Impact of E-Banking Service Quality on Customers' Behavior Intentions Mediating Role of Trust

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Abstract

This study examines customers' behavior intentions to use online-banking services in Pakistan context. It also examines mediating impact of customers' trust on association of e-banking service quality (E-BSQ) and their behavior intention (BI) as users of service. Data is obtained via self-administered questionnaire using survey method from 250 respondents (E-users of banks) from Lahore, Pakistan. Data is analyzed applying regression mediation analysis through Hayes process macro-SPSS 21. Results revealed the positive significant impact of E-BSQ on customers' trust. Further, EBSQ was also significant predictor of their behavior intentions. Mediating variable trust had also significant effect on customer behavior intentions. Results also supported partial mediation of trust in association of E-BSQ and BI. This study has implications for scholars, management and decision makers as findings provide valuable information on the significance of building customer trust and improving online-banking services for customers' retention. The research was focused on e-banking context. Future research studies should apply this framework in other service industries for generalizability of findings across various service sectors.

Keywords Customers' Behaviour Intentions, E-Banking Service Qquality, Trust, Online-Banking Services

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1.Introduction

Setting a standard ruling for customer's satisfaction is very complex in the service-oriented industry. Increase in customer's awareness about offered service by banks increases his/her expectation about quality of services. In banking industry, service quality (S*Q*) plays a crucial part to measure banks' performance (Alnaser et al., 2018). E-banking system is designed to enable secure and easy access to customer' bank account 24/7 in a week. E-banking service (E-BS) saves customers' time by executing transactions anytime, anywhere, and only requires internet accessibility (Preetha et al., 2019). By shifting focus to e-Service *Quality* (E-S*Q*), banks are now in place of conventional S*Q* in their entire process of transaction. Customers are pretty concerned about E-S*Q* provision by their respective banks in current age of information technology (IT).Based on quality of e-service provision by their respective banks, customers have initiated to maximize and minimize transactions from banks (Agarwal et al., 2014).Huge benefits (for both customers and banks) have been revealed by Internet banking as it is facilitating minimized waiting time, greater savings in cost, 24-hour appropriate bank timing, and improved control in delivery of service (Xue et al., 2011).Association between E-Banking services (E-BS*Q*) and client satisfaction (CS) is indicated by numerous studies (Hammoud et al., 2018). By using E-BS*Q* in banking sector, their satisfaction level increases (Asiyanbi & Ishola, 2018). According to State bank of Pakistan (SPB) reports of year 2014 and 2015, over past decades a massive flow was witnessed in financial transactions of retail banking in Pakistan with ATM cards comprising sixty four percent (64%) of total financial transactions of online-banking. Financial transactions through online -banking has witnessed a substantial growth since previous five years. Volume of transactions through E-banking raised from Rs 235 to Rs 247 million by 100% and volume further raised from Rs 22.1 to Rs 35.8 trillion by year 2010 to 2015 which portrays composition services growth of e-banking in Pakistan (Hussain et al., 2017). Main challenges and problems in growth of e-banking industry of Pakistan are also there which include website design, capacity, scalability, trust issue, security and money laundering (Kazmi & Hashim, 2015).

One of key issues in Pakistan is security for online-banking. Reputation of bank must be spoiled in case of financial damages to client. A major threat is security risk from hackers, who steal some secret information or money. Another main problem in development of online -banking in Pakistan is lack of trust. On account of few shortcomings in online-banking, clients stop to trust that bank and its services. Cyber threats have also been faced by banking sector of Pakistan on account of internet connectivity, for example security of transaction, threats on account of privacy of clients' accounts and security of banking system (Hussain et al., 2017). Security issues are high among clients, and existing banking system in Pakistan, which demands improved internet e-banking structure. To gain confidence of their customers, banks are required to get rid of this problem. For improving banking system, speedy, efficient and well-organized services are further needed to be facilitated by banks to minimize challenges of online banking in Pakistan. Security and measures are required to be implemented in all banks. Many problems prevail in implementation of online E-banking in Pakistan for instance use of implementation of E-banking system and additional expenditures (Tahir & Waheed, 2017). By resolving these challenges and issues, banking sector can give greater ease and make customer loyal (Kazmi & Hashim, 2015).

Banking sector can make its customer loyal and change their behavioral intentions (BI) by solving these issues and challenges, and provide more ease to its customers. BIs are identical in both virtual and traditional settings, and they usually include positive word of mouth, repurchase intents. Hence, these are vital signs for manages for understanding consumers' defection or retention with a firm (Tran, 2020). For customer retention, banks are required to consider more eagerly customer's needs preferences. BI impacts how hard an individual is eager to strive, and his / her motivation level to execute behaviour. In theory, BI most proximately predicts behaviour (Tran & Le, 2020; Ajzen, 1991). Effective, enhanced efficient, and rapid online -banking services must be provided by banks for building customers' trust and providing service provision. Websites and online-banking system are highly influential factor to build customer trust in E-banking service among other factors. In E-context, building trust is a critical challenging aspect. Trust is unavoidable and key factor in monetary transactions. Therefore, this has become a necessary variable to assess in E-financial service provision context. Banking characteristics (like client experience), service provision, shared information (like transparency, quality), perceived risk are key determinants of trust (Preetha et al., 2019). Assessment of service quality (SQ) in firms providing E-services varies with conventional SQ (Ardakani et al.,2015). For business success satisfying customer could be very critical in present market for building profitable and long-term customers (Punyani et al, 2015).

