

# Measuring E-Readiness among Non-Users of Internet Banking in Pakistan: By TAM with CRM as External Factor

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## Abstract

In the recent technological era, ignorance by financial institutes is observed while considering customer focus policies and business offers. In the meanwhile, technological innovation has changed the business nature, where internal customers of financial institutes are engaging with heavy technological trainings, to put it in the core of actions. The triangulated quantitative and qualitative approach is adopted. Specifically, the quantitative survey analyzed to measure path analysis, model fitness and highlight relationships after validating the scales and methodology. In qualitative aspect, 3 interviews with bank's managerial staff to understand the stance of bank clients about the Internet banking adoption. The findings conclude that the non-users of internet banking service have attractive 'Perceived Usefulness' and 'Perceived Ease of Use', however the 'push' from the bank by the effective communication is not been observed. The customers still can have the essence of trial-ability and adoption if the intelligent CRM based strategy is developed. To make it possible and successful adoption of internet banking, the current research suggests to promote Customer Relationship Management, as a tool to boost the morale of end-users. CRM can eliminate the negative impact of social influencing factors which are not current supporting internet banking adoption in Pakistan i.e. subjective norms, peer influence and reputation. Interestingly, only very few research studies highlighted the use of CRM and e-CRM to increase internet adoption globally. Moreover, it is the first initiative of its kind, to address Internet banking adoption while increasing relationship with customers in the focused region.

**Keywords:** Internet banking, Technology Adoption Model (TAM), Pakistan, Customer Relationship Management (CRM), Perceived Ease of Use (EASE), Perceived Usefulness (PU).

## 1 Introduction

Banking sector always play crucial role in the progress of any developed or developing economy. Since 1947, financial institutes in Pakistan witnessed many severe macro level interferences. For example: (1) un-lawful and un-fair business practices as a result of encouraged private banks in 1950's and 1960's. (2) Act to nationalize all established banks in 1970's dropped off the quality of products and services. (3) In 1990's, Government of Pakistan deregulated and privatize the banking sector in Pakistan to start new journey of liberalization in banking industry. On the current date, more than 38 commercial banks are in operation, which includes private, public and foreign banks (Shah, Jhatial, Ghumro, & Shah, 2012). Statistically, more than 80% of banking sector is running by private players and assets of Pakistani banking sector have been lifted above \$60 billion because of their healthy performance(Akhlaq & Shah, 2011). As the commercial banking sector in Pakistan is getting mature with the passage of time, new market players are re-shaping needs and wants of the consumers. As a result, today's consumers have high bargaining power and have updated knowledge about available services and choices, and never hesitate to switch in case of any inconvenience(Shah et al., 2012).

The purpose of the current study is to analyze internet banking behavior of customers in Pakistan on the basis of 'Technology Acceptance model' (TAM), and to understand the ground realities of the actual operations and practices in financial institutes. In the next section, 'Literature review' will present existing theories and concepts about the emerging trends and the manner of banking industry. This section analyse how banks strategically categorize their customers. Further sections within the Literature review will summarize the importance of 'Customer Relationship Management' (CRM). CRM as a tool to boost internet banking adoption. How technological innovation has transformed most of the business practices in the financial sector, and existing theoretical models which can help to illustrate the consumers behavior while considering about technology adoption. After having a quick look at the current practices in commercial banks in the country, highlight the internet banking research studied in the region, effective use of CRM observed around the globe and technological innovations impact on the commercial banking services. The objectives of the current study will be mentioned and will lead to the methodology. In 'Methodology' section, procedures and design will be discussed which will help to conduct qualitative surveys. It will be followed by 'Findings and analysis' to give an insight into the conflicts and doubts, which internal and external customers of internet banking generally holds about internet banking. 'Limitations and conclusion' will highlight the possible set of actions which can improve the rate of internet

banking adoption in external customers.

## 2 Literature Review

In the current business world, scope of any product or service can't be defined with any predetermined list of attributes and benefits. Sellers are stretching their arms to get closest to the consumers. In the systematic view, level of any product can be classified as (1) Core, (2) Tangible, and (3) Augmented (Levitt, 1983). The augmentation concept has restructured the traditional business environment into the hypercompetitive market place, where offering enrichments and add-ons are considered as threshold to survive and grow. Similarly, service marketing has transformed its strategies to focus customers. The service providers are not only working on typical combination of marketing mix (besides financial and social associations), firms have been started to treat customers as strategic partners where customized suite of services usually offered (Berry & Parasuraman, 1992). In context of financial service providers, the connection between financial institute and consumer can be categorized as following: (1) Interaction via Technological platform. For example: ATM (E-banking). (2) Interaction through bank representative (physical contact). (3) Mixed approach to interact by using technology and physical visit to the bank (Berry & Parasuraman, 1992). The ability of financial institutes to sense the strategic importance of any customer is the core to its success. Conceptually, each bank usually holds two types of customers. (1) Customer who can use limited number of services with less available funds. Such customers usually focus strong relationship with the financial institutes as they need cost-efficient services. Financial institutes classify such relationship as 'transactional exchange relationship'. (2) On the other side, customers with massive funds usually avail many add-ons and supporting services, and financial institutes treat them as partners. Strategically, transactional exchange relationship can be transformed into partners by motivating low investors with trust and information which can attract them for future investment (Day, 2000). In case of Pakistan, different levels of research has been recorded to elaborate the challenges and the benefits which can be availed through Internet Banking in Pakistan. Specifically, a quick overview of the conducted research is depicted in Table 1.

Table 1: Internet banking adoption-related research in Pakistan (in recent years)

Author(s) and year	Findings	Model adopted / Nature of the document
(Saeed, Azim, Choudhary, & Humyon, 2015)	Mentioned service quality (privacy, empathy, privacy, website design, and reputation) as driver for satisfaction and adoption of internet banking	Customized model / Qualitative
(Khurshid, 2014)	Studied trust, risk and quality as external factors to define ease of use and usefulness.	TAM with external variables / Quantitative
(Razzaq, 2014)	Studied TAM with trust, security, and compatibility as important factors to adopt the internet and mobile banking	TAM, Quantitative
(Goudarzi, Ahmad, & Soleymani, 2013)	Mention Trust as the major driver of Internet banking adoption.	Secondary data, Qualitative
(AHMAD, RASHID, MASOOD, & MUJEEB, 2011)	Discussed Bank's and Consumer's perspective on the basis awareness, benefits and trust.	Customized model
(Aslam, Khan, Tanveer, & Amber, 2011)	Studied non-Internet Banking users, highlighted perceived value, risk, privacy, and knowledge as challenging factors.	Descriptive statistics
(Omar & Bibi, 2011)	Studied customer's perceptions, problems, preferences while addressing quality and satisfaction.	Descriptive statistics / Quantitative
(Mohamad, Building, & Ismail, 2010)	Studied internet banking adoption among students on the basis of TAM and credibility and convenience.	TAM with external variables / Quantitative

The interesting observation in the current ongoing research concludes TAM as the most frequently used model to explain the situations, however very rare count of research is using triangulated approach to refine the findings to achieve research goals.

