



Research Article

Does technology improve customer satisfaction and loyalty? A comparative study of Islamic and conventional banks

Aftab Hussain Tabasam¹, Anam Ashiq², Muhammad Nadeem Khan³,
Sumaira Hafeez⁴, Malik Shahzad Shabbir^{5*}, Aysha Zamir⁶

¹Department of Business Administration, University of Poonch Rawalakot, Azad Kashmir, Pakistan

²School of Economics and Management, North China University of Water Resources and Electric Power, Zhengzhou, China

³Department of Management Sciences, Iqra University, Karachi, Pakistan

⁴Department of Business Administration, University of Poonch Rawalakot, Azad Kashmir, Pakistan

⁵Department of Management Sciences, University of Lahore, Lahore, Pakistan

⁶Department of Economics, University of Karachi, Pakistan

*Corresponding Author email: Mshahzad786.pk11@gmail.com

Submitted: 10 May 2022

Revised: 08 August 2022

Accepted: 15 August 2022

ABSTRACT

This study aimed to determine the impact of technology based service qualities! Toward customer loyalty mediated by customer satisfaction and further to compare this phenomenon between Islamic and conventional banks. The data was collected via adapted questionnaire and two hundred (200) questionnaires were distributed among customers. The statistical packages of social science (SPSS) is used for data analysis. The independent T test revealed that Islamic banks are significantly healthier to provide convenient and troubleshooting aspects of technology based services. Customer satisfaction plays a partial mediatory role between the technology service quality and customer loyalty. The comparison of positive mean value results show that Islamic banks employees have sufficient knowledge in order to guide their customers according to their desires on! However, this factor explores the importance of Islamic financial system in current market demand. The overall results show that all variables are statistical significant excluding one variable as convenient technology. This study is first ever attempt to use Technology as main policy variable in order to examine the real effects of customer satisfaction and loyalty in Pakistan.

Keywords: *Islamic Banks; Conventional Banks; Customer's Loyalty; Troubleshooting and Technology*

1. INTRODUCTION

This study consists on different modern technology effects on customer satisfaction and loyalty in the banks of Pakistan. Several studies previously focused on customer satisfaction with different independent variables, but this study is first ever attempt, which focus on different technology effects through combining both customer satisfaction and loyalty in order to understand the behavior and amplified in investment from their target customers. Banks are tight in competitive pressure. For attracting customers banks have to offer a good quality technology based services, under the supposition that it will bring about satisfaction and in turn loyalty among the customers. In Pakistan, there are three types of

banks operate such as, conventional banks, Islamic Banks and Standalone branches, whereas, the Islamic banks are having an advantage and a disadvantage as compared to those in the Arab world. Advantage is the better empowerment of its employees and the experience sharing culture in the banks while the low level of economic development in Pakistan is responsible to bring about the financial constraints to augment the barriers in their way to deliver quality of service.

Banking industry, around the globe has undergone some tremendous innovations, those in turn has at one hand greased and geared up the operations, while at the parallel has stressed the banks into fierce competition. At the hour, it is not merely sufficient to win the investors and customers, equivocally necessary are their retention. Knowing the customers makes the bank away from the perils of investor switching cost (Nawaz et al., 2021a; Shabbir, 2022; Nawaz et al., 2022a; Shabbir & Zeb, 2020; Wisner, 2001). This tale is told for the globe and as the matter of fact it is meticulously qualified for the scenario in Pakistan as well. This surge for entailing customers and investors' behaviour is more likely to be intense in the Islamic banks, since they are new in the play while their conventional counterparts are old-paced and have relatively sought their better economies to scale and having a better investor-base (Bennett & Higgins, 1988). Islamic banking is a novel occurrence, yet won a great attention from the researchers. Its individuality is erected upon their philosophical bases that harness no interest (interest or usury) and no uncertainty paving to conflict (Gharar)

Determining the ways of keeping clients' satisfaction and loyalty had been in the great books such as, (Karatepea, 2005; Zhou et al., 2002; zlex's Lam, 2002), and comparable is the situation in the Islamic banks also (Shabbir, 2020; Saleem et al., 2021; Muhammad et al., 2022; Nawaz et al., 2022b and Nawaz et al., 2021b). However, under the competitive business strategy Information Technology (IT) is widely utilized as a part of this focused environment to cater the customer services in best of their quality. Actually, ascent of technology advancements and more specifically the internet have changed the utilization procedure of retail managing of banking businesses as human-based services there are turning out to be progressively minor. Consequently the traditional way of managing a branch banking is going to be replaced with technology based alternatives, ATM, web based banking, to cite a few. Off course these technology services add spice to the service quality, as a matter of fact, that on turn invites the studies to estimate the impact of these technology based services of overall customer satisfaction and loyalty (Ganguli and Roy, 2011; Butt et al., 2022; Bai et al., 2022; Nawaz et al., 2022c; Shabbir et al, 2020) , yet no study in the existing literature has taken the comparative study of Islamic and conventional banks in relation to the technology based services quality (Ganguli and Roy, 2011; Li et al., 2021; Wen et al., 2022; Arif et al., 2020). Hence, the study under consideration is the prime to focus the differences, out of their specificity, in the conventional and Islamic banks, in the impact of technology based service quality to the customer satisfaction and customer loyalty.

