of Pakistan as a sample and five-point Likert scale questionnaire was employed as a measuring instrument. Finally, the data was analyzed using SPSS 26 (Statistical Package for the Social Sciences) software. After applying the necessary data analysis and testing of hypotheses, it was found that all factors, like perceived ease of use, performance expectancy, security & privacy, and social influence, were significantly exaggerated by the utilization of electronic banking technology by Pakistani Islamic banks. Therefore, from the results of this study it can be recommended that Islamic banks must make significant investments in technology since doing so will promote the adoption of electronic banking systems, and hence the financial performance of Islamic banks will improve in Pakistan.

Keywords: Electronic Banking, Justice, Perceived Ease of Use, Performance Expectancy, Security & Privacy, Social Influence

Introduction

The Islamic banking system (IB) initially emerged in the global financial scenario in the 1970s. Over time, IB intervention practiced achievements in Islamic countries in the Gulf States and Asia, and as the IB industry grew and advanced, its notoriety also expanded to include non-Muslim nations in Europe, the United Kingdom, & Africa. However, the history of Islamic banking (IB) appeared in the late 1970s in Pakistan. The establishment of Islamic banking in the nation accelerated in the second half of 1970 in conjunction with the global upsurge of Islamic banking initiatives (Aqib, 2014). The IB paradigm was first presented in 1977 by Zia ul Haq, the president of Pakistan at the time. He tasked the Council of Islamic Ideology (CII), an authority on Shariah legal issues, with creating an interest-free economic system that would be feasible to implement in order to eliminate Riba in interest based monetary transactions (Khan and Bhatti, 2008). To enable Islamic banking from the practical perspective of the legislative structure, several modifications were made to the relevant banking laws & statutory provisions after following the recommendations of the CII, which took the form of a comprehensive report that was submitted in 1980. These changes included the Banking Companies

Ordinance of 1962, the Negotiable Instruments Act of 1881, and the State Bank Act of 1956. Shah & Niazi (2019) stated that a blunder occurred in 1991 so that the execution of the Islamic banking approach became possible. The country's banking industry transactions all involve the attribute of riba, according to the Federal Shariat Court, and the economic system requires real restructuring to genuinely revolutionize its line of Islamic principles, which entails a riba-free banking industry. As a result of the productive discussions between numerous stakeholders in the banking, government, & regulatory domains, the SBP was asked to design a multifaceted plan for the advancement of Islamic-banking in Pakistan. Referring to the assigned duties, the SBP developed comprehensive standards for the foundation and organization of a fully functional commercial bank that complies with Shariah. As a result, Al Meezan Investment Bank, which subsequently changed its name to Meezan Bank and became the nation's leading Islamic bank, received its 1st license as an Islamic commercial bank from the SBP in 2002. There are now five functional Islamic banks currently available for business in Pakistan: Dubai Islamic Bank, MCB Islamic Bank, Al-Baraka Bank, Meezan Bank, and Bank Islami. In the nation's banking sector, Islamic banking deposits account for 16.9% of the total share, while Islamic banking assets hold a 15.2% market share, as per the report by SBP (2020). The need, due to intense competition, to better integrate electronic technologies into global industries has arisen due to the increasing competition in the banking sector. In an effort to reduce hold times, errors, and expenses and improve customer service, banks agreed to enforce, look into, evaluate, and try to offer internet banking services. And with the help of their online banking services, customers can access their personal accounts, ask questions about them, and carry out easy online purchases from the convenience of their homes & workplaces using desktop computers and cellular phones when there's adequate time.