### 2.1. CRM in 'Banking Sector'

The dramatic change in customer loyalty over the past two decades is observed, especially in the service sector where new technological support, new competition, and customer awareness have transformed the business

practices (Payne, 1998). Every successful market-oriented firm always targets to increase the number of re-visits and re-purchases to create satisfaction and loyalty (Brassington & Pettitt, 2006). To achieve such strategic targets, financial institutes usually creates the segmentation of the consumer markets, on the basis of demographic, sociographic and psychographic features to provide better insight knowledge about existing and potential customers, and to address their needs and values (Machauer & Morgner, 2001). The Customer Relationship Management (CRM) can be defined as a process where relationship marketing is used as a tool to keep the existing customer loyal and to push the retention level high by establishing the healthy relationship with customers on trust (Light, 2001). In previous researches, the strong positive relation is observed between trust and initial intentions to use the electronic platform (Chen, Fan, & Farn, 2007; Wahab, Ali, & Kedah, 2009). Furthermore, the familiarity of the firm also imposes a positive impact on the initiative to use the online platform (Yousafzai, 2012). The aim of CRM is to maximize the customer's lifetime value by establishing long-term relations with consumers (Wang, Po Lo, Chi, & Yang, 2004). In technological context, CRM related operations, and communications have been improved by advanced database operations. i.e. data warehouse and data mining (Govender & Wu 2013; Sandoe et al, 2001). To keep CRM as a core competency of any service provider, it is important to keep CRM as a heart of the company, where holistic approach should be considered in each set of action. It allows the firm to study activities of the past, needs of the present and emerging trend of the future while considering any external or internal customer. Such use of CRM can trigger long term two-way relationship on the basis of trust and loyalty (Crosby, 2002). Furthermore, CRM helps to develop new product and services which can be offered in near future. The effective and efficient use of CRM can help to identify, generate and communicate quality, timely and reliable information to the customers where required. In Pakistan, banking customers usually idealize (1) better service at low cost, (2) convenience in managing multiple bank accounts, and (3) best financial services and solutions offered by banks (Wang et al., 2004). Apart from the customer needs, banks usually use the traditional channel of communication in Pakistan where customers experience face to face communication to perform tasks. Besides this, the emerging trends in communication channels include (1) Automated Teller Machines (ATMs), (2) Telephonic banking, (3) Mobile banking and (4) Internet Banking. The emerging Self-Service Technologies (SST's) have also changed the current banking practices, where consumers have less interactivity with financial institutes (Durkin and Howcroft, 2003). It is although a tough challenge for CRM to meet the unspoken needs of customers and the emerging trend of less interactive communication channels, where critical decisions can amplify the business results. In the researched literature, following dominating research is observed as shown in Table 2, which is emphasizing the utilization of CRM for business growth.

Table 2: Literature discussed CRM in banking sector (in recent years)

Author(s) and Year	Findings	Country
(Saxena & Khandelwal, 2011)	CRM as a tool to improve customer loyalty and relationship with clients.	India
(Malik & Kumar, 2013) (Farooqi, Kumari, Shoeb, & Email, 2013)	Benefits of e-CRM for Banks to improve operations and service (in a qualitative manner).	India
(Syed & Modak, 2014)	Studied demographic, sociographic and economic factors of customers and their perception towards CRM.	India
(Shakoor, 2012)	Use of CRM for marketing purpose	Pakistan
(Muro, Magutu, & Getembe, 2013)	Benefits and challenges of CRM adoption and usage from Bank's perspective	Kenya
(Hussain, Hussain, Hussain, & Sajid, 2009)	CRM as customer management tool	Pakistan
(Ahmad & Azzam, 2014)	Discussed CRM as process, strategy, ability, and technology to improve customer satisfaction.	Jordan
(Wahab et al., 2009)	Unique research studied CRM as a tool to increase internet banking	Malaysia

However, the CRM related research shown in Table 2 are not limited, however very rare count of research highlighting the CRM as a strategic tool to increase internet banking adoption in bank clients. Around the globe, the business of every nature has been geared-up because of technological interventions. In fact, every growing business is using Information Technology (IT) as a tool to create competitive advantage in its market space. In the banking sector, internet banking is defined as the use of the electronic platform to communicate and serve by any financial institute (Ragoobur and Ayriga, 2011). From customer's perspective, internet banking provides (1) quick access to the banking solutions and information, (2) consumers can view transactional history and funds management on figure tips, (3) electronic platform has maximized the availability time of banking services (Thornton & White, 2001). On the other hand, internet platform supports financial institutes in following ways: (1) Cost efficient business operations (Gerrard & Barton Cunningham, 2003), (2) electronic platform support efficient resource management (Birch & Young, 1997) and (3) increases accountability as it keeps complete record

of financial transactions; (4) Paperless environment always encourages eco-friendly attitude and behavior. Besides the benefits of internet banking, mixed views are observed regarding the effectiveness of internet banking, i.e. Through internet banking, banks can achieve better association with the consumers where banks can enjoy better customer satisfaction and loyalty (Ben Oumlil & Williams, 2000). In the same slot of time, some consumers prefer to have some special association with the firm they are associated. Sometimes, people make same irrational reasons to be connected with any product or service provider (Lindstrom and Andersen, 2000). The loyalty and satisfaction on the electronic platform are currently undergoing research topic around the world (Saeed et al. 2015; Sadeh et al., 2011). Where, the major challenge is to provide privacy and security on such communication channels (Chang and Wang, 2008). Market segments exist, who feel low self-efficacy and confidence in IT related activities (Brassington & Pettitt, 2006), and technological phobia (Joseph & Brad Stone, 2005) and victims of the digital divide (Brassington & Pettitt, 2006). In the marketing perspective, every successful firm always discovers, defines, generates and communicates value to current and potential customers; the term e-readiness is defined as the process of creating value through the internet use. In country perspective, e-readiness includes the infrastructure to run IT related services (Woodall, 2003).

In the mid-1990s, a few foreign banks introduced the concept of ATMs and Credit cards in Pakistan which was latterly adopted by all market players (Kaleem and Ahmed, 2008). In recent years, transactional level internet banking has been practiced by all dominant financial institutes. Previously, only information and communication level internet banking was heavily observed. According to the facts provided by State Banks of Pakistan (SBP), most of the local banks are dominant ATM service providers, and mostly foreign banks are credit cards solution providers in Pakistan (Rahimuddin & Bukhari, 2010).

## 2.2. Technology Adoption Modeling

Many researchers in past, justified different structured approaches to map human behavior, that how people behave towards any technological innovation. Initial researches focused on the senses of trial-ability, observe-ability, perceived advantage, compatibility and complexity in any innovation as crucial variables to decide about its success (Rogers, 1995). In 1962, Everett M. Rogers suggested 'Innovation Diffusion Theory' (IDT), which states that the previous experiences, innovativeness in technology, social norms and knowledge about innovation push individuals to make decision on the basis of its perceived benefits, which afterwards follow by further actions of acceptance or rejection in future (Rogers, 1995). Roger's proposed technology adoption concept is widely observed in applied research, i.e., in the case of ATM (Chinedu, 2010) and internet banking acceptance (Akhlaq & Shah, 2011). Ajzen and Fishbein proposed 'Theory of Reasoned Action' (TRA), a socio-psychological model in 1975 which concluded intentions as an output of 'subjective norms' and 'attitude' (Fishbein & Ajzen, 1975). In the academic literature, TRA is a successful structured model to analyze social, psychological and technological issues i.e., crime rate in society (Tuck & Riley, 1986), adoption of technology (Rehman et al., 2003), electronic shopping (Chuchinprakarn, 2005) and usage of internet banking (Sadeghi & Farokhian, 2011). To explain the unaddressed 'volitional control' (which drives intention) in TRA, Icek Ajzen developed 'Theory of Planned Behavior' (TPB) in 1985. TPB structures 'Behavior' as an output intentions' and 'perceived behavioral control' (Ajzen, 1991). In contrast of TRA, TPB holds better explanation power of internet banking adoption behavior in sociable searches (Yousafzai, 2012).