The comparative analysis of Islamic and conventional banks, with reference to the obstacles to the service quality, reveals that Islamic banks is internally doing better to have less barriers as in its way to tailoring the service quality to its customers, expect in the case of meritocracy in hiring the bankers. Islamic banking is patron and chosen by the

customers upon the Sharia grounds among others, hence while the Islamic bank employees are at large untrained and less knowledge bearing due to its specificity and newness of Sharia based operations. Naturally in this scenario Sharia driven customers are not convinced by the employees upon the Sharia compliance nature of these banks and the customers feel down in the terms of service quality of Islamic banks. On the other hand the conventional banking is much older than Islamic, with its well based theory and practice to train the employees. Moreover the conventional banking is rather simpler because they only care for economic gains and never about the complex Sharia issues. Hence this hurdle to service quality is unique to Islamic banks not the conventional. These facts are responsible for this huge and highly significant difference between the Islamic and conventional banks. While on the other hand, the Islamic finance industry being the infant one, facing the challenge of scarcity of trained employees, well trained in both the field of Sharia and finance the basic two pillars of Islamic financial industry (Siddiqui, 2013; SBP, 2012; Hussain et al., 2018). The first section of this study consists on Introduction, which further discusses the objective and purpose of the study. However, comparisons of Islamic and conventional banks have debated regarding customer satisfaction and loyalty in section two as a literature review. Adapted questionnaires and method of solving customers issues are elaborated in section three and four respectively. Whereas, conclusion and references put at end of paper.

2. LITERATURE REVIEW

It is the proven matter of fact by the researchers that the selection of Islamic banks is driven by its Sharia compliant image (Dusuki & Abdullah, 2007; Nawaz et al., 2022c; Hayat et al., 2022; Nawaz et al., 2021c; Hayat et al., 2022; Dai et al., 2022; Zehra et al., 2022). While on the other hand, the Islamic finance industry being the infant one, facing the challenge of scarcity of trained employees, well trained in both the field of Sharia and finance the basic two pillars of Islamic financial industry (Siddiqui, 2013; SBP, 2012). Currently the Islamic banks usually prefer to hire their employees with prior experience in the industry of conventional banking (Zainol, Shaari, & Ali, 2008), undermining the fact that Islamic banking is unique and specific and needs the employees the specific knowledge. This way on the short term makes them at ease when confronted with scarcity of Islamic banking human resource. Nevertheless on the long term it adds fuel to the fire by discouraging the Institutes charting the degrees specifically on Islamic finance, like international Islamic universities of Islamabad and some of institutions belongs to Malaysia that in turn leads to a bigger level of scarcity. Here the Islamic banking heads, being trained and hence impressed by the conventional counterparts are blameworthy for hiring the Islamic bankers with unintentional lack of meritocracy (Liu et al., 2022a).

To put it short, the Islamic banking is patron and chosen by the customers upon the Sharia grounds among others (Dusuki & Abdullah, 2007), hence while the Islamic bank employees are at large untrained and less knowledge bearing due to its specificity and newness of Sharia based operations. Naturally in this scenario Sharia driven customers are not convinced by the employees upon the Sharia compliance nature of these banks and the customers feel down in the terms of service quality of Islamic banks. On the other hand the

conventional banking is much older than Islamic, with its well based theory and practice to train the employees. Moreover the conventional banking is rather simpler because they only care for economic gains and never about the complex Sharia issues (Liu et al., 2022b). Hence this hurdle to service quality is unique to Islamic banks not the conventional. These facts are responsible for this huge and highly significant difference between the Islamic and conventional banks. The comparative analysis of Islamic and conventional banks, with reference to the obstacles to the service quality, reveals that Islamic banks is internally doing better to have less barriers in its way to tailoring the service quality to its customers, expect in the case of meritocracy in hiring the bankers, due to external factor of specific HR scarcity.

Gait and Worthington (2008) it is noted that the products and services of Islamic financial institutions through different aspects like observations, approaches and idea of knowledge. The customer satisfaction is a major component for the financial institutions to motivate and increasing devotion of their target customers in an environment of competition. However services quality is considered as a primary feature in interest bearing to satisfy their customers. An empirical analysis was done through literature of both (Islamic & conventional) banking system about their goods and services. The promotion of Islamic finance is mainly based on the religious belief while some customers also focus on service quality, reputation of bank and profit ratio on their investments. However, conventional banks are promoted through business firms (Shabbir & Rehman 2015; Liu et al. 2022c and Shabbir et al., 2016a).

Hume (2008) identified that Services qualities have an interrelationship perceived value and satisfaction of customers through peripheral and its core services. The purpose of this new established system was to predict re-purchase the intention and arts of performance. Consumer retention plays a vital role in the development of any organization. However, due to hard competition in the entire market, performing arts have additional controls in handling and manipulative the consumer preservation packages. The data was collected through questionnaires, where 156 respondents were females and 77 were males with 63% response rate and it analyzed through structural equation modeling (SEM). Yaqoob et al. (2022b), result show that there is no direct or significant relationship found among exterior services, core of services qualities and repurchase intention toward perceived value. Whereas, core and peripheral services quality play a vigorous role to determine re-purchase intention of customers.

Siddique (2010) examines the interrelationship between customer loyalty, traits of services quality and customers gratification in the retail banking zone of Bangladesh. This study aims to fill the gap through this channel, first he investigates the relationship between services quality features and customer gratification (Nawaz et al., 2021d). After a comprehensive relationship found between both variables then he checks the impact of these both variables on customer loyalty in the sector of retail banking. For this purpose a sample of 100 questionnaires was distributed among the customers where males and females respondents are 77 and 23 respectively. He used services qualities model (SERVQUAL) to measure the services quality in retail banking. Several studies such as (Ji et al 2022; Arslan et al 2021; Chen et al 2022; Ge et al 2022; Cao et al 2022; Yu et al 2020; Zehra

et al. 2022; Wang et al. 2022; Wen et al. 2022; Yaqoob et al. 2022b; Jun et al., 2021; Shabbir et al., 2016b; Nawaz et al 2021e; Shabbir and Wisdom 2020; Liu et al. 2022d;) concludes with these remarks results shows that these all variables are positively interlinked to each other's, however tangibility indicates a least optimistic correlation while Empathy confirms high encouraging correlation toward customer satisfaction.