As we know, technology means the capacity to react quickly to changing customer needs while guaranteeing the stability of the product, efficient operations, and long-term scalability. By leveraging these technological advancements, almost the same Islamic banking industry can expedite strategic business development efforts and reach a younger, more digitally savvy audience whose banking and financial requirements can be met in a quick and easy way as they have become accustomed to using mobile apps in their ordinary routine. With a digital induction training program, Islamic banks can start making significant progress toward digitalization right away. Customers can start banking more quickly thanks to digital onboarding, which also streamlines complicated documentation requirements into a simple, digital process. That's why banking products are always changing to keep up with technological advancements. When it came to depositing and withdrawing money, clients had to physically visit the bank counter; however, these days, they can do so from everywhere by using electronic banking. The goal of using e-banking products is to lower overhead costs and establish an unrestricted and convenient method of transacting where they are situated. By focusing on the caliber of e-banking services and customer touchpoints, banks can stay ahead of the competition thanks to the Internet and recent technological advancements (Al-Hattami et al., 2021). Due to the advancements in technology, people can now gain knowledge on a real-time basis about events occurring all over the world. The quick development of technology in recent years has affected almost every industry, as well as banking services (Arshad & Alhumoudi, 2022). Fintech has completely changed the global financial & banking industry by providing more convenient banking offerings in developed countries that are new to the underbanked as well as unbanked individuals of underdeveloped nations (Namahoot & Jantasri 2022). However, banks and their financial offerings can gain a competitive advantage by providing high-quality services to their customers, as they are nearly similar. By reducing the perceived risk, rising advanced service has been shown

to boost the satisfaction level of clients and their likelihood of returning (Almatarneh et al., 2022). Even though banks are crucial to a nation's economic development, they are rapidly changing due to market innovation and the use of rising digital automated offerings (Rahi et al., 2019). Consequently, in the digital economy of fintech, the exertion needed for using a service is determined by its uncertainty, convenience, ease of use, and understandability (Al-Zaqeba et al., 2022). Furthermore, a user-friendly banking offering will motivate individual customers to adopt the advanced technology of e-banking so that they can conveniently enjoy all the services of a bank with just one click (Pham et al., 2022). Mobile marketing, social networking, and well-designed webpages are beneficial to banks as well as other businesses and individuals. The effectiveness and caliber of banking services have a big impact on the nation's economic development, in addition to all attributes of people's regular lifestyles (Kočišová, 2020).

Therefore, the basic aim of this study is to take into consideration the factors that influence the use of e-banking technology by customers of Islamic banks in Pakistan." In previous studies, scholars have extensively examined the conceptual, intellectual, contextual, and procedural aspects of Islamic banking. They have covered a wide range of significant topics, such as the frameworks and discrepancies of Islamic banking products & services, its goals, strategic and business issues in Pakistan like customer loyalty, product design and development, and service recognition, but no one has studied the response of Islamic bank customers to using electronic banking technology by taking into consideration factors like perceived ease of use, performance expectancy, security & privacy, and social influence. Moreover, this study's outcomes will be crucial to Pakistani Islamic bank managers since they will highlight the value of e-banking services for their customers, which ultimately leads to an enhancement the profitability of their banks because customers today find themselves more comfortable making online transactions. This will significantly contribute to the bank's attainment of its goals and ultimately raise shareholder wealth. It will also assist those involved in the banking sector in recognizing obstacles that their clients face and developing solutions. Also, this study will be extremely valuable to academics and researchers in the future because it will act as the basis for an upcoming investigation on electronic banking and provide literature for such studies.

Literature Review

The rise of innovation in financial service design in the digital technology era of global economic interdependence is an objective expansion; as a matter of fact, banks' methods for providing customers with straightforward, dependable services have evolved due to the use of digital technology in order to design new ones (Pham et al., 2022). The percentage of fintech companies is steadily rising in Jordan. Although the program is still in its earliest stages, Jordan has a large number of fintech businesses, which is steadily growing, and the banking industry is greatly impacted by the rise in financial technologies (Alsmadi et al., 2022). Technology is now a crucial tool for Islamic banks to increase productivity, market share, overall performance, and management effectiveness (Jarah et al., 2022). Clients can now accomplish their banking objectives anywhere, at any time. At its most basic, internet banking can be defined as a bank setting up a webpage with information about its services (Rahi et al., 2019). In line with Sarfaraz's research (2017), enhancing the usability, confidentiality, and functionality of the mobile banking system should be the primary focus of m-banking companies. With regard to banking technology, digital banking is the most recent, thanks to technological advancements. Your entire banking needs can be fulfilled by a single smartphone app; physical branches are not even available (Kusumawati & Rinaldi, 2020). The responses

