

## **Acceptance of Mobile Banking (MB) Framework in Pakistan – A Systematic Review**

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### **ABSTRACT**

*Technological advancement is one of the key sources of competitive advantage for modern-day businesses. Specifically, IT-based innovations in financial services such as mobile banking (MB) have revolutionized banking practices. However, in developing countries like Pakistan with decrepit infrastructure and less education, mobile banking has gained less attention. This study, through a systematic literature review, aims to assess the key factor of mobile banking acceptance. An electronic search was carried out incorporating 11 databases of majorly publish multidisciplinary articles. The outcomes are limited to the country of Pakistan and restricted by the year. 12 articles were identified as relevant to this particular systematic review based on the identified keywords. All the information is extracted from every single research article to impart data for the research title, author, journal name, methodology/model, year, study purpose, and major findings. The findings of this study suggest that despite mobile banking is gaining a foothold in Pakistan, ease of use, privacy, security, reliability, lower risk are the key factors that affect acceptance of mobile banking among customers. This study has some strong practical implications for the banking industry.*

**JEL Classification:** Z00, E50, G21, O33

**Keywords:** Mobile Banking, Systematic Review, IT Based, Industry, Pakistan.

### **INTRODUCTION**

#### **Background of the Study**

According to Sharif and Afshan (2016), technological advancements and innovations have come with enormous advantages to modern-day businesses. To attain competitive advantage and financial stability, businesses have redirected their emphasis upon making IT (information technology) as a vital element of their operations from the last few decades (Khurshid, Rizwan, & Tasneem, 2014). The rapid growth of communication and information technologies is having an incredible effect on all extents of human life. An extensively researched field of technological evolution is the retail financial services.

The Internet has triggered an IT-based innovation in the financial services industry that has fundamentally changed the manner that banking services are provided. This evolution, attributed as mobile banking (MB) has helped busy individuals to execute their financial activities in an efficient and cost effective way at any time of the day, irrespective of their physical location (Kazi & Mannan, 2013). MB also permits bank clients to involve in an array of financial services money transfer and bill payments, looking at the account information, and using investment and check services by means of bank websites (Raza & Hanif, 2011).

In current business trends, MB has attained exceptional significance and the progression of the field is accelerating. MB permits its users to utilize smart phones or any other portable device to carry out banking tasks (Rawwash et al., 2020). With the assistance of MB, the customers

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can enjoy banking facilities like managing their accounts, transferring funds, information inquiry, and bill payments etc. (Khan, 2011).

There are several advantages of MB for the banks. Financial institutions spend a huge amount of money on MB as it lessens costs comparative to other banking forms, and imparts more complete and timely client information (Shaikh & Karjaluo, 2015). It also enhances service quality which is vital for survival in cutthroat markets. Nevertheless, attaining these objectives needs clients to embrace MB (Saleem & Rashid, 2011a). Hence, banks should intend to have, in the initiation and evolution of MB abilities, an inclusive understanding of how their clients feel regarding this technology. A significant element that impacts client adoption and utilization of MB is their attitude towards MB (Ahmed & Akhlaq, 2013). By recognizing the wants and expectations of customers, and comprehending their motivations for embracing (or not embracing) MB, policy makers and bank managers can evolve policies to enhance the acceptance of MB (Anus et al., 2011). Further, it is specifically beneficial for the women as mentioned by Kemal (2019) considering the BISP because it makes them get their payments easily, safely and with utmost convenience. While on the other hand according to Albashrawi and Motiwalla, (2020) integrative framework can be beneficial in maintaining and establishing MB acceptance.

The branchless technology in banking which initiated from the Internet has now arisen as an updated and immensely innovative MB. It has great potential as it is pursuing the internet banking's success (Aslam, Khan, Tanveer, & Amber, 2011). The cellular banking penetration in the developed states is virtuous for evident reasons; nevertheless, it is also attaining recognition in the developing states (Arif, Afshan, & Sharif, 2016). Emerging countries like Pakistan having greater segment of poorer and less educated people have greater potential for the extensive acceptance of MB established upon the underlying notion that poor people are more inclined to utilize MB in comparison to the rich people (Kazi & Mannan, 2013).

In developing countries, there is a less formulated infrastructure like the lesser number of banking branches, generally ATMs are there to lessen the requirement of branches and low broadband penetration (Khan, Hameed, & Khan, 2017). For a vast number of banking clients in such countries, the agents of MB could impart greater convenience and benefits over its alternatives such as cash-based savings or travel and lining up at branches (Raza & Hanif, 2011). Thus, there are more reasons to be certain of that MB in developing states like Pakistan can target more than a niche application and could prove to be more prosperous in becoming a major banking medium for huge population segments (Khan, 2011).