In 1986, Davis presented 'Technology Acceptance Model' (TAM), especially to address technological innovations. He highlighted the unexploited 'attitude' related variables which generally drives the decision of technology adoption (Davis, 1989). Davis defined 'attitude' towards any technology as a combined output of 'perceived ease of use' (EASE) and 'perceived usefulness' (USE) (Davis, 1989). USE refers to the improvements which technology adoption can lead to, and EASE explains the capability of technological innovation to make users task's easier and less complicated (Davis, 1989). In the meanwhile, EASE holds the direct positive impact on USE, as it increases the technology's tendency of acceptance. Furthermore, TAM concludes 'Behavioral intentions' (BI) of any individual as a combined effect of 'attitude towards technology' and 'Perceived usefulness' of the technology. Many researchers criticized TAM with the stance that external factors should be valued more than EASE and PU as they actual drives the technology adoption behavior (Yu and Lo, 2007). TAM based on Davis (1989) is shown in Figure 1. Apart from critics, TAM is observed intensively in technology adoption research, especially in the case of electronic banking. i.e. Study to measure a level of acceptance in Turkey (Çelik, 2008) and Nigeria (Aderonke and Charles, 2010), In the current study, only 'Perceived Risk' will be studied as an external variable which is influencing PU and EASE. Perceived risk is defined as customer's stance and fear of facing or experiencing any undesired output (Littler & Melanthiou, 2006). Many previous studies have already concluded that the perceived financial risks have negative association with intentions to use internet banking (Faqih, 2011; Yeung, Yee, & Morris, 2010).

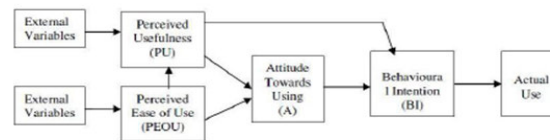


Figure 1: TAM (Technology Acceptance Model), adapted from (Davis, 1989)

### 2.3. Research Objectives

To continue the current research, customized TAM will be adopted as it helps to unearth internal as well as external factors which usually drive the decision to use any technology (Chong et al, 2010). The purpose of the current study is to understand the impact of 'perceived ease of use' and 'perceived usefulness' on the intentions of customer's internet banking adoption and the possibility to use CRM as a tool to increase its adoption in Pakistan as shown in the model shown in Figure 2.

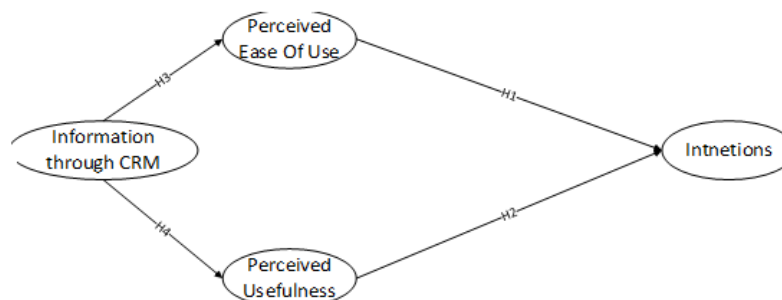


Figure 2: the proposed model to study 'Internet Adoption Behavior' in Pakistan.

'Perceived usefulness' includes three major dimensions which are addressing the issues of security, privacy, and consideration of Internet banking as a better option for using banking services. On the other hand, 'Perceived Ease of Use' is highlighting the elements of simplicity, assistance, and interactivity available in Internet Banking, and to which extent the self-efficacy is affecting it. Model for research is stating 'Intentions' as an only dependent variable which is covering the attributes related to preference, satisfaction and recommendations of Internet banking to others. Specifically, the hypotheses are stated below:

- H1:** Increase in the EASE creates positive intentions of individuals to adopt internet banking.
- H2:** Positive nature of 'USE' increase the intention of individuals to adopt internet banking.

In the literature regarding the downsides of the adopted model (TAM), it is challenged for holding less transparency (Benbasat & Barki, 2007), less ability to cope with the situational factors and aspects (Chuttur, 2009). To avoid these arguably arguments and in order to achieve the listed goals of the current piece of work. The CRM (which is entertaining CRM and e-CRM) will be considered as the single exogenous variable in the study. The hypotheses regarding CRM will be following:

- H3:** Increase in the supportive information by banks through CRM regarding Internet banking can improve the EASE of internet banking and its adoption.
- H4:** Increase in the supportive information by banks through CRM regarding Internet banking can improve the USE of internet banking and its adoption.

## 3 Methodology

Methodology to conduct the proposed research will be discussed in the current section. In the planned study, interpretive research philosophy will be applied as it is addressing complex social issues. To understand the beliefs, motivations, and behavior of individuals, and to increase the pool of knowledge related to the issue, an exploratory research design will be observed in the current research. It is not always true to apply quantitative and qualitative research in the case of exploratory design (Robson, 2002). In fact, the survey in the form interviews and questionnaires are the effective options to deal with the attitude and perception related issues (McMillan, 2004). Therefore, to make the findings more credible and reliable, three self-administrated interviews were conducted with the bank staff. It will help to explore critical contextual variables. Furthermore, the surveys will be cross-sectional manner is used as only the specific geographical population within the limited time slot is studied (Babbie, 2012).

### 3.1 Instrument

In the entire qualitative section, recorded interviews will be transcribed first, and categorized into broad categories, after refining the broadly categorized data, refined relevant information will be concluded. With the purpose to triangulate the findings, the quantitative survey in the form of the structured questionnaire with the Likert scale of 5 is followed as Likert scale helps to understand the perception of individuals (Saunders, Lewis, & Thornhill,

2009). A sample size of 120 cases collected from different cities to make the data more representable from the non-users of internet banking. In concern to address the validity of adapted instrument, the questions regarding 'Ease of Use' and 'Intentions' by Hanafizadeh(2014), and usefulness by Davis (1989) as shown in Appendix A.

### 3.2 Analyzing Approach

The statistic tools namely, AMOS and SPSS statistics will be worked in an iterative manner for computing discriminatory and composite reliability, factor and path analysis to challenge the conceptual model design and the list of hypotheses by using Structured Equation Modeling (SEM).

## 4 Findings and Analysis

In each of the sub-section, the findings and support from secondary data will be observed. It will start with the quantitative survey where the end-users are inquired and it will be lead to the observations from the qualitative interviews by the small count of bank staff. The demographics of bank customers are given in Table 3.

### 4.1 Bank Clients (Quantitative Study)

Table 3: Profile of EXTERNAL CUSTOMERS (Sample for quantitative study).