of the study by Usman et al. (2020) are extremely significant for encouraging usage intention behavior in banks by enabling customers to adopt e-banking technology. Rahi et al. (2021) exposed that the current conventional, cohesive technology maintenance approach has a strong ability to predict users' intentions to continue using online banking. Andavara et al., (2021) studied elements that impact users' m-bbanking services in Ethiopia and reported that the intention to use (ITU) mobile payment systems (MPS) is directly influenced by both perceived utility (PU) and perceived ease of use (PEOU) strongly. Hailat et al., (2023) identified that the utilization of technology in Jordanian conventional and Islamic banks was significantly impacted by simplicity of use, perceived ease of use, perceived utility, & social influence. Hossain et al., (2019) described that customers' perceptions of the practical usage of technology are reflected in their performance expectations. When deciding how to use technology, consumers will take into account how well it will serve their intended purpose. Pham, D. K. (2022) suggested that performance expectancy, effort expectancy, hedonistic inspiration, tradition, and trust significantly and positively influence the behavioral intention of digital banking services. Dagnoush & Khalifa (2021) research was conducted in Libya to examine the connection between users' behavior and intention to utilize e-commerce applications and their performance expectations. The findings exhibited an affirmative correlation among them. Igudia, & Ogunsina, (2023) observed that employees at publishing companies have high expectations for their performance when it comes to using social media for marketing. The use of social media by publishing company employees and performance expectations were also significantly correlated. Usman et al., (2020) studied five distinct I.Vs: security, social influences, facilitating conditions, performance expectancy, and effort expectancy. The research has documented that security takes on a paramount role in facilitating behavioral intentions and that security factors have an impact on user conduct.

Hussien & El Aziz, (2013) said that the first dimension of E-banking service quality (EBSQ) is security and privacy, which indicates the extent to which users think the website is secure against hackers and that any personally identifiable information they share on the forum is kept safe. Maintaining and enhancing the confidentiality of electronic banking is necessary to win over more customers' trust. Shankar & Kumari, (2016) argued that if online banking service providers guarantee secure transactions and the confidentiality of personal data, their customers are more likely to have faith in them. Orel & Kara, (2014) concluded that a clear privacy and security policy fosters favorable customer perceptions of the service provider. Rasli, Aris, & Razak, (2022) investigate the dimensions of e-service quality, including efficiency, ability to respond and interactions, efficiency and security, site organization, and an analysis of the main effects on e-customer loyalty of these dimensions. The results demonstrate that every aspect of e-banking service quality has a noteworthy and favorable influence on e-consumer retention. Demertzi et al., (2023) claimed that in order to support such services, smart urban areas should prioritize enhancing the protection and integrity of data in semi financial transactions. Alalwan, et al., (2017) evaluated a number of factors and made the argument that they were all likely to have a significant direct & indirect influence on the adoption of electronic wallets and the desire to recommend these technologies. Johnson et al., (2018) addressed variables like perceived security, visibility, relative benefit, & ease of use all positively affect people's intentions to utilize m-payment services. A person's perception of security is also positively impacted by trialability and ubiquity, but negatively by worries about privacy. Hammoud, Bizri, & Baba, (2018) said that rather than being restricted by the bank's working hours or needing to visit the branch, today's customers want to be able to conduct their banking business quickly and easily from anywhere at any time. To live up to these expectations, baking services must be of high

caliber and exhibit security, adaptability, self-determination, and individuality. Hasandoust & Saravi, (2017) asserted that, surprisingly enough, the degree to which a bank can solve issues and promote long-term business is what determines how well its customers feel about its banking services. In addition, customers' primary considerations when selecting a bank include security & the speed of transactions, ease of use, trust, and privacy concerns. Kusyanti & Prastanti, (2017) determined that security & privacy are important to e-banking services because users feel that using this online service exposes them to a lot of risk or danger in the virtual world. The potential for financial and personal data to be misused is the reason for this. Mufarih et al., (2020) explored that comprehensive, interesting, and educational efforts must be made to improve users' comprehension of these advantages and that e-banking systems must be designed so that users have no trouble using them in order to facilitate the successful adoption of e-banking services. According to Patel & Patel (2018), the willingness to use internet banking is more strongly influenced by perceived security than by perceived value, perceived ease of use, and social influence. Singh et al. (2020) detected that ease of use, usefulness, perceived risk, and attitude affected the intention of the user, the exhaustion of use, and the degree to which users endorsed and expressed subjective satisfaction with money services.