**Table 1:**  
*MB Trend in Pakistan (Arshian Sharif, 2016)*

Year	Transactions Millions	Percentage Growth	Transaction value Millions	Growth %
2009	0.1	□	200	□
2010	0.6	500%	2200	1000%
2011	3.3	450%	8000	263.63%
2012	3.1	-6.06%	12000	50%
2013	4.2	35.48%	27000	125%
2014	6.2	47.61%	67400	149.62%

*Source : State Bank of Pakistan, Annual report FY 14, Vol 1, Chap # 2*

Table 1 demonstrates the MB trend in the country's economy. It depicts that in the year 2009, the number of MB transactions were around 0.1 million and the total worth of transaction was approximately 200 million PKR. In the year 2010, MB was increased drastically by 500 percentage growth in the number of transactions; that is, 0.6 million and 1000 percent transaction value growth; that is, 2200 million PKR.

Considering the years 2013 and 2014, the growth in terms of number of transaction was steady with the rise of 35.48 percentage (4.2 million PKR) and 47.61 percentage (6.2 million PKR) specifically. Similar with the transaction value, the growth was enhanced by 125 percentage (27000 million PKR) to 149.62 percentage (67400 million PKR) respectively. The advantages of convenience, personalization, and accessibility related with MB have established the favourable impacts on the framework of MB acceptance in Pakistan (Shaikh & Karjaluo, 2015).

Speculating progress in the MB acceptance by a visible segment of banking customers; financial institutions in Pakistan are incorporating MB as a component of their strategic directive (Ahmed & Akhlaq, 2013). Following this recent preference, this systematic review paper seeks to explore the past literature on MB acceptance and to categorize these researches founded on their banking perspectives in the context of Pakistan. The attentiveness ensuing after such an extensive approach will help banks not merely in pointing bottlenecks that hamper consumer acceptance but will also be useful in exploring the decision making elements to perk up the banking services in Pakistan (Saleem & Rashid, 2011a).

### **Study Objective**

This research is focused on conducting a systematic review based research Mobile Banking Framework associated to Banking Sector of Pakistan, in order to evaluate the acceptance of mobile banking (MB) framework in Pakistan considering the key factors.

### **Significance of the Study**

This systematic review will prove to be a significant milestone on the evolution of MB research field in Pakistan. It will impart an opportunity to step back and assess the collective intelligence that has combined from a varied literature body (Sharif & Afshan, 2016). This is vital as the outcomes of isolated researches are often contradicted by succeeding studies. Hence, this systematic review will cautiously classify and put together the outcomes that can lead to clear insights and valuable research directions (Kazi & Mannan, 2013). Therefore, this review paper looks for contributing to the acceptance of MB technologies in Pakistan by carrying out a systematic review of MB adoption.

## **RESEARCH METHODOLOGY**

### **Information Sources**

An electronic search was carried out to recognize and identify the pertinent research articles published on adoption of MB. This search incorporated databases that majorly publish multidisciplinary articles which are free of cost to access. Hence, the search is done on 21 primary databases of Academic Search, BASE, Directory of Open Access Journals, J-Gate, Science Direct, Google Scholar, Microsoft Academics, CiNii, CiteSeerX, DBLP Computer Science Bibliography, EconBiz, IEEE, Index Copernicus, Information Bridge, JURN, Lesson Planet, NDL online, OAIster, SafetyLit, Science.gov, and Semantic

Scholar. Databases which don't have relevant data on the topic were excluded from the search. Out of 21 databases 11 databases are included in the research.

The outcomes are limited to the country of Pakistan. Moreover, the search is also restricted by the year of publication so that outdated articles can be excluded. The articles included in this review ranges from the year 2011 till 2019.

### Search Criteria

The search terms are selected on the basis of the core concepts of Mobile banking (MB) acceptance like "mobile banking", "adoption", "acceptance", and "Pakistan". A combination of same search terminologies is utilized to search on each and every data base. A comprehensive and rigorous research of relevant articles is carried out by means of a manual search of chosen databases. The author has also carried out an additional search on the relevant papers' references.

### Exclusion/Inclusion Criteria

Reviews of papers and research articles assessing the phenomenon of acceptance of MB framework in Pakistan were sought. The following criteria is employed in choosing pertinent research articles. (1) Research articles published between the years 2011 till 2018, (2) articles published in the English language, (3) research articles published in the Pakistani mobile banking context, (4) research articles having the qualitative as well as the quantitative research design.