3. METHODOLOGY

In our study, we investigated the impact of Technology on customer satisfaction and loyalty in both Islamic and conventional banks of Pakistan. For this purpose we prepaid a questionnaire in order to get the opinion about technology effects on different customer's satisfaction and loyalty. We collect primary data from questionnaire and distribute among 200 different customers, whereas response rate is 80%. It includes the opinion of customers of different types of banks via full fledged Islamic banks, conventional banks and standalone Islamic banking branches of conventional banks were considered. The respondents belonged to different age groups, educational and occupational background, irrespective of gender. However, bank branches were selected at random from Lahore city. The sample remained un-weighted in respect of gender to avoid any bias. The areas of questions consist of the following statements; Overall technology service-quality (TSQ), User friendly Technology (UFT), Convenient Technology (CT), Time effective technology (TET), Troubleshooting Technology (TST), Customer Satisfaction (CS) and Customer Loyalty (CL). Questions were designed keeping these areas in mind and to confirm the objectives of the study.

We present the tables in two forms, whereas in first form of tables express only mediating regression analysis for Islamic, conventional and overall the banking system of Pakistan. Whereas, second form represents construct analysis through mediating regression for Islamic, conventional and overall the banks of Pakistan. However, we develop some relational equations (UFT + CT + TST + TET → CL), (UFT + CT + TST + TET → CS), (CS → CL) and (UFT + CT + TST + TET + CS → CL) in order to get better results from construct analysis. The purpose of Construct Analysis through mediation regression analysis elaborate us analytical scores such as written numbers, equations and figures without any kind of analytical diagrams.

4. DATA ANALYSIS

Table 1. Comparison of Group Means

Constructs	Statements	Bank Type	Mean	Sig	Mean Difference
Overall technology service-quality		Islamic	3.685	0.047	0.214
		Conventional	3.470		
User friendly Technology		Islamic	3.740	0.968	-0.006
		Conventional	3.746		
	The technology provided by my bank is easy to use	Islamic	3.86	0.246	0.240
		Conventional	3.62		
	The technology provided by my bank is user-friendly.	Islamic	3.64	0.539	-0.120
		Conventional	3.76		
	My bank's technology is reliable	Islamic	3.72	0.472	-0.140

Constructs	Statements	Bank Type	Mean	Sig	Mean Difference
Convenient Technology		Conventional	3.86		
		Islamic	3.740	0.010	0.440
		Conventional	3.300		
	My bank's technology is accessible beyond regular business Hours	Islamic	3.78	0.040	0.420
		Conventional	3.36		
Time effective technology	I find it more convenient to use technology than interacting with branch employees.	Islamic	3.70	0.021	0.460
		Conventional	3.24		
		Islamic	3.480	0.410	0.130
		Conventional	3.350		
	My bank's technology saves me a lot of time, especially when I am pressed for time.	Islamic	3.68	0.131	0.280
Troubleshooting Technology	My bank offers a fair compensation for its mistakes	Conventional	3.40		
		Islamic	3.28	0.916	-0.020
		Conventional	3.30		
		Islamic	3.780	0.044	0.293
		Conventional	3.486		
Customer Satisfaction	When I contact my bank's customer service, my calls are always answered promptly.	Islamic	3.74	0.344	0.180
		Conventional	3.56		
	When there are problems, my bank's customer service people are sympathetic and reassuring	Islamic	3.70	0.412	0.140
		Conventional	3.56		
	My bank employees are knowledgeable enough to resolve the problems	Islamic	3.90	0.007	0.560
Customer Loyalty		Conventional	3.34		
		Islamic	3.720	0.671	0.053
		Conventional	3.666		
	Overall, I am satisfied with my bank	Islamic	3.74	0.579	0.100
		Conventional	3.64		
Customer Loyalty	I think I did the right thing when I chose this bank	Islamic	3.76	0.314	0.160
		Conventional	3.60		
	I am delighted with my bank	Islamic	3.66	0.567	-0.100
		Conventional	3.76		
		Islamic	3.78	0.731	0.050
Customer Loyalty		Conventional	3.73		
	I would recommend my bank to others	Islamic	3.80	0.817	0.040
		Conventional	3.76		
	I will always consider this bank as my first choice	Islamic	3.76	0.715	0.060
		Conventional	3.70		

Independent sample T test

Several studies such as Hanif et al, (2012) and Awan et al. (2011) investigated that the comparison between Islamic and convention financial institutions, which are based on their altered mode of financing, communication system and behavior to their customers. However, table 1 reveals the results generated by the independent sample T test. The data was processed under this test with the aim for comparative analysis of challenges in the way of delivering service quality and customer loyalty between the both banks. The significant differences between the banks were observed at the variables of convenient technology, my bank's technology is accessible beyond regular business hours and I find it more convenient to use technology than interacting with branch employees,

troubleshooting technology and my bank employees are knowledgeable enough to resolve the problems among these variable values 0.010, 0.040, 0.021, 0.044 and 0.007 respectively. However, the above significant value represents that these banks observe statistically different results under the above mention significant variables. While among these variables the biggest mean difference occurs 'my bank employees are enough knowledgeable to resolve the problems' with the mean difference of 0.560. Positive mean difference is the evidence to explain that Islamic banks employees have sufficient knowledge in order to guide their customers according to their desires and this factor explore the importance of Islamic financial system in current market demand.