Underpinning Theories

Technology Acceptance Model (TAM)

Particularly with regard to the use of these technologies in the workplace, TAM is specifically intended to serve as a model for advanced analytical recognition of information technology. It allows tech users to embrace new technology with intention or immediate action. The construct of TAM in the recent research comprises perceived ease of use. Davis, (1989a) said that perceived usefulness may be seen as a person's degree of confidence in a technology when it comes to its ability to support their work. Davis, (1989) defined the term "perceived ease of use" denotes a person's degree of comfort with a technology when it is simple to use and requires little learning initiative.

Unified Theory of Acceptance & the Use of Technology (UTAUT)

According to Venkatesh, et al., (2003), UTAUT is regarded as reliable when it comes to learning digitization. Since it combined elements from eight well-known theories and frameworks of technology acceptance in information technology research, it is one of the most complete theories of technology acceptance. Venkatesh, et al., (2003) also validated UTAUT with performance expectancy (PE), effort expectancy (EE), and social influence (SI) as the primary elements that evaluate the model's primary drivers of technology adoption. The authors discussed UTAUT's function in elucidating information technology use behavior and suggested that researchers validate and evaluate the framework across a range of technologies, respondents, and situations. UTAUT suggested that, as a powerful predictor of technology use, performance expectancy (PE) is a fundamental construct that influences the implementation and subsequent practice of relevant technical expertise. One measure of the purpose of an individual's use of modern technology is called effort expectancy (EE). Customers' perception of how much their friends and family think they should use technology is known as their social influence (SI).

This study aims to explain the relationships between perceived ease of use, performance expectation, security and privacy, and social influence on the use of e-

banking technology. These elements aim to provide an explanation for user behavior concerning online banking.

Hypothesis development:

H1: Perceived Ease of Use has a significant effect on the Use of Technology

H2: Performance expectancy has a significant effect on the Use of Technology

H3: Security & privacy has a significant effect on the Use of Technology.

H4**:** Social Influence has a significant effect on the Use of Technology

Conceptual Framework

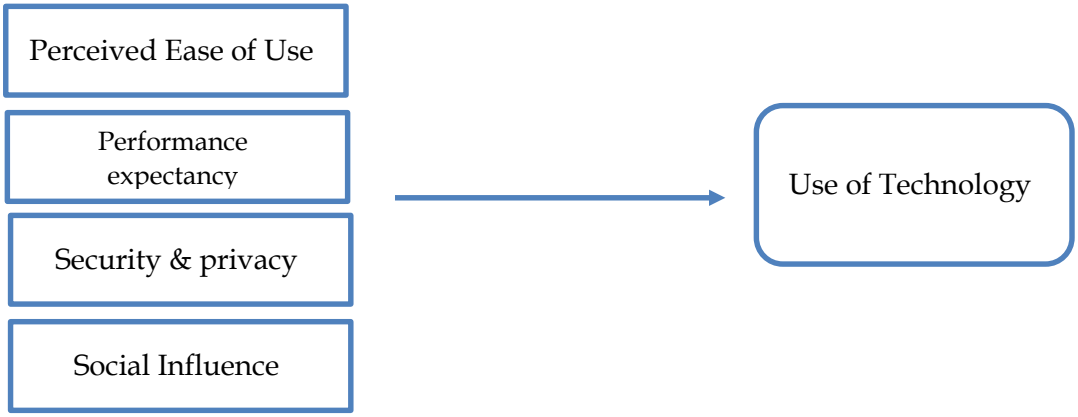

Figure 1: Proposed Research Framework

Material and Methods

This study aims to take into consideration the factors that influence the use of technology by customers of Islamic banks in Pakistan. Islamic banks in Pakistan are included in the research population. There are currently five full-time operational Islamic banks in Pakistan offering their services as well as products, i.e., Dubai Islamic Bank, MCB Islamic Bank, Al-Baraka Bank, Meezan Bank, and Bank Islami. The sample size is set at ten times the number of indicators or items (Hair et al., 2021:92). This study has 29 indicators, so the minimum number of samples is 290 respondents. The Google Forms were used for the online questionnaire, which was then subsequently shared online via social media platforms such as WhatsApp with the 300 prospective respondents, but only 221 respondents filled out the questionnaire conveniently. Hence, in this study, a sample of 221 customers of Pakistani Islamic banks was selected randomly for further data analysis. Using four constructs derived from the literature, the predictor variables were assessed, among which perceived ease of use and social influence (Rahi et al., 2021s), security & privacy (Rasli et al., 2022), and performance expectancy (PE) (Alsheikh, L., & Bojei, J. 2014), whereas the dependent variable was use of technology (UT) (Mutahar et al., 2018; Rahi et al., 2021). The study used a questionnaire as an instrument constructed using prior pertinent research and literature to gather the necessary data. To make it simple for respondents to select the appropriate response, a five-point scale ranging from strongly agree to strongly disagree was employed.