In online-services provision by banks in Pakistan, information website design, scalability, capacity, security and privacy, money laundering, cybercrime, ATM network link, non-technical staff and trust are critical problems identified by various research studies. These factors impact banks' customer base as customers switch to other banks if they become dissatisfied from provision of service by the bank. Improving customer base is crucial for banks as a lot of money is invested by banks in Pakistan for provision of E-banking services. Hence, addressing critical factors of E-banking service quality (E-BSQ) and its impact on customers' behavior intentions (CBI) is crucial for building long term customers' base and minimizing clients' defection which may result in customer loyalty. Furthermore, research gap is present due to limited research in terms of service quality and behavioral intention literature and findings are contradictory as well. Limited research is conducted in Pakistan on account of few studies in E-BSQ assessment. Research is limited to examine impact of trust as mediator in relation of E-BSQ and behavioral intentions. Therefore, this study will address effect of E-BSQ on customers' behavioral intentions and also look into mediating causal effects of trust on its relationship. This study is designed with the key objectives of 1) to examine effect of e-Banking service quality (E-BSQ) on customers' behavior intentions (CBI) in e-banking services of Pakistan; 2) to examine effect of trust on CBI in e-Banking services context; 3) To investigate mediating role of customer's trust in association of E-BSQ and CBI in e-banking services of Pakistan.

2. Literature Review and Hypotheses Formulation

2.1 E-Banking Service Quality (E-BSQ)

Parasuraman et al., (1985) defined Service quality (SQ) as, "result of the evaluation by customers which they DEVELOP between their expectations regarding a service and their perception of service performance". To examine consumer's perceptions of service, the authors suggested Serv-Qual, a multi-item scale, as a vital model for gap identification between consumers' expectations regarding service and their perceptions of its actual performance. Initially Serv-Qual scale had ten (10) dimensions which were reduced to five (Butt, 2020; Parasuraman et al., 1988). Based on five dimensions, 22 item scale to appraise SQ was constructed (Namahoot & Laohavichien, 2015). SQ construct, Serv-Qual was developed in marketing research to appraise SQ perception of consumer. This was presently considered in few studies only to evaluate successful acceptance of technology (Tran, 2020).

2.1.1 Measuring E-BSQ using E-SQUAL

E-service quality (E-SQ) is defined as, "the consumers' overall evaluation and judgment of the excellence and quality of E-service offering in the virtual market place" (Santos, 2003) and this definition explains E-SQ in general and particularly E-BSQ (Tharanikaran al., 2017). Many techniques allow for assessment of E-service profile of a firm that is perceived by its consumers which include E-S-$Qual$ developed by Parasuraman et al., (2005), E-Serv$Qual$, by Zeithaml et al., (2002), web-$Qual$, by Loiacono et al., (2002), and E-Tail$Q$ by Wolfinbarger and Gilly (2002). Akinci, et al., (2010) suggested that existence of an E-organization context is dependent on understanding assessment and perception of E-SQ by customers, and it is primarily true for e-Banking (Tharanikaran et al., 2017). E-SQ plays an important part in achieving failure or success in any firm by offering e-Services. It will enhance competition among firms to attract clients on basis of provision of SQ. Improved quality of E-service will augment clients' satisfaction and relations. On account of intricate nature of services, assessment of E-SQ is very important but it is a complicated procedure. For assessing website E-SQ, E-ServQual is a technique which is based on similar standard like conventional Serv$Qual$ technique and includes few dimensions like Serv-$Qual$. E-S-QUAL scale is used to appraise quality of website (Agarwal et al., 2014). Although, E-SQ models have been developed by many authors, model by Parasuraman et al. (2005) has been used in many previous studies. Their model has been rooted from mean-end framework, and they developed E-S-QUAL with four (4) dimensions (including system, efficiency, privacy, fulfilment), and E-Rec-SQUAL with three (3) dimensions (including Compensation, responsiveness, and contact) for assessing SQ of Web sites. Significantly, this E-SQ model by Parasuraman et al. (2005) has been used by Akinci et al., (2010), who ensured this model was appropriate for E-banking context. Moreover, seven (7) dimensions of E- service quality by Parasuraman et al., (2005) have also been used by numerous latest studies on online E-banking for example Cetinsoz, (2015), Paschaloudis (2014) and Nathan, (2014) for measuring SQ construct in E-banking (Tharanikaran et al.,2017).