Table 2. Mediation regression analysis for Islamic banks

Variables	Beta	Sig.	R Square	Adjusted R Square	F-Stats	ANOVA Sig.
<i>TSQ → CL</i>						
Constant	1.424	0.036	0.213	0.197	13.104	0.001
Technology Services Quality	0.462	0.001				
<i>TSQ → CS</i>						
Constant	1.894	0.000	0.255	0.239	16.430	0.000
Technology Services Quality	0.505	0.000				
<i>CS → CL</i>						
Constant	0.267	0.641	0.448	0.437	38.972	0.000
Customer Satisfaction	0.669	0.000				
<i>TSQ + CS → CL</i>						
Constant	-0.140	0.827	0.469	0.446	20.729	0.000
Technology Services Quality	0.585	0.000				
Customer Satisfaction	0.166	0.184				

Table 2 represents the mediation regression analysis for Islamic banks where in this above table we built four relations among such variables Technology Services Quality (TSQ), Customer Satisfaction (CS) and Customer Loyalty (CL). In each relation one variable donated as constant and rest of variables are to make a perfect relation. In first relation Customer Loyalty is a constant and Technology Services Quality as a variable. F – Test and ANOVA show positively significant relationship between TSQ to CL with 13.104 at 0.001 levels of significant. However, rest of three relations such as technology service quality to customer satisfaction (TSQ to CS), customer satisfaction to customer loyalty (CS to CL) and technology service quality with customer satisfaction to customer loyalty (TSQ + CS to CL) also show significantly positive relationship among all variables with these F-test values 16.430, 38.972 and 20.729 at same significant levels (0.000) for all the three values respectively. Whereas, the biggest F-test value in the table of mediation regression analysis for Islamic banks is 38.972 with variables of customer satisfaction to customer loyalty (CS to CL). It means that CS and CL have strong correlation; now both Islamic and conventional financial institutions of Pakistan must focus on the usage of modern technology to entertain their customers.

Table 3. Mediation regression analysis for Islamic banks (Construct Analysis)

Variables	Beta	Sig.	R Square	Adjusted R Square	F-Stats	ANOVA Sig.
<i>UFT + CT + TST + TET → CL</i>						
Constant	1.210	0.021	0.497	0.452	11.11	0.000
User-friendly Technology	0.261	0.040				
Convenient Technology	-0.139	0.222				
Troubleshooting Technology	0.340	0.003				
Time-effective Technology	0.402	0.001				
<i>UFT + CT + TST + TET → CS</i>						
Constant	1.774	0.000	0.402	0.349	7.575	0.000
User-friendly Technology	0.261	0.004				
Convenient Technology	-0.100	0.209				
Troubleshooting Technology	0.156	0.306				
Time-effective Technology	0.216	0.034				

The purpose of Construct Analysis through mediation regression analysis for Islamic banks elaborate us analytic scores such as written numbers, equations and figures without any kind of analytical diagrams. In the above table we have built one to one (Linear relationship) relation between different variables but in construct analysis, we checked the impact a number of independent variables on dependent variable. The independent variables in regression analysis of Islamic banks comprise on User-friendly Technology (UFT), Convenient Technology (CT), Troubleshooting Technology (TST) and Time-effective Technology (TET) with dependent variable as customer loyalty (CL). However, all the independent variables are statistical significant in both regressions through Beta values expect Convenient Technology (-0.139 and -1.00) at (0.222 and 0.209) significant level and in all mediation regressions for Islamic banks through construct analysis is statistical significant via F-test value (11.11) and (7.575) respectively.

Table 4. Mediation regression analysis for conventional banks

Variables	Beta	Sig.	R Square	Adjusted R Square	F-Stats	ANOVA Sig.
<i>TSQ → CL</i>						
Constant	1.025	0.071	0.336	0.332	24.240	0.000
Technology Services Quality	0.579	0.000				
<i>TSQ → CS</i>						
Constant	0.951	0.096	0.333	0.320	24.009	0.000
Technology Services Quality	0.577	0.000				
<i>CS → CL</i>						
Constant	1.755	0.000	0.294	0.280	20.009	0.000
Customer Satisfaction	0.539	0.000				
<i>TSQ + CS → CL</i>						
Constant	0.730	0.190	0.400	0.375	15.694	0.000
Technology Services Quality	0.399	0.006				
Customer Satisfaction	0.312	0.29				

The Mediation regression analysis for conventional banks demonstration in table 3, where the above table represents the same four relations 'technology service quality to customer loyalty (TSQ to CL), technology service quality to customer satisfaction (TSQ to CS), customer satisfaction to customer loyalty (CS to CL) and technology service quality with

customer satisfaction to customer loyalty (TSQ + CS to CL) as we have discussed in mediation regression analysis for Islamic banks in table 2. Actually, we are going to find out the usage of technology and its impact on customer satisfaction and loyalty in our study, that's why we built same four relations for both Islamic and conventional banks in order to find out the difference on base of technology. However, the convention banks show lesser values of F-test as comparatively analysis with Islamic banks, which means that Islamic banks are more preferable than convention and customers of Islamic banks, also more satisfied than conventional. Whereas, F-test values (24.240, 24.009, 20.009 and 15.694) show positively significant for all the variables in conventional banks at same levels of significant 0.000.

Table 5. Mediation regression analysis for conventional banks (Construct Analysis)

Variables	Beta	Sig.	R Square	Adjusted R Square	F-Stats	ANOVA Sig.
<i>UFT + CT + TST + TET → CL</i>						
Constant	1.210	0.021	0.497	0.452	11.119	0.000
User-friendly Technology	0.261	0.040				
Convenient Technology	-0.139	0.222				
Troubleshooting Technology	0.340	0.003				
Time-effective Technology	0.402	0.001				
<i>UFT + CT + TST + TET → CS</i>						
Constant	1.120	0.029	0.521	0.478	12.234	0.000
User-friendly Technology	0.626	0.000				
Convenient Technology	-0.161	0.149				
Troubleshooting Technology	0.202	0.062				
Time-effective Technology	0.135	0.248				
<i>CS → CL</i>						
Constant	1.755	0.000	0.294	0.280	20.009	0.000
Customer Satisfaction	0.539	0.000				
<i>UFT + CT + TST + TET + CS → CL</i>						
Constant	0.970	0.072	0.519	0.465	9.506	0.000
User-friendly Technology	0.126	0.418				
Convenient Technology	-0.105	0.363				
Troubleshooting Technology	0.296	0.011				
Time-effective Technology	0.373	0.003				
Customer Satisfaction	0.215	0.161				