Firstly, 16 articles were identified as relevant to this particular systematic review based on the identified keywords. Afterwards, the author scrutinized and screened the abstracts where 12 were found to be potentially relevant to the topic of this systematic review. After assessing for the complete methodological limitations, 12 articles fulfil the established criteria. The results of all such data bases are described in the table below;

**Table 2:**  
*Exclusion/Inclusion Criteria*

Data base	Number of Identifies research articles	Articles identified bysearching the citations	Total Articles Identified	Romoval of the duplicators	Articles Rmored which did not incorporate both the MB and its adption and Pakistan	Romove dartilces that did not match the criteria after reading their Abstract	Total no of elegible articles
Google Scholar	8	2	10	7	<input type="checkbox"/>	<input type="checkbox"/>	3
Science Direct	4	<input type="checkbox"/>	4	3	<input type="checkbox"/>	<input type="checkbox"/>	1
Aoademi Search	2	1	3	3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BASE	1	<input type="checkbox"/>	1	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Directory of Open							
Access Journals	2	<input type="checkbox"/>	2	2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
J-Gate	1	2	3	2	<input type="checkbox"/>	<input type="checkbox"/>	1
Microsoft Academic	5	<input type="checkbox"/>	5	2	1	<input type="checkbox"/>	2
Cite Factor	1	<input type="checkbox"/>	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
DBLP Computer							
Science bibilography	2	<input type="checkbox"/>	2	1	<input type="checkbox"/>	<input type="checkbox"/>	1
EconBiz	3	<input type="checkbox"/>	3	1	<input type="checkbox"/>	<input type="checkbox"/>	2
Semantlc Scholar	7	1	8	7	<input type="checkbox"/>	<input type="checkbox"/>	1
Total	36	6	42	29	1	0	12

## **Critical Appraisal**

The major strength of a well carried out systematic review is the bias minimization at the level of study inclusion, so that the entire synthesis reflects the undertaken study in an accurate manner. Here, all the articles that are possibly relevant according to their abstract and/or title information are acquired in full. Only the articles fulfilling the criteria are included in this review, while others have been simply excluded. Relevant articles are then appraised critically in detail and then overseen by the author of this systematic review by using this checklist presented by Young and Solomon in their research study conducted in the year 2009. If there is no evident answer to a specific question in the research publication, the article should be regarded as one not fulfilling the criteria (Young & Solomon, 2009). This checklist is presented below:

- Is the research question pertinent?
- Does the research added any worth to the field?
- What kind of question the research is asking?
- Was the design of the study appropriate for the study question?
- Did the research methods tackle the most vital possible origins of biasness?
- Was the research conducted according to the actual protocol?
- Does the research assessed a stated hypothesis?
- Were the statistical evaluations carried out accurately?
- Do the research data validate the study conclusions?
- Are there any sort of conflicts of interest?

This quality assessment is carried out by the author himself and on the basis of the above questions.

## **Data Extraction**

All the information is extracted from every single research article to impart data for the research title, author, journal name, methodology/model, year, study purpose, and major findings

## **Analysis**

All the selected research articles greatly differ in their research designs, user groups, setting, and the manner in which questions were asked from the participants. Hence, a formal statistical evaluation is not regarded as suitable. All the outcomes of the selected studies are thus presented in the table.

## RESULTS

Title	Author	Journal Name	Methodology or Model	Year	Study Purpose	Major Findings
Acceptance of Mobile Banking Framework in Pakistan	Sahar Afshan & Arshian Sharif	Telematic & Information	Online questionnaires were utilized for the purpose of data gathering from sample of 198 respondents	Sep-15	This study aims to explore the unexploited MB acceptance dimensions in the context of Pakistan	Initial trust, task technology fit, and technology characteristics are found to have considerable relation with the customers' intention to embrace MB
Factors affecting adoption of mobile banking in Pakistan	Abdul Kabeer Kazi & Muhammad Adeel Mannan	International Journal of Research in Business and Social Science	400 questionnaires were routed for the purpose for data gathering and (SPSS) Cronbach's alpha was used for data analysis purpose	Apr-13	This paper is explaining the factors which are affecting the acceptance of MB	Findings of the paper reveal that if MB is secure and easy to use then customers are willing to adopt the same
Trust and initial acceptance of Mobile Banking in Pakistan	Syed Anus, Farhan Ali Qureshi, Shahrukh Malik, Areeb Abbasi, Ashad Chaudhry & Shahbaaz Nabi Mirza	International Journal of Scientific & Engineering Research	Responses were collected from 306 respondents of different universities of Karachi and data was analyzed by using General Linear Modeling	Aug-11	This paper aims to explain different risks associated with the initial adoption of MB	The results show that perceived risk is the most vital deciding element in the acceptance of MB services in Pakistan. Such outcomes prove that the customers who think that the services of MB are useful and possesses higher privacy and lower transactions risks are inclined to embrace this technology