Dominating Features are following		
Gender	Male	58%
	Female	42%
Age	Less than 20	20%
	20-30	48%
	30-40	29%
Occupation	Student / Un-Employed	48%
	Employed	52%
Education	Attended School / College	56%
	Attended University	44%

Perceived Usefulness (USE): Descriptive quantitative survey concludes that the trend to perceive weak internet security and privacy increases with age. Specifically, the people who are employed, majorly from age segment 20-30 and having low education hold the strong negative perception of internet banking in their minds. On the brighter side, youth who are actually the driving force of the future understand internet banking as a secure channel for using banking services. In a recent couple of years, many internet banking service providers have been compromised in Pakistan, which is making the potential consumers confused and insecure. During the current research, it is observed that the young people really want to try new innovations and technology. Mostly young, employed and educated subset of researched sample is still holding neutral perceptions and thoughts about the privacy and effectiveness of Internet banking as a channel to use internet banking.

Perceived Ease of Use (EASE): Before going in depth analysis of EASE in the research sample, it is important to highlight the interesting fact that almost 70% of the sample have availability of resources to use electronic services (i.e. mobile devices, tablets and personal computers.)

#### 4.1.1 Reliability Test and Validity

The two-stage approach, where the reliability and CFA were measured in the first stage and the path analysis measured in the second as suggested by Anderson & Gerbing (1988). During the first stage of the current study, the 'cronbach alpha' and 'principal component analysis' will be adopted to measure factor loadings. Specifically, the Cronbach alpha helps to improve the internal reliability of each variable (Mirkin, 2011). In other words, the Cronbach alpha value helps to improve the internal consistency of data which collectively defined as a single variable for the current study as shown in table 4. Specifically, the Cronbach alpha value was observed between the ranges of 0.942 to 0.810 in the current research which should be supposed to be higher than .70 (Saunders et al., 2009). Factor analysis adopted for construct validity by the support of 'Principal Component Analysis' (PCA). Specifically, the no construct loaded lower than the item value of 0.50. However, no cross-loading item was found during the test. The detailed results are shown in Table 4 below. Similarly, any unfavorable AVEs and CR lower than .50 and .70 respectively is observed which is supporting the internal validity of the measured scales (Fornell & Larcker, 1981).

Table 4: Tests for convergent validity in the present scenario.

Construct	Items	Loadings	CA	AVE	CR
Perceived Ease of Use (EASE)	EASE1	.654	.889	.662	.851
	EASE2	.914			
	EASE3	.847			
CRM as tool (CRM)	CRM1	.738	.920	.694	.901
	CRM2	.785			
	CRM3	.901			
	CRM4	.897			
Intentions (INT)	INT1	.779	.914	.700	.874
	INT2	.854			
	INT3	.874			
Perceived Usefulness (USE)	USE1	.534	.761	.608	.741
	USE2	.965			

CA=Cronbach  $\alpha$ , AVE=Average Variance extracted, CR=Composite reliability

The external validity measured through the inter-construct's correlation (cross-loadings) and the measured correlation score of constructs likely to be observable lower than the square root of each construct's AVE as many researches argue and considered as the sub-section of the first stage (Chin, 1998). Moreover, the supportive recordings are observed in the current study as well as shown in Table 5 below.

Table 5: AVE's square-root for each construct (underlined and bold in diagonal) and discriminant validity.

Construct	Mean	SD	EASE	CRM	INT	USE
EASE	3.04	.862	<b><u>.813</u></b>			
CRM	4.02	.630	.338 <sup>a</sup>	<b><u>.833</u></b>		
INT	3.53	.815	.512 <sup>a</sup>	.347 <sup>a</sup>	<b><u>.836</u></b>	
USE	3.74	.690	.257 <sup>c</sup>	.587 <sup>a</sup>	.300 <sup>b</sup>	<b><u>.779</u></b>

a=p<0.001, b=p<0.005, c=p<0.02

SD=Standard Deviation, EASE=Perceived Ease of Use, CRM=Customer Relationship Management, INT=Intentions, USE=Perceived Ease of Use

After challenging scale's credibility by reviewing internal consistency while defining each of the constructs, the model indices measured to gauge the model fitness and exploratory strengths of it as shown in table 6.

Table 6: Model fit's summary (SEM)

	Model's observation	Recommended measurement range
X <sup>2</sup>	84.190	--
Df	50	--
CMIN (chi-square / df)	1.684	<3.00 (Chin & Todd, 1995)
GFI (Goodness of Fit Index)	.916	>.90 (Hair, Black, Babin, & Anderson, 2014)
AGFI (Adj. Goodness of Fit Ind.)	.869	>.80 (Hair et al., 2014)
RMSEA	.068	Preferred <.08
NFI (Normed Fit Index)	.936	>.95
TLI (Tucker Lewis Index)	.973	>.95
CFI (Comparative Fit Index)	.972	>.95

The recommended values for NFI, TLI and NFI ranges and limits are observed by Hu and Bentler(1999).

To achieve the second stage of the by Anderson & Gerbing (1988), the hypotheses and path analysis is performed by the help of statistical software (AMOS by SPSS). During the analysis, the X<sup>2</sup> of 84.190 with df of 50 is observed. In other words, the CMIN of desired range is recorded where the value was specifically 1.684. The suggested range should be between the ranges of 1-3 (Chin & Todd, 1995). The value of X<sup>2</sup> is always sample size dependent so other indices are also measured to support the findings and model related arguments (Hooper, Mullen, Hooper, Coughlan, & Mullen, 2008). It is observed that most of the indices' acceptance limits are getting strict and arguably with the passage of time (Hooper et al., 2008). The value of NFI and CFI were previously considered to be higher than .90. However, nowadays the value higher than .95 are more appreciate-able (Hooper et al., 2008). From the currently focused mode, the NFI of .935 is observed which is considerable acceptable as previous research accepted is to be entertainable. Moreover, the values of TLI, CFI, GFI, AGFI, and RMSEA are .973, .972, .916, .869 and .068 respectively as listed in table 6.

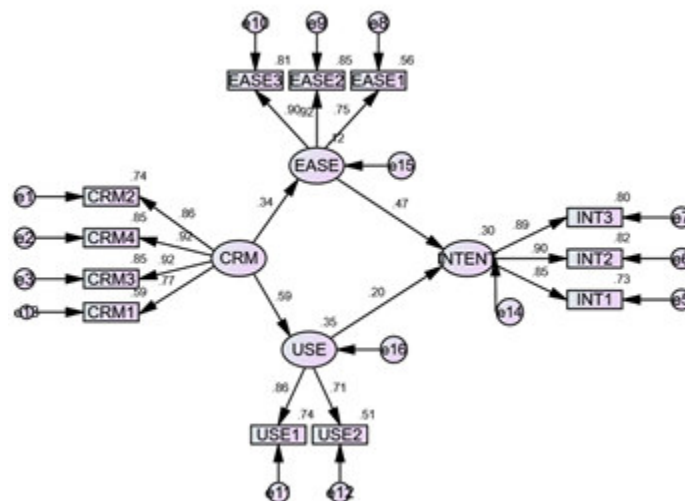


Figure 3: Path coefficients and hypotheses evaluation for the conceptualized model.