Results and Discussion

Table 1
Socio Demographic Characteristics of The Respondents

Variable	Frequency	Percent
Gender		
Male	124	56.4
Female	96	43.6
Total	**220**	**100**
Qualification		
Bachelor	4	1.8
Master	62	28.2
MPhil / PhD	154	70
Total	**220**	**100**
Age		
18-27	54	24.5
28-37	91	41.4
38-50	65	29.5
Above 50	10	4.5
Total	**220**	**100**
Mobile phone used for online transactions?		
Yes	199	90.5
No	21	9.5
Total	**220**	**100**

Table 1 above displays the summary of our respondents' characteristics, i.e., of the survey participants, 43.6% are women and 56.4% are men; 70% of our respondents are M.phill or Ph.D. qualified, whereas the majority (41.4%) of our respondents are of the age group between 28 and 37, whereas, 90.5% of our respondents use their mobile phones for making online transactions.

Table 2
Results of the Measurement Model Assessment

Variable	Items	Mean	Std. Deviation	Cronbach's alpha
	PEU1	2.06	.963	
PEU	**PEU2**	2.20	1.104	0.826
	PEU3	2.22	.948	
	PEU4	2.50	.913	
S.I	**SI1**	2.62	1.073	
	SI2	2.60	1.262	0.789
	SI3	2.87	.945	
	SI4	2.32	.856	
	S.P1	2.17	.843	
S.P	**S.P2**	2.38	.915	
	S.P3	1.94	1.088	0.787
	S.P4	2.15	.989	
	S.P5	2.44	.822	
	S.P6	2.38	.727	
	S.P7	2.25	.786	
	S.P8	2.89	.828	
PE	**PE1**	3.76	1.111	

	PE2	2.13	1.042	
	PE3	2.46	.893	0.725
	PE4	3.44	1.265	
	PE5	2.43	.926	
	PE6	2.11	.810	
	UT1	1.83	.980	
U.T	**UT2**	2.28	1.064	
	UT3	2.21	1.231	0.780
	UT4	2.47	.962	
	UT5	1.99	.835	
	UT6	2.25	.767	

The four indicators that were used to calculate PEU had mean values that varied from 2.06 to 2.5. The mean values that will be used to result from using the four indications to measure SI varied from 2.32 to 2.62. The SP was assessed using eight factors, whose mean values ranged from 1.94 to 2.89. Additionally, six PEU factors were employed, with an overall mean ranging from 2.11 to 3.76. Additionally, six indicators were used to assess the D.V., or the use of technology, with the overall mean varying from 1.83 to 2.47. An additional reliability measure was Cronbach's alpha for each variable, which showed satisfactory results as per the cut-off rule. If Cronbach's alpha value is greater than 0.7, it means the instrument used in this study is good.

Table 3
Pearson Correlation between Variables

		PEU	S.I	PE	SP	U.T
PEU	Pearson Correlation	1	.099	.062	-.067	.070
	Sig. (2-tailed)		.000	.359	.320	.297
	N	221	221	221	221	221
SI	Pearson Correlation	.099	1	.295**	.548**	.237**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	221	221	221	221	221
PE	Pearson Correlation	.062	.295**	1	.325**	.128
	Sig. (2-tailed)	.359	.000		.000	.057
	N	221	221	221	221	221
SP	Pearson Correlation	-.067	.548**	.325**	1	.514**
	Sig. (2-tailed)	.320	.000	.000		.000
	N	221	221	221	221	221
Use_tech	Pearson Correlation	.070	.237**	.128	.514**	1
	Sig. (2-tailed)	.297	.000	.057	.000	
	N	221	221	221	221	221

**. Correlation is significant at the 0.01 level (2-tailed).

Table 3 displayed Pearson's correlation, which indicated that PEU and SI have a statistically significant correlation with a Pearson correlation of (.099) at the statistical significance level of (0.01). There also exists a substantial positive association between SI, PEU, PE, SP, and UT at the significance level of 0.01, with Pearson correlation values of.099,.295,.548, and.237.