Relationship between Customer Satisfaction and mobile Banking Adoption in Pakistan	Zohra Saleem and Kashif Rashid	International Journal of Trade, Economics and Finance	three Bank which were offering MB services for more than five years were selected by using Non-probabilistic Technique, study is a survey based study	Dec-11	This article is focusing on the major elements of mobile adoption technology which impact the customer satisfaction in Pakistan	The findings demonstrate that the customers' concerns regarding the authenticity, security, and reliability of the MB technology are extremely vital. These outcomes entail that Pakistani banks should emphasize upon the innovative services, IT application, customer trust, security, risk as these are the significant indicators of adopting the MB technology. Outcomes exhibit that the customers are attractive towards MB services in the Pakistani market., as it is a convenient source for fast and reliable financial services providing greater yields to the banks too Even though women and men do not vary in their attitude towards MB adoption, the succinct nuance between women and men regarding the behavioral control and the impact of societal norms with MB adoption requires a strategic reorientation of how women and men as MB consumers must be suitably targeted
An analysis of mobile banking acceptance by Pakistani customers	Sulaiman D. Muhammed, Bushra Abdul Jabbar, Nooreen Mujahid, & Ghulam Rasool Lakhani	ISSN	Questionnaires are distributed among 200 account holders of MCB bank Ltd and SPSS, regression analysis is used for data analysis, TAM model is also used for Hypothesis building	Jan-13	This research investigates the factors impacting and manipulating the MB acceptance technology in the Pakistani market	Outcomes exhibit that the customers are attractive towards MB services in the Pakistani market., as it is a convenient source for fast and reliable financial services providing greater yields to the banks too Even though women and men do not vary in their attitude towards MB adoption, the succinct nuance between women and men regarding the behavioral control and the impact of societal norms with MB adoption requires a strategic reorientation of how women and men as MB consumers must be suitably targeted
Mobile banking services adoption in Pakistan: are there gender differences?	Richard Glavee-Geo, Aijaz Ahmed Shaikh, Heikki Karjaluoto,	International Journal of Bank Marketing	A survey technique was employed with a sample of one hundred and eighty nine participants across Pakistan	2017	This study provides an all-inclusive insight into the determining elements affecting a person's intention to embrace the MB services in Pakistan	Outcomes exhibit that the customers are attractive towards MB services in the Pakistani market., as it is a convenient source for fast and reliable financial services providing greater yields to the banks too Even though women and men do not vary in their attitude towards MB adoption, the succinct nuance between women and men regarding the behavioral control and the impact of societal norms with MB adoption requires a strategic reorientation of how women and men as MB consumers must be suitably targeted

<p>An Investigation of Factors Affecting Usage and Adoption of Internet &amp; Mobile Banking In Pakistan</p>	<p>Fatima Mazhar, Muhammad Rizwan, Umar Fiaz, Sobialshrat, Muhammad Salman Razzaq &amp; Taimur Nawaz Khan</p>	<p>International Journal of Accounting and Financial Reporting</p>	<p>Convenience sampling technique was used to collect data from 150 customers of 3 different banks located in 6 different cities, TAM model was incorporated.</p>	<p>Jan-14</p>	<p>The aim of this study is to explore the impact of numerous elements impacting the successful MB adoption utilizing TAM model in the context of Pakistan, particularly especially within the Pakistani rural areas</p>	<p>The impact of the anticipated security and usefulness is vital on MB attitude, where the attitude substantially impact on the intentions to adopt MB services. Moreover, due to the cultural impact, this contemporary banking service is not well-matched with the living styles of the rural population of the country.</p>
<p>An Empirical Investigation of Mobile Banking Services Adoption in Pakistan</p>	<p>Aijaz A. Shaikh, Richard Glavee-Geo, Heikki Karjaluoto</p>	<p>International Journal of Economics and Management Engineering</p>	<p>210 respondents participated in the study and PLS smarts was used for hypothesis testing</p>	<p>Jan-15</p>	<p>This paper aims to present a preliminary inspection of the antecedents of MB services acceptance and adoption in the context of Pakistan by employing the planned behavior theory and the TAM model</p>	<p>Findings of the study depicted that an integrated TAM and the planned behavior theory greatly explains the Pakistani consumers' adoption intention of MB</p>