After following the first stage of reliability and validity examination, the relationships in the model tested and examined. The R2 (squared multi-correlation) recorded where the USE is 35% explained by the CRM as the motivator to adopt internet banking, the CRM's ability to explain EASE is least recorded, specifically, the value of 12% noted. While measuring the Intentions, through usefulness and ease, the 30% exploratory power (R2) is recorded when the CRM was added as the exogenous variable in the study.

Table 7: Challenging hypotheses and analyzing path's coefficients.

H#	Exogenous	Nature expected	Nature observed	Significance	Coefficient	Result
H1	CRM → EASE	+	+	<0.001	.344	Supported
H2	CRM → USE	+	+	<0.001	.592	Supported
H3	EASE → INTENTIONS	+	+	<0.001	.199	Supported
H4	USE → INTENTIONS	+	+	<0.030	.468	Supported

While discussing the relationships and associations between each of the exogenous and endogenous variable as per designed conceptual model, each of the hypotheses is revisited to measure their strength and ability to contribute productively to the research as the summarized results are shown in Table 7 above. H1 stated in order to identify the impact of CRM to measure perceived EASE among non-users of internet banking services. The research concluded the positive relationship between EASE and CRM where the  $\beta$  value of .344 was recorded with  $p < 0.001$ . This positive association has been only studied regarding the adoption of innovation and in e-commerce previously (Akar & Mardikyan, 2014; Ayo, Mbarika, & Oni, 2015; Revels, Tojib, & Tsarenko, 2010). The H2 regarding the impact of CRM on the perceived Usefulness challenged within the conceptualized model. The findings suggested having more fruitful effect of CRM on non-users of internet banking service users. Specifically, the  $\beta = .592$  is recorded with the  $p < 0.001$ . From the findings, it can be concluded that the CRM is more effectively communicating the usefulness of internet banking. However, the less emphasize on the Ease to use is observed while communicating with the non-users of internet banking in the market. The intentions as the output of attitude, or the summing strength of usefulness and ease of use is heavily researched relationships and less challenging as well (Ajzen & Fishbein, n.d.; Davis, 1989; Venkatesh, 2000). From the findings of H3 and H4, the impact of USE (usefulness) is heavily dominating the intentions as compared to the EASE (perceived ease to adopt and use). The findings from the quantitative section also supported the secondary literature. Specifically, the ( $\beta = .199, p < 0.001$ ) and ( $\beta = .468, p < 0.03$ ) is recorded while defining the impact of EASE and USE respectively. The quantitative findings conclude the non-users have more load of information regarding the usefulness of internet banking. However, the lesser the essences of pulling nonusers towards trial ability and testing are observed. In the lens of existing literature, the diffusion of innovation required the attributes of observability and trail-ability to increase innovation adoption (Calvo-Porrall & Lévy-Mangin, 2015; Rogers, 1995). To understand better, the qualitative interviews by the bank staff was conducted as discussed in the next section.

#### 4.2 Bank Staff (Qualitative Study)

Besides all findings from the external customers, the aim of qualitative interviews with bank's employees was to review the current unspoken dimensions of the current scenario where technology adoption in external banking customers is slow. Some of the conclusions from the qualitative analysis are following:

(1) In Pakistani commercial banks, only 30% of the customer's accounts are 'Salary' based. Furthermore, 80% of



the 'Salary' based segment usually consume their all savings on the basic needs, so they can only enjoy 'transactional exchange relationship' where consumers use limited banking services. However, the educated and IT literate sub-segment of the 20% of the 'Salary' based segment is the only potential users of 'Internet Banking' in Pakistani market as they are able to enjoy all attractive banking services. The researched literature drives these two types of bank clients as individual and corporate clients (Dimitriu, 2012) and previous research characterized both of them on the uniqueness in the criteria's of satisfaction, needs and choices (TOPALA, 2007).

(2) The rest of the 70% consumer market in Pakistani commercial banks are 'Business' based consumers. The further breakdown of business segment classifies as (a) Sole proprietor; where the only single actor acts as owner and director of the business. (b) Partnership; where two or more people agree to unify operations for mutual interests. (c) Company; which includes private and public organizations in the same slot. While addressing the potential market of internet banking in 'business based segments'. The sub-segment who are well educated, adaptive to technological innovation and promote international corporate culture in the core of their business is the only possible market for internet banking in Pakistan. Specifically, the literature defines the adoption of internet banking by small and medium level enterprises with the different sense of interest and motivations, in contrast of individual customers (Chuwa, 2015; Mohamad & Ismail, 2009; Padachi & Louis, 2010).

(3) In context of 'Ease of Use', following are the dominating negative issues observed during qualitative study;

- Most consumers usually experience slow procedure to activate the 'internet banking service'. Practically, it includes 3 steps procedure; firstly, the consumer has to register the activation request by the physically visit to the bank's branch. At the second stage, a consumer will receive an electronic mail as a response to the internet banking activation request. It will be further followed by the instructions to dial helpline for activating electronic banking service. To support the primarily researched findings, the infrastructural issues are also been previously discussed in the literature (AHMAD et al., 2011; Hassan, Shehab, & Peppard, 2010; Lawrence & Tar, 2010).
- The web interfaces provided by most of the banks in Pakistan are less interactive and have insufficient information to catch up with any self-assistance procedure while doing any financial transactions. By the support of the secondary data, the above argument is also supported that that the web interfaces and quality of service have great impact on the customer's adoption process of Internet banking (Ariff, Yun, Zakuan, & Jusoh, 2012; Chinomona, Sandada, & Masinge, 2014; Mahfooz, Al-Motairi, Ahmad, & Khan, 2013; Saeed et al., 2015; Tsourela, 2014).
- Mostly, in the case of any inconvenience or problem experienced by the consumers, the staff usually advises only to call 'customer service center' instead of resolving the customer's issue and unfortunately, it triggers the state of dissatisfaction and insecurity in the mind of consumers. In the perspective of existing literature, the unsatisfactory response from the bank's side always triggers disloyalty with the internet banking as offered service (Eriksson & Schunter, 2009; Suleiman, Nik Kamariah, Adesiyan O. I., Mohammed A. S., & ALekam, 2012).

(4) While addressing the 'Usefulness' of internet banking from the perspective of bank's staff are following;

- In traditional banking which is in practice for last few decades, the concept of getting the receipt as an acknowledgment in hard copy for any financial transaction is actually the driver of the satisfaction in customer's mind. Unfortunately, electronic banking lacks such experience to provide (Chinomona et al., 2014; Havasi, Meshkany, & Hashemi, 2013).
- While doing any financial transaction in a traditional manner, the responsibility to transfer funds in the right head is actually the responsibility of bank's staff. By the use of the electronic platform for such operations, this whole responsibility goes to the shoulder of consumers as this issue has been concluded as the critical factor in previous studies in different countries (Chauhan & Choudhary, 2015; Omar, Sultan, Zaman, & Bibi, 2010).
- In Pakistani society, peer influence creates the great impact on decision making. As far as Internet banking is concerned, mostly people usually share their bad and odd experiences about internet banking services. The existing research highlights the security of internet banking as a service and perceived insecurity in the mind of an end user is one of the critical factors to adopt and accept internet banking (More, Jadhav, & Nalawade, 2015; Najaf, Najaf, & Aziz, 2014; Rasool, 2015).