2.1.2 E-BSQ DIMENSIONS

According to Parasuraman et al., (1985), a determining factor of consumer's satisfaction is speed in performing e-Banking services. In terms of rapid speedy service, efficiency was also confirmed by Khadem & Mousavi (2013) and Wirtz and Bateson (1995). Different dimensions have been defined by researchers in online banking contest. Following E-S-Qual measurement dimensions have been defined by researchers in e-Services context and also used in this study.

a) *Reliability* It is the most significant feature which clients look for in determining E-SQ of E-banking context (Liao & Cheung , 2002).It is related to the technical working and proper functionality of the website (Khan et al., 2014).It is exactness of service promised and accurate technical functioning of site and delivery of order what and when it was promised to be delivered , information of product and billing (Parasuraman, et al., 2005).

b) *Responsiveness* It is readiness to support the bank clients and rapid service delivery to customers (Madu & Madu, 2002). It is related to customer representative services. It assesses for-tellers' ability of timely information provision to clients, queries handling and clients complains and gives online guarantees (Khan et al., 2014).

c) *Fulfilment* is level to which promise about delivering and item availability of order at site is fulfilled (Hammoud et al., 2018).

d) *Efficiency* Site being easy to use, appropriately structured, and minimum information is required for input by client (Parasuraman, et al., 2005). It is about the appropriate working of internet services. Customers can access complete information on website without difficulty. It is ability of getting relevant and reliable information on site (Khan et al., 2014).

e) *Security / Privacy* In online service context, it is the degree of consumer's belief about protection of private information at site and safety from interruption (Parasuraman et al., 2005). Table 1 gives an overview of E-S-Qual measurement dimensions used by researchers.

Table 1 E-S-Qual Measurement Dimensions

E-S-Qual Scale Dimensions	Researchers
Efficiency	Parasuraman et al. (2005), Asad, et al (2016)., Sikdar, et al., (2015), Hammoud et al. (2018)
Reliability	Alawneh, et al., (2013), Toor et al., (2016), Hammoud et al. (2018)
Security / Privacy	Alawneh, et al., (2013), Parasuraman et al. (2005)
Responsiveness / Communication	Hammoud et al. (2018), Alawneh, et al., (2013)
System availability and fulfilment	Parasuraman et al. (2005)

Source Hammoud et al. (2018), Parasuraman et al. (2005)

2.2 Customer Behavior Intentions (CBI)

According to Fishbein and Ajzen, (1975), "Behaviour intentions (BI) appraise the capability of a person's intentions to perform a specific behaviour". Positive BI are linked with the capability of service providers making their consumers to speak positive words (Tran & Le, 2020). Using Ser-Qual model, Zeithaml et al., (1996) proposed relation of perceived service quality (PSQ) with positive

behavioural intentions (BI), being viewed as signals of client defection or retention. Behavioural intentions (BI) are a multidimensional concept according to latter model, comprising of purchase intentions, word-of-mouth (WOM), complaining behaviour and price sensitivity. Fishbein and Ajzen (1975) proposed that appropriate measurement of BI to a higher degree could forecast actual behaviour. Applying Zeithaml et al., (1996) model, Bloemer et al., (1999), and Baker and Crompton (2000) found confirmation for its worth to predict components of customer loyalty (Ravichandran et al.,2010).

2.2.1 Factors Impacting Customer Behavior Intentions in E-Banking Context

Gerrard and Cunningham, (2004) identified incidents causing customers to switch among banks and main findings showed switching bank was strongly impacted by incidents of three (3) types including inconvenience, service failures, and pricing. These incidents accounted for approximately ninety per-cent (90%) of switching bank. Keaveney (1995) pioneering research study developed a model containing 8 switching incidents including inconvenience, pricing, failures of core service, failures of service encounter, responses of employee to service failures, ethical problems, attraction by competitors, involuntary switching, and few rare incidents.

2.2.2 Association Between Service Quality and Customer Bbehavioral intentions

Relation between service quality (SQ) dimensions and behavioural intention (BI) model has not been sufficiently examined in literature of SQ (Ravichandran et al., 2010). Boulding et al., (1993) found overall perception of SQ relating positively with motivation to recommend and negatively to complaining and switching behaviour (Kelley et al., 1993). In terms of relation between behavioural intention (BI) and overall SQ, conflicting finding were reported. Cronin and Taylor (1992) found insignificant relation, while Boulding et al. (1993) found positive and significant relation. Research on the relation between dimensions of SQ and Zeithaml et al. (1996) proposed model of BI is still limited (Ravichandran et al., 2010). To investigate nature of association between E-B SQ and CBI, following hypothesis is formulated.

> *H1* E-banking service quality (E-BSQ) has positive and significant impact on customer behavior intentions (CBI).