Table 4
Normality Test

	Shapiro-Wilk		
	Statistic	**df**	**Sig.**

PEU	.964	221	.065
SI	.924	221	.082
PE	.876	221	.097
SP	.882	221	.056
Use_tech	.916	221	.074

To ascertain whether a given data set is normal, one hypothesis-testing technique is the Shapiro-Wilk test. The null hypothesis, according to which the set of data is normally distributed, will be utilized to assess data from a sample. A large p-value indicates that the data set follows a normal distribution, whereas a lower p-value implies that it does not. So, in Table 4, our data is normally distributed because the p-value is greater than 0.05 for all the variables studied.

Table 5
Hypotheses testing

	Path Hypotheses	Path Coefficient	'p' value	Decision
H1	Perceived Ease of Use → Use of Technology	0.616	0.000	Supported
H2	Performance expectancy → Use of Technology	0.525	0.000	Supported
H3	Security & privacy → Use of Technology	0.431	0.000	Supported
H4	Social Influence → Use of Technology	0.572	0.000	Supported

Table 5 showed that the results of the structural model that are most frequently encountered to understand the significance levels are values of path coefficients and "p" values. (Hair et al., 2017). Therefore, we can say that factors, i.e., PEU, PE, SP, and SI, have all been greatly impacted by Pakistan's Islamic banks' use of technology.

Conclusion

Today, technological advancements have led to the emergence of digital banking as a new banking technology, due to which it is able to provide its customers with user-friendly services for doing their monetary transactions by just sitting at home and with just one click (Kusumawati & Rinaldi, 2020). Additionally, Upadhyay et al. (2022) discovered that attitude influences attitude to use, which in turn influences intention to use and performance expectancy. As per the point of view of Abdul-Rahim et al., (2022), FinTech adoption is strongly correlated with sustainability, but perceived benefits have a greater influence on adoption than perceived risk. It means that customers who are flexible in their adoption of financial technology can get more benefits, and if they only think about perceived risks, they will not freely enjoy the benefits of financial technology. Rezvani et al., (2022) found PEU to be significant for user satisfaction, perceived usefulness, and application usage behavioral intention. Besides, Sathar et al., (2022), Saleem et al., (2022), Singh et al. (2020), Prastiawan et al., (2021), and Almaiah et al., (2022) identified that PEU consequences S.I., through attitude toward use, had both direct & indirect consequences on the use of mobile banking. Therefore, the aim of this study was to examine and determine the impact of electronic banking service determinants, i.e., PEU, PE, SP, and SI, on the use of technology by the customers of Islamic banks in Pakistan. Using a quantitative approach, 221 customers of Pakistani Islamic banks were chosen randomly for the recent study. The results of this study showed that variables like perceived ease of use, performance expectation, security & privacy and social

influence all significantly affected the use of technology in Pakistani Islamic banks at the level of $p \leq 0.05$.

Recommendations

According to the findings, more work needs to be done by different banking industry stakeholders to improve the technological infrastructure of the banking sector. This will allow e-banking services and products to reach a larger customer base and offer greater flexibility, interactivity, and accessibility than commercial banking. Pakistan's Islamic banks must make significant investments in technology since doing so will promote the adoption of electronic banking systems, and hence the financial performance of Islamic banks will improve.

Also, due to budgetary and scheduling constraints, this study concentrated on examining the consequences of online banking service determinants (PEU, PE, SP, and SI) on the use of technology by the customers of Pakistan Islamic Bank. Additional research could be conducted to compare the effects of various commercial and Islamic banks in Pakistan, looking at the same variables or those of other countries. Since many respondents knew very little about the e-banking services provided by Islamic banks in Pakistan, another issue was the bank clients' lack of collaboration because, in Pakistan, the Islamic banking industry is developing and customers still do not have much awareness about their product offerings.

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