The mediation regression analysis of conventional banks depend upon four relations such as (UFT + CT + TST + TET → CL), (UFT + CT + TST + TET → CS), (CS → CL) and (UFT + CT + TST + TET + CS → CL) through Construct Analysis. The independent variables in regression analysis of conventional banks comprise on User-friendly Technology (UFT), Convenient Technology (CT), Troubleshooting Technology (TST) and Time-effective Technology (TET) with dependent variable as customer loyalty (CL). However, all the independent variables are statistical significant in all regressions through Beta values expect Convenient Technology because it shows negative values in all relations with higher degree of significant (-0.139, -1.16 and -0.105) at (0.222, 0.149 and 0.363). However, F-test values (11.12, 12.23, 20.09 and 9.506) indicate that overall model of mediation regression for conventional banks is statistical significant with same levels in all relations (0.000) respectively. It is observed through the

value of individual and F-test that customer satisfaction has strong positive impact on customer loyalty in all cases.

Table 6. Mediation regression analysis for all banks

Variables	Beta	Sig.	R Square	Adjusted R Square	F-Stats	ANOVA Sig.
<i>TSQ → CL</i>						
Constant	1.294	0.003	0.284	0.256	35.117	0.000
Technology Services Quality	0.514	0.000				
<i>TSQ → CS</i>						
Constant	1.482	0.000	0.287	0.280	39.497	0.000
Technology Services Quality	0.536	0.000				
<i>CS → CL</i>						
Constant	1.222	0.000	0.349	0.342	52.506	0.000
Customer Satisfaction	0.591	0.000				
<i>SQT + CS → CL</i>						
Constant	0.533	0.200	0.403	0.391	32.786	0.000
Technology Services Quality	0.276	0.004				
Customer Satisfaction	0.442	0.000				

However, our study consists on Islamic and conventional banks and their impact on customer satisfaction and loyalty through technology as a mediating variable. The table 4 epitomizes mediation regression analysis for all banks. Actually we are going to fill the gap with a new dimension takes in our study through mediation regression analysis for all banks (public & private) in Pakistan. The idea of this new dimension occurs when we have done individually analysis of mediating regression for Islamic and convention banks then we think what happened in overall as well as individual results if we combine the analysis for all banks in Pakistan. We are very grateful to see the highly positive significant results (35.117, 39.497, 52.506 and 32.786) of combine analysis in Beta and F-test in all four sector/relations among variables with same levels of significant (0.000) as these variables are mention in above tables. It means that our new experiment of combine the synergies show better effect on customer satisfaction and loyalty as well as for new researcher for further analysis.

Table 7. Mediation regression analysis for all banks (Construct Analysis)

Variables	Beta	Sig.	R Square	Adjusted R Square	F-Stats	ANOVA Sig.
<i>UFT + CT + TST + TET → CL</i>						
Constant	1.214	0.004	0.345	0.318	12.535	0.000
User-friendly Technology	0.240	0.012				
Convenient Technology	-0.067	0.451				
Troubleshooting Technology	0.255	0.005				
Time-effective Technology	0.325	0.001				
<i>UFT + CT + TST + TET → CS</i>						
Constant	1.445	0.000	0.449	0.426	19.369	0.000
User-friendly Technology	0.510	0.000				
Convenient Technology	-0.140	0.085				
Troubleshooting Technology	0.179	0.030				
Time-effective Technology	0.217	0.012				

Variables	Beta	Sig.	R Square	Adjusted R Square	F-Stats	ANOVA Sig.
<i>CS → CL</i>						
Constant	1.222	0.001	0.349	0.342	52.506	0.000
Customer Satisfaction	0.591	0.000				
<i>UFT + CT + TST + TET + CS → CL</i>						
Constant	0.547	0.208	0.437	0.407	14.584	0.000
User-friendly Technology	0.032	0.754				
Convenient Technology	-0.009	0.911				
Troubleshooting Technology	0.182	0.034				
Time-effective Technology	0.237	0.010				
Customer Satisfaction	0.407	0.000				

Table 7 explores the construct analysis for all combined banks in Pakistan through mediation regression. Actually, this table represent a new dimension in existing results because we are doing a relative research in both Islamic and conventional banks, where this combine synergic in all the banks of Pakistan show better result as individually compared with conventional and Islamic banks in Pakistan. The international bank branches, who are working in Pakistan as well as domestic banks, take part in the above table of our study. This table is furthermore depend upon four relations and also consist on same independent and dependent variables such as (UFT + CT + TST + TET → CL), UFT + CT + TST + TET → CS), (CS → CL) and (UFT + CT + TST + TET + CS → CL) through Construct Analysis. However, all the independent variables are statistical significant in all regressions through Beta values expect Convenient Technology because it shows negative values in all relations with higher degree of significant (-0.067, -1.140 and -0.009) at (0.451, 0.085 and 0.911). Whereas, F-test values (12.535, 19.369, 52.506 and 14.584) indicate that overall model of mediation regression for all banks in Pakistan is statistical significant with same levels of significant in all associations (0.000) respectively such as (Shabbir et al 2020; Ali et al., 2022; Saleem et al 2020).