2.3 Mediating Role of Trust, its Dimensions and Measurement Criteria

In E-Banking services context, trust is defined as "the assured confidence a consumer has in the internet banking service provider's ability to provide reliable services through internet" (Namahoot & Laohavichien, 2015). It is a significant element in adoption of e-banking and customer relationship management (Usman, 2015). Trust comprises of three (3) features Integrity, ability, and benevolence (Slenders, 2010; Namahoot & Laohavichien, 2015). Benevolence means trustee cares and is motivated of acting in interests of truster. Ability is trustee's competence for doing what is required by trusted. Integrity means trustee is honest and keeps his/ her promises (Slenders, 2010). In terms of internet relation, customers believe in seller's ability of goods and services provision in convenient and proper manner. Benevolence means a person believes securely about second person's care about other and his/her motivation for acting in interest of another person. Integrity is belief that the

internet seller fulfils promises for delivering goods or services on scheduled time and conditions, or keeping personal information secured (Namahoot & Laohavichien, 2015). Literature indicates, trust has been examined as an outcome of other features by researchers. Assessment of defined trust criterion in e-banking services allows determining most significant factors for a specific market. Behind trust formation, identified factors in literature include integrity, benevolence, common values predictability, and competence (Skvarciany & Jureviciene, 2018; Lee et al., 2017; Kim et al., 2008). Table 2 presents key trust criteria used by researchers.

Table 2 Trust Criteria in E-banking Ascertained by Researchers

Criterion (Name of Equivalent Used by Authors)	Scholars	Factors Highlighted in Literature
Transparency	Kaabachi et al., (2017)	Relevant and accurate perceived risk
Reliability	Roy et al., (2017), Zhao et al., (2010)	
Quality	Kaabachi et al., (2017)	
Goodwil	Yu et al., (2015)	Benevolence
Reputation	Casaló et al., (2008), Kaabachi et al., (2017), Susanto, et al., (2013)	
Integrity	Casaló et al., (2008), Yu et al., (2015)	Relationship commitment
Security	Casaló et al., (2008), Kaabachi et al., (2017), Susanto, et al. (2013)	Perceived security, perceived website quality
Privacy	Casaló et al. (2008), Susanto, et al., (2013)	Perceived privacy
Perceived benefits	Kaabachi et al., (2017), Susanto et al., (2013)	Relative benefits, perceived use fullness, comparative advantage, perceived value
Satisfaction with system fairness	Zhu & Chen (2012)	Service quality, system quality fairness

Source Skvarciany and Jureviciene (2018)

2.3.1 Association among E-BSQ E, Customer Trust and Behavior Intentions

Namahoot and Laohavichien, (2015), study revealed that QM (quality management) directly impacts trust but has diverse impacts on its three (3) features of trust (benevolence, ability, and integrity). They found that only QM dimensions of service quality (SQ) and system quality had positive impact on ability component of trust. Lee and Chung (2009) research study investigated impact of QM dimensions of service, information and system quality on trust level of Thai customers towards E-banking, and corresponding impact of trust on customers' behaviour intention (BI) to use E-banking system. Findings showed SQ and system quality had positive impact on trust in mobile banking. Zeglat, et al., (2016) examined the impact of the e-Service quality (E-SQ) in E-academic databases on behaviour intentions of end users. Findings showed that five (5) dimensions of E-SQ had a positive effect on behaviour intentions of e-Users. Based upon study findings, following hypothesis is formulated.

H2 E-banking service quality (E_BSQ) has positive and significant impact on Trust (T).

Findings of numerous studies depicted that trust had direct and positive effect on customer's intention to use E-banking (Yiga, 2016). Furthermore, trust is determining factor which leads to additional use of E-banking (Özkan et al., 2010). Chiu et al., (2017) evaluated mediating impact of trust and behavioural intention (BI) of adopters to use mobile banking. Findings showed non-adopters of mobile banking asserted that initial trust antecedents had a significant impact on BI to use E-banking services. These findings support mediating role of trust in association between E-BS*Q and* CBI. Therefore, following hypotheses are formulated.

H3 Trust (T) has positive and significant impact on customer behavior intentions (CBI).

H4 Trust (T) has mediating impact between E-Banking service quality (E-BSQ) and customer behavior intentions (CBI).

3. Theoretical Framework

3.1 Underlying Theories
Theoretical framework and research model is developed considering theory of reasoned action (TRA) and theory of planned behavior (TPB) and E-SQual. Reseachers applied either TRA or TPB in internet and mobile banking, whereas few scholars such as Alsajjan and Dennis (2010) combined these models to predict behavioural intention to use e-banking (Chui et al.,2017).TRA (theory of reasoned action) is extensively authenticated behaviour intention (BI) model which is successful to explain and predict behaviour across broad range of fields (Namahoot & Laohavichien, 2015).According to TRA, behavioural intention (BI) is cognitive depiction of personal readiness for executing a given behaviour which is impacted by subjective norm and shaped by individual's attitude (Fishbein and Ajzen, 1975).This theory helps banks in improving and developing service quality of e-banking system and increases customer confidence and enhances positive image.TPB (theory of planned behaviour) was introduced as extension of TRA by Ajzen (1991) which additionally provides explanation for adoption behaviour. It focuses on behavioural intention (BI) as function of attitude, perceived behavioural control and subjective norms (Fishbein & Ajzen, 1975). According to Ajzen (1991), TPB explains how a person is expected to complete a behaviour leading to determinant actual behaviour of a person. Three (3) variables impacting person's behavioural intention include attitude toward the behaviour, subjective norms and perceived behavioural control. It helps persons in rational and systematic decision making by available information. For assessing website E-service quality (E-SQ), E-ServQual is a scale which is based on similar standard like conventional SERV-QUAL and includes few dimensions like Serv-Qual. E-ServQual scale is used to assess delivered quality by website. (Agarwal et al., 2014).