## 5. Conclusion and Future Research

The current research claims a strong impact of 'perceived ease of use' and 'perceived usefulness' towards the 'intention' of internet banking adoption in Pakistan. The study concludes the following critical elements which need immediate attention to boost the adoption rate of internet banking in Pakistan.

Internal customers should create trust and encourage external customers to use internet banking. Besides the fact that, currently most of the private banks are holding very limited internet banking customers, who demand the internet as a platform to use banking services. Current research suggests the use of CRM as a tool to catch potential internet banking customers can increase the internet banking adoption, better communication with

external customers can minimize the negative impact of social norms in the case of internet banking adoption. Most of the people who ever tried Internet banking are still holding doubts and insecurities as financial institutes always fail to provide sufficient information and guidance when needed. Due to emphasize on the traditional banking practices in the country, the efficient use of CRM and e-CRM is rarely observable in the Pakistan's consumer banking sector. The current study highlights the effective use of CRM to provide more information to the bank account holders about the usability and ease of use (convenience) through internet banking can improve the internet banking adoption among the bank clients.

The present study evolved around the Technology Acceptance Model (TAM) to elaborate the current scenario. To explain and understand other complex variables in depth, different technology adoption models can be adopted. Moreover, the trust and risk factors are not addressed in the current study which can be adopted in the future research to improve the findings. In the meanwhile, the qualitative interviews are only conducted in the southern part of Punjab. (Specifically, Bahawalpur, Multan, and Khanewal), to make this research findings more generalize, other cities of the state or country can be covered. Furthermore, grounded research approach where a combination of inductive and deductive reasoning can work in an effective manner to understand the current problem. In fact, technology adoption in developing countries needs comprehensive research to make more customized frameworks and models to make such technological innovation acceptable and adaptable in this region.

## References

- ahmad, M. S., Rashid, S., Masood, M. T., & Mujeeb, E. U. L. (2011). E-Banking: A Case Study Of Askari Commercial Bank Pakistan. *Management and Marketing Journal*, 9(2), 243–254. Retrieved from [http://www.mnmk.ro/documents/2011-2/7\\_Shakil\\_FFF.pdf](http://www.mnmk.ro/documents/2011-2/7_Shakil_FFF.pdf)
- Ahmad, Z., & Azzam, M. (2014). The Impact of Customer Relationship Management on Customer Satisfaction in the Banking Industry – A Case of Jordan. *European Journal of Business and Management*, 6(32).
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. [http://doi.org/10.1016/0749-5978\(91\)90020-T](http://doi.org/10.1016/0749-5978(91)90020-T)
- Ajzen, I., & Fishbein, M. (n.d.). Questions Raised by a Reasoned Action Approach: Comment on Ogden (2003).
- Akar, E., & Mardikyan, S. (2014). Analyzing Factors Affecting Users' Behavior Intention to Use Social Media : Twitter. *International Journal of Business and Social Science*, 5(11), 85–95.
- Akhlaq, M. A., & Shah, A. (2011). Internet banking in Pakistan: Finding complexities. *Journal of Internet Banking and Commerce*, 16(1), 1–14.
- Anderson, J., & Gerbing, D. (1988). Structural Equation Modeling in Practice: A Review and Recommended Two-Step Approach. *Psychological Bulletin*, 103(3), 411–423. <http://doi.org/10.1037/0033-2909.103.3.411>
- Ariff, M. S. M., Yun, L. O., Zakuan, N., & Jusoh, A. (2012). Examining Dimensions of Electronic Service Quality for Internet Banking Services. *Procedia - Social and Behavioral Sciences*, 65(ICIBSoS), 854–859. <http://doi.org/10.1016/j.sbspro.2012.11.210>
- Aslam, H. D., Khan, M., Tanveer, A., & Amber, T. (2011). Perceived Barriers Towards Adoption Of Internet Banking Among Non-Metropolitan Internet Users Of Pakistan. *International Business & Economics Research Journal*, 10(45-56).
- Ayo, C. K., Mbarika, V. W., & Oni, A. A. (2015). The Influence of Trust and Risk on Intention to Use E-Democracy in Nigeria. *Mediterranean Journal of Social Sciences*, 6(6), 477–486. <http://doi.org/10.5901/mjss.2015.v6n6s1p477>
- Babbie, E. R. (2012). *The Practice of Social Research*. Cengage Learning. Retrieved from <https://books.google.com/books?id=k-aza3qSULoC&pgis=1>
- Ben Oumlil, A., & Williams, A. J. (2000). Consumer education programs for mature consumers. *Journal of Services Marketing*, 14(3), 232–243. <http://doi.org/10.1108/08876040010327239>
- Benbasat, I., & Barki, H. (2007). Quo vadis, TAM? *Journal of the Association for Information Systems*, 8(4), 211–218.
- Berry, L. L., & Parasuraman, A. (1992). Reviewed Work: Marketing Services: Competing Through Quality. *Journal of Marketing*, 56(2), 132–134. Retrieved from [https://www.jstor.org/stable/1252050?seq=1#page\\_scan\\_tab\\_contents](https://www.jstor.org/stable/1252050?seq=1#page_scan_tab_contents)
- Birch, D., & Young, M. A. (1997). Financial services and the Internet - what does cyberspace mean for the financial services industry? *Internet Research*, 7(2), 120–128. <http://doi.org/10.1108/10662249710165262>
- Brassington, F., & Pettitt, S. (2006). *Principles of Marketing*. Prentice Hall. Retrieved from [https://books.google.com/books/about/Principles\\_of\\_Marketing.html?id=dBurthQ-hiEC&pgis=1](https://books.google.com/books/about/Principles_of_Marketing.html?id=dBurthQ-hiEC&pgis=1)
- Calvo-Porrá, C., & Lévy-Mangin, J.-P. (2015). Smooth operators? Drivers of customer satisfaction and switching behavior in virtual and traditional mobile services. *Revista Española de Investigación En Marketing ESIC*, 19(2), 124–138. <http://doi.org/10.1016/j.reimke.2015.03.001>