5. CONCLUSION

However, group mean difference values elaborate that biggest mean difference occurs “my bank employees are enough knowledgeable to resolve the problems” with the mean difference of 0.560. Whereas, positive mean difference is the evidence to explain that Islamic banks employees have sufficient knowledge in order to guide their customers according to their desires and this factor explore the importance of Islamic financial system in current market demand. In order to fill the gap of this research, we used some variables to complete this whole process. The variables with their abbreviations are as follow; Overall technology service-quality (TSQ), User friendly Technology (UFT), Convenient Technology (CT), Time effective technology (TET), Troubleshooting Technology (TST), Customer Satisfaction (CS) and Customer Loyalty (CL). However, Questionnaire was designed through keeping these areas in mind and to confirm the objectives of the study. We present the tables in two forms, whereas in first form of tables express only mediating regression analysis for Islamic, conventional and overall the banks of Pakistan and in second form represents construct analysis through mediating regression for Islamic, conventional and overall the banks of Pakistan. However, we develop some relational equations (UFT + CT +

TST + TET → CL), UFT + CT + TST + TET → CS), (CS → CL) and (UFT + CT + TST + TET + CS → CL) in order to get better results from construct analysis. The comparison of positive mean value results show that Islamic banks employees have sufficient knowledge in order to guide their customers according to their desires and this factor explore the importance of Islamic financial system in current market demand. The result of convenient technology shows insignificant, while rest of all variables and whole model are statistical significant through individual as well as F-test values.

According to above results, we strongly recommended that Islamic banks provide advance trainings to their staffs in order to facilitate their customers with their due desires. Whereas, the staffs of conventional banks are unable to facilitate their customers properly with several reasons, but most important reason, they have a lot of customer's portfolio that's why they don't care them accurately because they get their targets easily as compared with Islamic banks. While on the other hand, it is also noted in our study that after the financial crises 2007-08, the customers moved from conventional to Islamic financial Institutions due to investment saving on their portfolio and customer's satisfaction and loyalty. These are the key factors of Islamic banks and if it remains as in future then results must favorable for Islamic financial Institutions.

Author Contributions:

Aftab Hussain Tabasam: Conceptualization, Investigation, Anam Ashiq: Data creation, Resources, Muhammad Nadeem Khan: Methodology, Summeria Hafeez: Methodology, Formal analysis, Malik Shahzad Shabbir: Result and discussion section, Abstract and Conclusion sections, formation of paper as per journal requirements, Aysha Zamir: Data analysis

Funding:

The authors have not received any financial support for this research project.

Institutional Review Board Statement:

This study didn't use any kind of human participants or human data, which require any kind of approval.

Informed Consent Statement:

Our study didn't use any kind of Individual data such as video, images etc.

Data Availability Statement:

The data is available on request from corresponding author.

Conflicts of Interest:

The authors have declared no potential conflicts of interest concerning the research, and publication of this article.

Reference:

- Ali, A., Shafi, M., Tabasam, A. H., Ashiq, A., & Shabbir, M. S. (2022). Trends and volume of successful application of Musharakah as a major mode of financing in Pakistan: A case study of Meezan bank limited. *Journal of Public Value and Administrative Insight*, 5(2), 467-482.
- Arif, A., Sadiq, M., Shabbir, M. S., Yahya, G., Zamir, A., & Bares Lopez, L. (2020). The role of globalization in financial development, trade openness and sustainable environmental-economic growth: evidence from selected South Asian economies. *Journal of Sustainable Finance & Investment*, 1-18.
- Arslan, Z., Kausar, S., Kannaiah, D., Shabbir, M. S., Khan, G. Y., & Zamir, A. (2021). The mediating role of green creativity and the moderating role of green mindfulness in the relationship among clean environment, clean production, and sustainable growth. *Environmental Science and Pollution Research*, 1-15
- Bennett, D., & Higgins, M. (1988). Quality means more than smiles. 46.
- Bai, D., Jain, V., Tripathi, M., Ali, S. A., Shabbir, M. S., Mohamed, M. A., & Ramos-Meza, C. S. (2022). Performance of biogas plant analysis and policy implications: Evidence from the commercial sources. *Energy Policy*, 169, 113173.
- Butt, M. A., Ayub, H., Latif, B., Asif, F., Shabbir, M. S., & Raja, A. A. (2022). Financial risks and performance of conventional and Islamic banks: Do reputational risk matters?. *Journal of Islamic Accounting and Business Research*.
- Cao, X., Kannaiah, D., Ye, L., Khan, J., Shabbir, M. S., Bilal, K., & Tabash, M. I. (2022). Does sustainable environmental agenda matter in the era of globalization? The relationship among financial development, energy consumption, and sustainable environmental-economic growth. *Environmental Science and Pollution Research*, 1-11.
- Chen, J., Su, F., Jain, V., Salman, A., Tabash, M. I., Haddad, A. M., ... & Shabbir, M. S. (2022). Does Renewable Energy Matter to Achieve Sustainable Development Goals? The Impact of Renewable Energy Strategies on Sustainable Economic Growth. *Front. Energy Res*, 10, 829252.
- Dusuki, A. W., & Abdullah, N. I. (2007). Why do Malaysian customers patronise Islamic banks? *International Journal of Bank Marketing*, 25(3), 142 - 160.
- Dai, Z., Sadiq, M., Kannaiah, D., Khan, N., Shabbir, M. S., Bilal, K., & Tabash, M. I. (2022). The dynamic impacts of Financial Investment on environmental-health and MDR-TB diseases and their influence on environmental sustainability at Chinese hospitals. *Environmental Science and Pollution Research*, 1-1.
- Ge, M., Kannaiah, D., Li, J., Khan, N., Shabbir, M. S., Bilal, K., & Tabash, M. I. (2022). Does foreign private investment affect the clean industrial environment? Nexus among foreign private investment, CO2 emissions, energy consumption, trade openness, and sustainable economic growth. *Environmental Science and Pollution Research*, 1-8.
- Ganguli, S., & Roy, S. K. (2011). Generic technology-based service quality dimensions in banking: Impact on customer satisfaction and loyalty. *International journal of bank marketing*.
- Hanif, M., Tariq, M., Tahir, A., & Wajeeh-ul-Momeneen. (2012). ISSN 1450-2887 Issue 83 () Comparative Performance Study of Conventional and Islamic Banking in Pakistan. *International Research Journal of Finance and Economics*, 83(1), 62-72.
- Hayat, K., Yaqub, K., Aslam, M. A., & Shabbir, M. S. (2022). Impact of Societal and Economic Development on Academic Performance: A Literature Review. *iRASD Journal of Economics*, 4(1), 98-106.
- Hayat, K., Hafeez, M., Bilal, K., & Shabbir, M. S. (2022). Interactive Effects of Organizational Structure and Team Work Quality on Project Success in Project Based Non Profit Organizations. *iRASD Journal of Management*, 4(1), 84-103.