3.2. Association among Variables and Path Diagram
Figure 1 depicts research model, E-banking service quality (E-BSQ) is predictor variable (IV), customer behaviour intentions (CBI) is dependent variable (DV), and trust (T) is mediating variable. Diagram shows, predictor variable E-BS*Q* has direct effect on dependent variable BI which is shown

as path 'c'. While path 'a' shows effect and relationship of predictor (E-BSQ) on mediator trust (T). Similarly, path 'b' shows mediator trust (T) effect on dependent variable, CBI. Finally, path 'c' shows mediation which is total effect (i.e., direct and indirect effect) of predictor variable, E-BSQ on customer behaviour intentions (CBI). This model also assumes that all effects are significant.
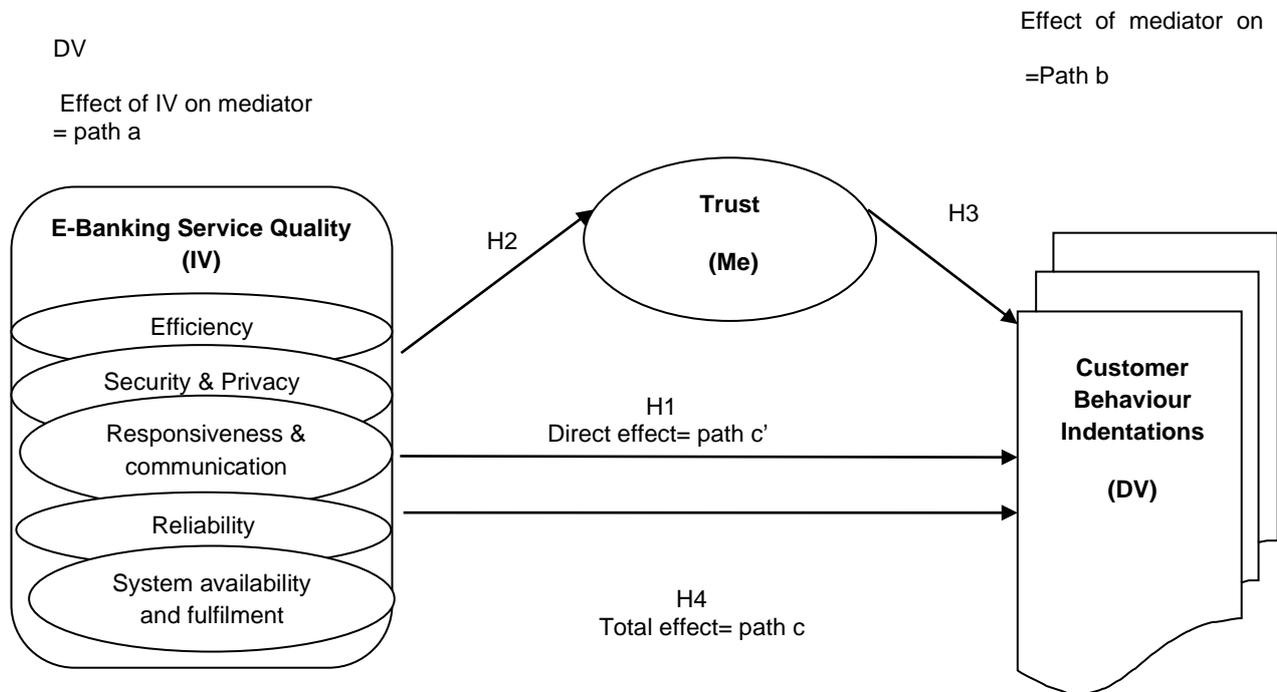

Figure 1. Research Framework

4. Methodology

4.1 Research Design and study sample

Research engaged quantitative technique and cross-sectional design to examine effect of E-BSQ on customers' behaviour intentions (CBI). Survey method using self administered questionnaire was used as primary data collection technique to get feedback from E-customers of various banks. Sample of 250 respondents from Lahore, Pakistan was selected applying random sampling technique. Questionnaire was adopted as primary data collection instrument and research tool for current study was adopted and developed from previous validated scales by researchers. Study population consists of all customers using E-banking services of various banks of Lahore, Pakistan. Sampling unit for the study was E-customer who had first hand service experience of using E-banking services of various banks in Lahore. Sample adequacy is pre-requisite for quantitative studies. For scale development; few scholars recommended at least 10 subjects/ item as a rule-of-thumb (Flynn & Pearcy, 2001). According to Bentler and Chou (1987), a ratio of 10 responses/perameter was recommended for sample size by scholars to achieve reliable estimates. But in case of data normality concerns, responses/ estimated parameters should be enhanced to 15 (Janjua, & Aftab, 2016; Hair et

al., 2006; Bentler & Chou 1987). Considering number of study factors, sample size of 250 respondents was adequate for data analyses.