- Çelik, H. (2008). What determines Turkish customers' acceptance of internet banking? *International Journal of Bank Marketing*, 26(5), 353–370. <http://doi.org/10.1108/02652320810894406>
- Chauhan, V., & Choudhary, V. (2015). Internet Banking : Challenges and Opportunities in Indian Context. *Journal of Management Sciences and Technology*, 2(3), 29–40.
- Chen, C., Fan, Y., & Farn, C. (2007). Predicting electronic toll collection service adoption : An integration of the technology acceptance model and the theory of planned behavior, 15, 300–311. <http://doi.org/10.1016/j.trc.2007.04.004>
- Chin, W. W. (1998). Commentary: Issues and Opinion on Structural Equation Modeling. *MIS Quarterly*, 22(1), 1. <http://doi.org/Editorial>
- Chin, W. W., & Todd, P. A. (1995). On the use, usefulness and ease of use of structural equation modeling in MIS research: A note of... *MIS Quarterly*, 19(2 (June)), 237–246.
- Chinomona, R., Sandada, M., & Masinge, G. (2014). The Influence of E-Service Quality on Customer Perceived Value, Customer Satisfaction and Loyalty in South Africa. *Mediterranean Journal of Social Sciences*, 5(9), 331–341. <http://doi.org/10.5901/mjss.2014.v5n9p331>
- Chuttur, M. Y. (2009). Overview of the Technology Acceptance Model: Origins, Developments and Future Directions. *Sprouts: Working Papers on Information Systems*, 9(37). Retrieved from <http://sprouts.aisnet.org/9-37>
- Chuwa, G. (2015). Factors Influencing the Adoption of Internet Banking by Small and Medium Enterprises (SMEs) in Nyamagana District, Mwanza-Tanzania. *European Journal of Business and Management*. Retrieved from <http://www.iiste.org/Journals/index.php/EJBM/article/view/22129>
- Crosby, L. A. (2002). Exploding some myths about customer relationship management. *Managing Service Quality: An International Journal*, 12(5), 271–277. <http://doi.org/10.1108/09604520210442056>
- Davis, F. D. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly*, 13(3), 319–340.
- Day, G. S. (2000). Managing Market Relationships. *Journal of the Academy of Marketing Science*, 28(1), 24–30. <http://doi.org/10.1177/0092070300281003>
- Dimitriu, D. S. (2012). CUSTOMERS CATEGORIES AND TYPES OF BANKING SERVICES. *Annals of the University of Petroșani, Economics*, 12(2), 127–134.
- Eriksson, M., & Schunter, C. (2009). Customer loyalty in internet banking. *International Business and Economics Program*, 28, 72–91.
- Faqih, K. M. S. (2011). Integrating perceived risk and trust with technology acceptance model: An empirical assessment of customers' acceptance of online shopping in Jordan. In *2011 International Conference on Research and Innovation in Information Systems* (pp. 1–5). IEEE. <http://doi.org/10.1109/ICRIIS.2011.6125686>
- Farooqi, R., Kumari, S., Shoeb, M., & Email, W. S. (2013). Recent Trend of e-CRM in Commercial Banks of India. *International Journal of Application or Innovation in Engineering and Management (IJAIEM)*, 2(4), 287–291.
- Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention, and behavior : an introduction to theory and research*. Reading Mass.: Addison-Wesley Pub. Co.
- Fornell, C., & Larcker, D. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(3), 39–50. <http://doi.org/10.2307/3151312>
- Gerrard, P., & Barton Cunningham, J. (2003). The diffusion of Internet banking among Singapore consumers. *International Journal of Bank Marketing*, 21(1), 16–28. <http://doi.org/10.1108/02652320310457776>
- Goudarzi, S., Ahmad, M. N., & Soleymani, S. A. (2013). Impact of Trust on Internet Banking Adoption : A Literature Review. *Australian Journal of Basic and Applied Sciences*, 7(7), 334–347.
- Govender, J. P., & Wu, J. (2013). The Adoption of Internet Banking in a Developing Economy. *Journal of Economics and Behavioural Studies*, 5(8), 496–504.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2014). *Multivariate data analysis* (7th ed.). Upper Saddle River, N.J.: Pearson Education.
- Hanafizadeh, P., Behboudi, M., Abedini Koshksaray, A., & Jalilvand Shirkhani Tabar, M. (2014). Mobile-banking adoption by Iranian bank clients. *Telematics and Informatics*, 31(1), 62–78. <http://doi.org/10.1016/j.tele.2012.11.001>
- Hassan, H. S., Shehab, E., & Peppard, J. (2010). Toward Full Public E-Service Environment in Developing Countries, 605–609.
- Havasi, F., Meshkany, F. A., & Hashemi, R. (2013). E-Banking : Status , Implementation , Challenges , Opportunities. *IOSR Journal Of Humanities And Social Science*, 12(6), 40–48.
- Hooper, D., Mullen, J., Hooper, D., Coughlan, J., & Mullen, M. R. (2008). Structural Equation Modelling: Guidelines for Determining Model Fit. *The Electronic Journal of Business Research Methods*, 6(1), 53–60. Retrieved from [www.ejbrm.com](http://www.ejbrm.com)

- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1–55.
- Hussain, I., Hussain, M., Hussain, S., & Sajid, M. A. (2009). Customer Relationship Management : Strategies And Practices In Selected Banks Of Pakistan. *International Review of Business Research Papers*, 5(6), 117–132.
- Joseph, B. N., & Brad Stone. (2005, April 25). Diagnosis: Internet Phobia; Seniors Who Shun the Web Miss out. How to Help. *Newsweek*. Newsweek. Retrieved from <https://www.highbeam.com/doc/1G1-131685476.html>
- Khurshid, A. (2014). Factors contributing towards adoption of E-banking in Pakistan. *International Journal of Accounting and Financial Reporting*, 4(2), 437–455.
- Lawrence, J. E., & Tar, U. A. (2010). Barriers to ecommerce in developing countries, 3(1), 23–35.
- Levitt, T. (1983). After the Sale Is Over.... *Harvard Business School Publishing*, (9). Retrieved from <https://hbr.org/1983/09/after-the-sale-is-over>
- Light, B. (2001). A Review of the Issues Associated with Customer Relationship Management Systems. *9th European Conference on Information Systems*, (Hammer 1990), 1232–1241.
- Littler, D., & Melanthiou, D. (2006). Consumer perceptions of risk and uncertainty and the implications for behaviour towards innovative retail services: The case of Internet Banking. *Journal of Retailing and Consumer Services*, 13(6), 431–443. <http://doi.org/10.1016/j.jretconser.2006.02.006>
- Machauer, A., & Morgner, S. (2001). Segmentation of bank customers by expected benefits and attitudes. *International Journal of Bank Marketing*, 19(1), 6–18. <http://doi.org/10.1108/02652320110366472>
- Mahfooz, Y., Al-Motairi, M., Ahmad, F., & Khan, A. (2013). A Study of the Service Quality Issues of Internet Banking in Non-Metro Cities of India. *Journal of Advanced Management Science*, 1(1), 75–79. <http://doi.org/10.12720/joams.1.1.75-79>
- Malik, K., & Kumar, N. (2013). E-CRM GOLDEN OPPORTUNITY FOR BANKS. *International Journal in Multidisciplinary and Academic Research (SSIJMAR)*, 2(2), 1–11.
- Mirkin, B. (2011). *Core concepts in Data Analysis: Summarization, correlation and Visualization*. London: Springer.
- Mohamad, R., Building, A., & Ismail, N. A. (2010). Determinants of Internet Banking Adoption: An Empirical Evidences From Indian Banking. *Journal of Internet Banking and Commerce*, 15(1), 1–11. [http://doi.org/10.1007/978-3-531-92534-9\\_12](http://doi.org/10.1007/978-3-531-92534-9_12)
- Mohamad, R., & Ismail, N. A. (2009). Electronic commerce adoption in SME: The trend of prior studies. *Journal of Internet Banking and Commerce*, 14(2), 1–16.
- More, M. M., Jadhav, M. P., & Nalawade, K. M. (2015). Online Banking and Cyber Attacks : The Current Scenario. *International Journal of Advanced Research in Computer Science and Software Engineering*, 5(12), 743–749.
- Muro, M. B., Magutu, P. O., & Getembe, K. N. (2013). THE STRATEGIC BENEFITS AND CHALLENGES IN THE USE OF CUSTOMER RELATIONSHIP MANAGEMENT SYSTEMS AMONG COMMERCIAL BANKS IN KENYA. *European Scientific Journal*, 9(13), 327–349.
- Najaf, R., Najaf, K., & Aziz, B. (2014). E-Banking in Pakistan. *American Scientific Research Journal for Engineering, Technology, and Sciences (ASRJETS)*, 10(1), 74–84.
- Omar, A. Bin, & Bibi, N. (2011). Customer Perception towards Online Banking Services: Empirical Evidence from Pakistan. *Journal of Internet Banking and Commerce*, 16(2). [http://doi.org/10.1007/978-3-531-92534-9\\_12](http://doi.org/10.1007/978-3-531-92534-9_12)
- Omar, A. Bin, Sultan, N., Zaman, K., & Bibi, N. (2010). Customer Perception towards Online Banking Services: Empirical Evidence from Pakistan. *Journal of Internet Banking and Commerce*, 15(1), 1–11. [http://doi.org/10.1007/978-3-531-92534-9\\_12](http://doi.org/10.1007/978-3-531-92534-9_12)
- Padachi, K., & Louis, P. (2010). A STUDY ON THE USE OF INTERNET BANKING AMONG SMEs IN MAURITIUS. *International Research Symposium in Service Management*, (August), 24–27.
- Payne, A. (1998). *Relationship Marketing for Competitive Advantage: Winning and Keeping Customers*. Butterworth-Heinemann. Retrieved from [https://books.google.com/books/about/Relationship\\_Marketing\\_for\\_Competitive\\_A.html?id=0n89PpHII0UC&pgis=1](https://books.google.com/books/about/Relationship_Marketing_for_Competitive_A.html?id=0n89PpHII0UC&pgis=1)
- Rahimuddin, M., & Bukhari, S. A. A. (2010). E- Banking System in Pakistan. *School of Management, Blekinge Institute of Technology, Ronneby, Sweden*.
- Rasool, S. (2015). Cyber security threat in Pakistan : causes Challenges and way forward. *International Scientific Online Journal*, 12, 21–34.
- Razzaq, M. S. (2014). An Investigation of Factors Affecting Usage and Adoption of Internet & Mobile Banking In Pakistan. *International Journal of Accounting and Financial Reporting*, 4(2), 478–501.
- Revels, J., Tojib, D., & Tsarenko, Y. (2010). Understanding consumer intention to use mobile services.