- Hussain, B., Javaid, N., Hasan, Q. U., Javaid, S., Khan, A., & Malik, S. A. (2018). An inventive method for eco-efficient operation of home energy management systems. *Energies*, *11*(11), 3091.
- International Monetary Fund. (2004). *Pakistan: Financial System Stability Assessment*. Washington, D.C.: International Monetary Fund.
- Ji, G., Cheng, X., Kannaiah, D., & Shabbir, M. S. (2022). Does the global migration matter? The impact of top ten cities migration on native nationals income and employment levels. *International Migration*.
- Jun, W., Mughal, N., Zhao, J., Shabbir, M. S., Niedbała, G., Jain, V., & Anwar, A. (2021). Does globalization matter for environmental degradation? Nexus among energy consumption, economic growth, and carbon dioxide emission. *Energy Policy*, *153*, 112230.
- Karatepea, O. M., Yavasb, U., & Babakus, E. (2005). Measuring service quality of banks: Scale development and validation. *Journal of Retailing and Consumer Services*, *12*(1), 373–383.
- Li, Q., Cherian, J., Shabbir, M. S., Sial, M. S., Li, J., Mester, I., & Badulescu, A. (2021). Exploring the relationship between renewable energy sources and economic growth. The case of SAARC countries. *Energies*, *14*(3), 520.
- Liu, C., Ni, C., Sharma, P., Jain, V., Chawla, C., Shabbir, M. S., & Tabash, M. I. (2022a). Does green environmental innovation really matter for carbon-free economy? Nexus among green technological innovation, green international trade, and green power generation. *Environmental Science and Pollution Research*, 1-9.
- Liu, J., Jain, V., Sharma, P., Ali, S. A., Shabbir, M. S., & Ramos-Meza, C. S. (2022b). The role of Sustainable Development Goals to eradicate the multidimensional energy poverty and improve social Wellbeing's. *Energy Strategy Reviews*, *42*, 100885.
- Liu, Y., Sharma, P., Jain, V., Shukla, A., Shabbir, M. S., Tabash, M. I., & Chawla, C. (2022c). The relationship among oil prices volatility, inflation rate, and sustainable economic growth: Evidence from top oil importer and exporter countries. *Resources Policy*, *77*, 102674.
- Liu, Y., Cao, D., Cao, X., Jain, V., Chawla, C., Shabbir, M. S., & Ramos-Meza, C. S. (2022d). The effects of MDR-TB Treatment Regimens through Socioeconomic and Spatial characteristics on Environmental-Health Outcomes: Evidence from Chinese Hospitals. *Energy & Environment*, 0958305X221079425
- Muhammad, I., Ozcan, R., Jain, V., Sharma, P., & Shabbir, M. S. (2022). Does environmental sustainability affect the renewable energy consumption? Nexus among trade openness, CO2 emissions, income inequality, renewable energy, and economic growth in OECD countries. *Environmental Science and Pollution Research*, 1-11.
- Nawaz, S., Kiran, A., Shabbir, M. S., & Zamir, A. (2022a). A study to analyze the Rights and Responsibilities of Husband and Wife Relationship in Pakistan. *Pakistan Journal of Multidisciplinary Research*, *3*(1), 139-151.
- Nawaz, S., Kiran, A., Koser, M., Shabbir, M. S., & Zamir, A. (2022b). The dynamic effect of education levels, marriage status and domestic life of women in Balochistan. *Journal of Public Value and Administrative Insight*, *5*(2), 455-466.
- Nawaz, S., Kiran, A., Koser, M., Shabbir, M. S., & Zamir, A. (2022c). The role of safety management to analyze the current situation of honour killing in Pakistan. *Journal of Public Value and Administrative Insight*, *5*(2), 424-439.
- Nawaz, S., Koser, M., & Shabbir, M. S. (2021a). THE CONCEPTUAL FRAMEWORK OF STUDY TO ANALYZE THE STATUS OF WOMEN IN PAKISTANI FAMILY SYSTEM. *Pakistan Journal of Educational Research*, *4*(4).
- Nawaz, S., Koser, M., Bilal, K., Shabbir, M. S., & Latif, R. (2021b). The Conceptual Framework of Early Child Marriage in Pakistani Society. *PalArch's Journal of Archaeology of Egypt/Egyptology*, *18*(09), 1762-1776.