4.2 Questionnaire Design

 A structured questionnaire (on a Likert 5-point scale) was developed for data collection from previous researchers validated scales that were adapted for purpose of current study. Questionnaire consisted of four sections.

Section I comprised of statements regarding participants' demographic profile including, monthly income, gender, customer bank account information, age, qualification, and frequency of website usage.

Section II comprised of 32 questions to record respondents' opinion abou E-BSQ dimensions. Statements/ questions in this part were rephrased and adopted from research papers of Hammoud, et al., (2018), Akinci et al., (2010), Alawneh et al., (2013), Parasuraman et al., (2005), and Toor et al., (2016).

Section III comprised of six questions to record respondents' opinion about trust (T). Statements/ questions in this part were rephrased and adopted from research papers of Shareef et al., (2018) and Kordnaeij et al., (2015).

Section IV comprised of six questions to record respondents' opinion about perceived customer behavior intentions (CBI). Statements/questions in this part were rephrased and adopted from research papers of Parasuraman et al. (2005), and Kordnaeij et al., (2015).

Developed scale was pretested on twenty respondents (E-customers of various banks) to identify any ambiguous statements before data collection.

4.3 Data Collection and Analysis Method

Survey method was used by researcher for data collection. Researcher approached customers who were using E-banking services of various banks of Lahore and requested them to participate in survey. After seeking approval, researcher explained them purpose of research and ensured about confidentiality of information. This method was adopted to clarify any ambiguity to respondents regarding responses and questions. Data was analyzed applying statistical tool SPSS 21. For analysis, first internal consistency/reliability and correlation among variables was determined. Second, Andrew Hayes Process macro-SPSS 32 version was employed (for regression mediation analysis) to test impact of trust as mediating variable.

5. Results and Analysis

5.1 Demographic Analysis

Demographic information of respondents is reported in table 3. Descriptive statistics revealed that sample size comprised of 250 respondents including 129 females (51.6%) and 121 males (48.4%). Age profiles reveled that majority of respondents 87 (34.8%) were between 26–35-year age bracket, followed by 77(30.8%) between 36-45 year, 38 (15.2%) between 46-55 year, 30(12.0%) were < 25 year and only 18(7.2%) were greater than 55 years. Regarding E-account holder profiles, majority of respondents 135 (54%) were E-customers of HBL, followed by 53 (21.2%) of standard chartered, 28 (11.2%) of MCB, 22 (8.8%) of bank Islamic, 9 (3.6%) of Askari bank E-customers and only 3 (1.2%) were E-customers of other banks. Moreover, results also revealed that highest percentage of respondents 123 (49.2%) was for salaried category, followed by 55(22%) for self-employed, 31(12.4%) for students, 29 (11.6%) for retired persons and only 12 (4.8%) for other categories. Regarding the income level, majority of respondents 98 (39.2%) were between Rs 25,000- 49,999 income bracket, followed by 94 (37.6%) were between Rs 50,000-99,999 bracket, 39 (15.6%) were between income bracket Rs 100,000 or more, and only 19 (7.6%) belonged to less than < 25,000 income bracket. While in terms of frequency of website usage, majority of respondents 82 (32.8%) used website 9 to 12 times a month, 79 (31.6%) 5 to 8 times, 50 (20%) 13 or more times and 39 (15.6%) 4 or less times a month. In terms of qualification level, majority of respondents 116 (46.4%) were master degree holders, 87 (34.8%) were bachelor, 24(9.6) were intermediate, 21(8.4%) were MS/ PhD and only 2 (.8%) had matriculation degree.

Table 3 Demographic Information

Factor	Category	Frequency		Percentage	
Gender					
	Males	121		48.4	
	Females	129	250	51.6	100
Age (year)					
	< 25	30		12.0	
	26-35	87		34.8	
	36-45	77		30.8	
	46-55	38		15.2	
	more than 55	18	250	7.2	100
E-customer A/C					
	HBL	135		54.0	
	Standard chartered	53		21.2	
	MCB	28		11.2	
	Bank Islami	22		8.8	
	Askari	9		3.6	
	Other	3	250	1.2	100
Customer Types					
	Salaried	123		49.2	
	Self-employed	55		22.0	
	Retired	29		11.6	
	Students	31		12.4	
	Other	12	250	4.8	100
Monthly Income (Rs)					
	< 25,000	19		7.6	
	25,000-49,999	98		39.2	
	50,000-99,999	94		37.6	
	100,000 or more	39	250	15.6	100
Website Usage (frequency / month)					

	4 or less times	39		15.6	
	5 to 8 times	79		31.6	
	9 to 12 times	82		32.8	
	13 or more times	50	250	20.0	100
Education level					
	Matriculation	2		0.8	
	Intermediate	24		9.6	
	BS	87		34.8	
	MS	116		46.4	
	Other	21	250	8.4	100

5.2 Reliability Statistics

Table 4 presents reliability of scales used in study applying Cronbach's alpha value. According to Nunnally & Bernstein, (1994), the data were considered as reliable if the value of Cronbach's alpha exceeded 0.50. Test results showed that values of coefficient α were greater than acceptable value in all factors. According to Gliem and Gliem (2003) rule, "Cronbach's α-value greater than .70 falls in acceptable range and Reliability>.90=excellent; >.80=good; >.70=acceptable;>.60=questionable; and >0.5=poor" (Butt & Yazdani, 2021). Test results showed that values of coefficient α were greater than acceptable value in all factors.