- Australasian Marketing Journal*, 18(2), 74–80. <http://doi.org/10.1016/j.ausmj.2010.02.002>
- Robson, C. (2002). *Real world research : a resource for social scientists and practitioner-researchers*. Oxford UK ;Madden Mass.: Blackwell Publishers.
- Rogers, E. M. (1995). *Diffusion of Innovation* (4th ed.). New York: The Free Press.
- Sadeghi, T., & Farokhian, S. (2011). The Role of Behavioral Adoption Theories in Online Banking Services. *Middle-East Journal of Scientific Research*, 7(3), 374–380. <http://doi.org/10.1002/mar>
- Saeed, S., Azim, M., Choudhary, A. I., & Humyon, A. A. (2015). SERVICE QUALITY FACTORS AFFECTING ADOPTION OF INTERNET BANKING IN PAKISTAN. *International Journal of Economics, Commerce and Management*, 3(2), 1–10.
- Saunders, M., Lewis, P., & Thornhill, A. (2009). *Research methods for business students* (5th ed.). Essex: FT Prentice Hall.
- Saxena, R., & Khandelwal, P. (2011). Exploring customer perception and behavior towards CRM practices in banking sector: An empirical analysis. *International Journal of Interdisciplinary Social Sciences*, 5(9), 375–391.
- Shah, A. A., Jhatial, A. A., Ghumro, I. A., & Shah, N. (2012). A NARRATIVE DESCRIPTION OF BANKING SECTOR IN PAKISTAN. *INTERDISCIPLINARY JOURNAL OF CONTEMPORARY RESEARCH IN BUSINESS*, 4(1).
- Shakoor, A. (2012). *Electronic Customer Relationship Management (eCRM) from the Perspective of Two Banks with Online Marketing in Pakistan: case of HSBC PK and Standard Chartered Bank PK*. Blekinge Institute of Technology.
- Suleiman, G. P., Nik Kamariah, N. M., Adesiyan O. I., Mohammed A. S., & ALekam, J. (2012). Customer loyalty in e-banking: A structural equation modelling (SEM) approach. *American Journal of Economics*, 2(4), 55–59. <http://doi.org/10.5923/j.economics.20120001.13>
- Syed, T., & Modak, K. C. (2014). Customer Perception Towards CRM Practices in Private Banks in Indore. *Indian Journal of Applied Research*, 4(5), 360–363.
- Thornton, J., & White, L. (2001). Customer orientations and usage of financial distribution channels. *Journal of Services Marketing*, 15(3), 168–185. <http://doi.org/10.1108/08876040110392461>
- TOPALA, C.-L. (2007). Characteristics and Behaviors Types of Bank's Clients and the Negotiation Tactics Adjusting (part II). *Economia. Seria Management*, 10(1), 74–80. Retrieved from <http://ideas.repec.org/a/rom/econmn/v10y2007i1p74-80.html>
- Tsourela, M. (2014). Using E-S-QUAL to measure internet service quality of E-Banking web sites in Greece. *Journal of Internet Banking and Commerce*, 19(2), 1–17.
- Tuck, M., & Riley, D. (1986). *The theory of reasoned action: A decision theory of crime. The Reasoning Criminal: Rational Choice Perspectives* .... Transaction Publishers. Retrieved from <http://scholar.google.com/scholar?hl=en&btnG=Search&q=intitle:The+Theory+of+Reasoned+Action:+A+Decision+Theory+of+Crime#0>
- Venkatesh, V. (2000). Determinants of perceived ease of use: Integrating perceived behavioral control, computer anxiety and enjoyment into the technology acceptance model. *Information Systems Research*, 11(4), 342–365.
- Wahab, S., Ali, J., & Kedah, S. (2009). Technology Trust and E-Banking Adoption : The Mediating Effect of Customer Relationship Management Performance, 2(2), 40–49.
- Wang, Y., Po Lo, H., Chi, R., & Yang, Y. (2004). An integrated framework for customer value and customer - relationship - management performance: a customer - based perspective from China. *Managing Service Quality: An International Journal*, 14(2/3), 169–182. <http://doi.org/10.1108/09604520410528590>
- Woodall, T. (2003, October 9). Conceptualising “value for the customer”: an attributional, structural and dispositional analysis. *Academy of Marketing Science Review*. Academy of Marketing Science. Retrieved from <http://irep.ntu.ac.uk/6707/>
- Yeung, R., Yee, W., & Morris, J. (2010). The effects of risk-reducing strategies on consumer perceived risk and on purchase likelihood. *British Food Journal*, 112(3), 306–322. <http://doi.org/10.1108/00070701011029174>
- Yousafzai, S. Y. (2012). A literature review of theoretical models of Internet banking adoption at the individual level. *Journal of Financial Services Marketing*, 17(3), 215–226. <http://doi.org/10.1057/fsm.2012.19>