- Nawaz, S., Koser, M., Boota, A., & Shabbir, M. S. (2021c). The effects of Cultural Limitations, Constitution, Feminism, Sexual Orientation status among the Women in Pakistani Families. *Pakistan Journal of Humanities and Social Sciences*, 9(3), 526-534.
- Nawaz, S., Shabbir, M. S., Bilal, K., Koser, M., & Latif, R. (2021d). Does Literacy Rate Decrease the Sexual Harassment Cases in Pakistan?. *PalArch's Journal of Archaeology of Egypt/Egyptology*, 18(18), 559-573.
- Nawaz, S., Shabbir, M. S., Shaheen, K., & Koser, M. (2021e). The Role of Human Rights and Obligations toward Cross Gender Empowerment under the domain of Islamic Laws. *iRASD Journal of Management*, 3(3), 208-217.
- Saleem, H., Shabbir, M. S., Khan, B., Aziz, S., Husin, M. M., & Abbasi, B. A. (2020). Estimating the key determinants of foreign direct investment flows in Pakistan: new insights into the co-integration relationship. *South Asian Journal of Business Studies*.
- Saleem, H., Shabbir, M. S., Shah, S. A. R., & Shah, J. (2021). Nexus between Foreign Direct Investment and Poverty Reduction: A case of Pakistan. *iRASD Journal of Economics*, 3(3), 280-288.
- SBP. (2012, February 28). Islamic banking industry in Pakistan set to double its market share in next five years: Yaseen Anwar. *SBP Press Reports*.
- Shabbir, M. S., Rehman, A. K., & Akhtar, T. (2016a). The Role of Islamic Leading Organizations for the Promotion of Islamic Finance in Western Countries. *The Journal of Internet Banking and Commerce*, 21(1).
- Shabbir, M.S., Aslam, E., Irshad, A. et al (2020). Nexus between corporate social responsibility and financial and non-financial sectors' performance: a non-linear and disaggregated approach. *Environmental Science and Pollution Research*. <https://doi.org/10.1007/s11356-020-09972-x>
- Shabbir, M. S. (2022). Regulatory and Supervisory Regime of Islamic Banking System in Nigeria: Challenges, Constraints and Way Forward. *Journal of Islamic Banking & Finance*, 39(2).
- Shabbir, M. S., & Zeb, A. (2020). Nexus and Perception of Customers Toward Conventional Banking Systems: Does the Islamic Banking System Exist as a Competitor?. *International Journal of Asian Business and Information Management (IJABIM)*, 11(4), 54-70.
- Shabbir, M. S. (2020). Attributes Ensuring Positive Consumer Evaluation in Brand Extension of Pakistan. *International Journal of Asian Business and Information Management (IJABIM)*, 11(4), 71-84.
- Shabbir, M. S., Ghazi, M. S., & Akhtar, T. (2016b). The Relationship between Traditional as well as Modern Modes of Financial Instruments for International Market through Islamic Finance. *Journal of Internet Banking and Commerce*, 22(3).
- Shabbir, M. S., & Rehman, A. K. (2015). Are Islamic Financial Institutions become Challenge or Opportunity for Western Countries? *European Journal of Economics, Finance and Administrative Sciences*, 4(84).
- Shabbir, M. S., & Wisdom, O. (2020). The relationship between corporate social responsibility, environmental investments and financial performance: evidence from manufacturing companies. *Environmental Science and Pollution Research*, 1-12. DOI: 10.1007/s11356-020-10217-0
- Shahzad, M., Rehman, A., (2015). Barriers to Service Quality in the Banks of Pakistan: A Comparative Study of Islamic and Conventional Banks. *Business and Economics Journal*, 6(4), 178.
- Siddiqui, A. A. (2013). *Islamic Banking Industry – Growing amid challenges*. Karachi Pakistan: Meezan Bank.
- Wisner, J. a. (2001). "Comparing practices for capturing bank customer. Benchmarking: An International Journal, Vol. 8 No. 3, p. 250.

- Wang, G., Sadiq, M., Bashir, T., Jain, V., Ali, S. A., & Shabbir, M. S. (2022). The dynamic association between different strategies of renewable energy sources and sustainable economic growth under SDGs. *Energy Strategy Reviews*, 42, 100886
- Wen, Y., Shabbir, M. S., Haseeb, M., Kamal, M., Anwar, A., Khan, M. F., & Malik, S. (2022). The dynamic effect of information and communication technology and renewable energy on CO2 emission: Fresh evidence from panel quantile regression. *Frontiers in Environmental Science*, 1123.
- Yaqoob, N., Ali, S. A., Kannaiah, D., Khan, N., Shabbir, M. S., Bilal, K., & Tabash, M. I. (2022). The effects of Agriculture Productivity, Land Intensification, on Sustainable Economic Growth: A panel analysis from Bangladesh, India, and Pakistan Economies. *Environmental Science and Pollution Research*, 1-9.
- Yaqoob, N., Jain, V., Atiq, Z., Sharma, P., Ramos-Meza, C. S., Shabbir, M. S., & Tabash, M. I. (2022). The relationship between staple food crops consumption and its impact on total factor productivity: does green economy matter?. *Environmental Science and Pollution Research*, 1-10.
- Yu, S., Sial, M. S., Shabbir, M. S., Moiz, M., Wan, P., & Cherian, J. (2020). Does higher population matter for labour market? Evidence from rapid migration in Canada. *Economic Research-Ekonomska Istraživanja*, 1-18.
- Zainol, Z., Shaari, R., & Ali, H. M. (2008). A Comparative Analysis on Bankers' Perceptions on Islamic Banking. *International Journal of Business and Management*, 3(4), 157-168.
- Zhou, L., Zhang, Y., & Xu, J. (2002). A critical assessment of SERVQUAL's applicability in the banking context of China. *Asia Pacific Advances in Consumer Research*, 5, 14-21.
- zlex's Lam, T. (2002). *Making sense of SERVQUAL's dimensions to the Chinese customers*. *Journal of Market-Focused Management*, Vol. 5 No. 10, pp. 43-58.
- Zehra, N., Umair, H., Shabbir, M. S., & Mallouli, A. E. (2022). The Role of Islamic Banking Development and its impact on Financial Stability: Evidence from Morocco's Financial Institutions. *Pakistan Journal of Humanities and Social Sciences*, 10(1), 354-365.