Table 4 Reliability Statistics

	Items	Cronbach's Alpha		Items	Cronbach's Alpha
Efficiency	7	.711	E-Banking service quality	32	.899
Security and privacy	7	.775	Trust	6	.902
Responsiveness and communication	6	.797	Customer behavior intention	6	.886
Reliability	6	.779	Overall scale reliability	44	.943
System and fulfilment	6	.832			

5.3 Normality Statistics

Table 5 presents normality statistics. H0 (null hypothesis) of all variables under study assumes that data followed normal distribution (Butt, 2020). Results indicated insignificant p-values greater than 0.05 for all variables. Hence, normality statistics indicated that data were appropriate for regression analysis.

Table 5 Normality Test

Factors	Statistic	df	Sig.
Efficiency	.056	250	.057
Security & privacy	.054	250	.072
Responsiveness and communication	.055	250	.068
Reliability	.055	250	.065
System and fulfillment	.054	250	.071
Trust	.054	250	.079
Customer behavior intentions	.052	250	.098
E-Banking service quality	.038	250	.200[*]

5.4 Correlation Analysis

Test results indicated positive and statistically significant correlation between trust and E-banking service quality (r=.612, P < 0.01); between trust and customer behaviour intentions (r=.822, P < .01); and between E-banking service quality and customer behaviour intentions (r =.629, P <0.01). This means with increase in one variable other also increases or vice versa.

Table 6 Correlation Analysis

Factors	T	E_BSQ	CBI
Trust (T)	1		
E-Banking service (E-BS*Q*)	.612**	1	
Customer behavior intentions (CBI)	.822**	.629**	1

** Significant at 0.01 levels

5.5 Mediation Regression Analysis

Table 7 presents overview of study variables and mediation process model applied in study. Data was analyzed applying Andrew Hayes model 4 for mediation using Hayes process macro-SPSS version 21.

Table 7 Model information

Hayes Process model	Predictor	Mediator	Dependent Variable	Sample Size
Model 4	E-Banking service quality (E-BS*Q*)	Trust (T)	Customer behaviour intentions (CBI)	250

5.5.1 E-BS*Q*, CBI and Trust Interactions

Table 8 presents results of mediation regression analysis using SPSS process macro-32. Series of regression equations were applied to test mediation impact of trust (T) on relation of E-banking service quality (E_BS*Q*) on customer behavior intentions (CBI). Output in table lists all variables in the analysis, indicating that E_BS*Q* is predictor (X), CBI is dependent variable (Y) and trust (T) is mediator. Findings showed that E_BSQ was also significant predictor of customer behavior intentions (R^2=.395, F (1,248) =162.159, p < 0.05). Hence, H1 was accepted. Results also indicated that E_BS*Q* was a significant predictor of trust (T), B=.807, SE=.066, p < .05. Hence, H2 was accepted. Furthermore, trust (T) had significant effect on CBI, B=.705, SE=.044, p < .05. Hence, H3 was accepted. These results supported the mediation hypothesis. But E_BSQ remained significant predictor of customer behavior intentions (CBI) after controlling for the mediator, trust (T), B=.267, SE=.058, p <.05 indicating partial mediation. Approximately, 70.16% of variance in CBI was contributed by the predictors (R^2=.702, F (2, 247) = 290.408, p < .05). Hence, H4 was supported.

Table 8 E-BSQ, CBI and Mediator Trust Interactions

	R²	MSE	F	B	SE	t	p	LLCI	ULCI
E-BSQ effect on CBI									
Model Summary	.395	.286	162.159				.000		
Constant- CBI				.587	.247	2.373	.018	.099	1.074
E-BSQ				.836	.066	12.734	.000	.707	.966
E-BSQ effect on Trust									
Model Summary	.374	.292	148.270				.000		
Constant- Trust				.790	.249	3.164	.002	.298	1.282
E-BSQ				.807	.066	12.177	.000	.677	.938
E-BSQ, Trust effect on CBI									
Model Summary	.702	.142	290.408				.000		
Constant – CBI				.030	.178	.169	.865	-.319	.379
E-BSQ				.267	.058	4.572	.000	.152	.382
Trust				.705	.044	15.923	.000	.618	.792

Level of confidence for all confidence intervals in output 95%
Number of bootstrap samples for percentile bootstrap confidence intervals 5000

5.5.2 Total and Direct Effects

Table 9 presents results of total and direct effects of E_BSQ (predictor-X) on CBI (dependent variable-Y). Total effect (c) is sum of direct effect (c') indirect effect (ab). It can be statistically written as c= (c' + ab= .267+.569=.836, (SE=.066, t=12.734, p < 0.05). 95%-CI [.707, .966] didn't include zero, indicating it is statistically significant, p value < 0.05, which further confirmed its significance. Based on 5,000 boot straps, a confidence interval of 95% indicated that direct effect (c') of E_BSQ on CBI, (c'=.267, SE=.058, t=4.572), 95%-CI [.152, .382] did not include 0; hence, it was statistically significant and significant p value < .05 further indicated its significance.

5.5.3 Indirect Effects

Table 9 presents results of indirect effects of E_BSQ (predictor -X) on CBI (dependent variable-Y) through mediating variable trust. Mediating variable trust is ab=.569. 95%-CI [.4219, .725] did not include 0, hence it was statistically significant and indicated partial mediation effect as E-BSQ in presence of mediator remained significant. Hence, H4 (mediation hypothesis) was supported.

Table 9 Mediation Effects in Presence of Trust

	Effect-B	SE	t	p	LLCI	ULCI
Total effect of E-BSQ on CBI	.836	.066	12.734	.000	.707	.966
Direct effect	.267	.058	4.572	.000	.152	.382
Indirect effects	.569	.077	-	-	.422	.725

6. Discussion and Conclusion

Presents study was conducted to assess impact of online-banking service quality on customer's behaviour intentions with mediating role of trust. Data was analysed applying SPSS 21 and path co-efficient were estimated conducting multiple regression mediation analysis applying process macro developed by Andrew Hayes. This statistical tool determined direct, indirect impacts of predictor variable (e-banking service quality) on the dependent variable (customer behaviour intentions) through presence of mediating variable (trust). Rregression mediation analysis assumes that some linear correlation must exist between predictor and dependent variable and mediating variables, Pearson test results confirmed positive and statistically significant correlation between predictor (EBSQ), outcome variable (CBI), and Mediator (Trust). Study hypotheses were supported and showed statistically significant impacts. Results indicated that e-Banking service quality (E-BSQ) was a significant predictor of trust. E_BQ was also significant predictor of customer behavior intentions (CBI). Results also indicated that trust (T) had significant effect on CBI. These results supported mediation hypothesis. But E-BSQ remained significant predictor of customer behavior intentions CBI after controlling for the mediator (trust) indicating partial mediation.

Relation between service quality (SQ) dimensions and behavioural intention (BI) model has not been sufficiently examined in literature (Ravichandran et al., 2010). Research ffindings are supported from previous literature. E_BSQ significant and positive effect on CBI is supported from findings of Zeglat, et al., (2016) who found that five (5) dimensions of E-SQ had a positive effect on behaviour intentions of e-Users. Results are also consistent with Boulding et al. (2003) who found significant and positive relation, but findings are in contradiction with Cronin and Taylor (1992) who found insignificant relation between Service quality (S. Q) and BI. Findings also indicated significant effect of E_BSQ on trust. These findings are in alignment with Namahoot and Laohavichien (2015) study findings in e-Banking context which showed quality management (QM) dimensions of service and system quality had positive effect on trust dimensions.Results are also aligned with Lee and Chung (2009) investigated impact of QM dimensions of service, information and system quality on trust level of Thai customers and corresponding impact of trust on CBI to use online banking system. Findings showed service and system quality had positive impact on trust in mobile banking. Moreover, study findings also indicated positive and significant impact of trust on consumer behaviour intentions. Findings are also in alignment in Chiu et al., (2016) study of Philippines internet banking to examine effect of initial trust on customers' behavioural intentions. Their findings showed initial trust played a significant effect on behavioural intentions of customers to use mobile banking services. Results are also in alignment with Chiu et al., (2017).

6.1 Study Implications

This study contributes to existing literature as published research examining online banking services and customer behavioral intentions considering mediating role of trust is limited specifically in online banking context.Study findings provide scholars and managers valuable information on the importance of building customer trust and improving online-banking services for customers retention

and minimize defections due to positive and significant association between e-banking service quality (E-BSQ) and customer behaviour intentions (CBI).Assessment of E-BSQ will help bank managers and decision makers to enhance customer trust, maximize their customer base of e-Users of internet banking services, formulate strategies and revise quality policy for improving electronic banking services. Effective service provision depends on trust building formation as customer experiences online services. Maintaining customer's confidence is essential to build long term customer relations. Moreover, study findings provide insights for building consumer trust, changing customer behavioral intentions by improving e-Banking service quality.

6.2 Limitations and Future Directions

This study has few limitations. First study limitation is smaller sample size due to time constraints. A second limitation is that sample focused on e- Users of banks in Lahore city, Pakistan due to time and resource constraints. Future studies are needed to increase sample size and include e-Users of other areas in Pakistan to generalize study findings. This study examined effect of mediator trust to examine relation of e-Banking service quality and customer behavior intentions (CBI). Further research should be conducted testing other mediators for example corporate image ,switching costs or a combination of mediator and moderator. Third, this research was focused on e-banking context. Future research studies should apply this framework in other online service industries to validate applied model and increase generalizability of findings across various service sectors. Future researchers can include other mediating and moderating variables in this model to develop an improved model. Future research should also examine significant differences in consumer's perception about e-banking service quality and behavioral intentions on account of demographic factors like qualification and income level.

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