<p>M-banking barriers in Pakistan: a customer perspective of adoption and continuity intention</p>	<p>Abdul Waheed Siyal, Donghong Ding &amp; Saeed Siyal</p>	<p>Data Technologies and Applications</p>	<p>Data was accumulated in regional headquarters located country-wide to mark utmost generalizability of outcomes, which incorporated 7 largest Pakistani cities. SEM path analysis was employed to assess collected data from customers of the top 5 Pakistani banks incorporating both non-users and users</p>	<p>Feb-19</p>	<p>The aim of this study is to decide barriers risking the usage and adoption of MB in Pakistan. Outcomes also assert that if the highlighted problems were settled, consumers will continue to utilize besides attracting many more to the service</p>
<p>Acceptance of mobile banking in Islamic banks: evidence from modified UTAUT model</p>	<p>Syed Ali Raza, Nida Shah and Muhammad Ali</p>	<p>Journal of Islamic Marketing</p>	<p>The data was accumulated by utilizing the survey method. Moreover, the five-point Likert scale is utilized for the purpose of this study. The statistical methods executed to the data set were the partial least square structure equation modeling and the confirmatory factor analysis</p>	<p>Jul-18</p>	<p>The aim of this paper is to assess the elements, which influence the acceptance of MB in Islamic banks of Pakistan. Likewise, the intention to embrace the MB technology is taken as the mediator, and the actual usage is employed as the dependent variable</p> <p>The factual evidence depicts that all the research variables excluding the social influence variable have a significant favorable impact on the adoption intention, resulting in actual usage of MB adoption in the country</p>

<p>Mobile-banking adoption: empirical evidence from the banking sector in Pakistan</p>	<p>Maya F. Farah, Muhammad Junaid Shahid Hasni &amp; Abbas Khan Abbas</p>	<p>International Journal of Bank Marketing</p>	<p>A questionnaire was circulated to assess the responses of the customers on a five-point Likert scale. Sampling technique used is the convenience sampling to gather data from a sample of four hundred and ninety respondents in Pakistan. The data were assessed utilizing Amos and SPSS CR, AVE, CMV, Cronbach's <math>\alpha</math>, Harmon's single factor test, structural equation modeling, and correlation</p>	<p>Dec-17</p>	<p>The aim of this research is to assess the vital elements which assist explain customer intention and usage behavior in MB adoption</p>	<p>The outcomes exhibit that social influence, perceived value, performance expectancy, habit, trust, effort expectancy, and perceived risk all are significant in MB adoption in the country</p>
<p>What are the key determinants of mobile banking Adoption in Pakistan?</p>	<p>SayedKhawar Abbas, Hafiz Ali Hassan, Jawad Asif, Hafiz Muhammad Junaid, Faiqa Zaimab</p>	<p>International Journal of Scientific &amp; Engineering Research</p>	<p>Data was gathered from four hundred and forty six respondents from Islamabad, Lahore, and Karachi. A structured questionnaire and snowball sampling method is utilized</p>	<p>Feb-18</p>	<p>This study was focused to the elements of social influence, perceived trust, ubiquitous financial service, relative advantage, persona innovativeness, perceived risk, and perceived cost with regard to the adoption of MB technology in Pakistan</p>	<p>Only perceived cost was not a significant variable, all the other variables were found to be significant. Paper having implication for MB service providers and consumer too.</p>

<p>An integrative framework on mobile banking success</p>	<p>Mousa Albashrawi, Luvai Motiwalla</p>	<p>Information Systems Management</p>	<p>Data on MB is collected using field survey and computer recorded data from bank log files. Online users are focused to conduct survey and questionnaire is prepared using well-established measures from the literature.</p>	<p>2020</p>	<p>This study was focused on assessing MB acceptance using subjective measures i.e. self-reported data as well as objective measures i.e. computer recorded log data while focusing on integrative behavioral framework combining IS Success and UTAUT model.</p>	<p>Contribution is made to theory of IS adoption by comparing subjective and objective measures to assess the performance of the program that was not used in the MB sense as well as Integrating system-oriented factors with interface behavior-oriented factors to check the stability of the implemented process for adoption and usage in the MB sense.</p>	<p>Finings determine that MB enable women to get complete number of grants from agent, conveniently and securely. Duality of Technology framework ensure women's empowerment. The paper accentuates the modernization of mobile banking to suit the strengths of women and to provide them with financial and technical preparation.</p>
<p>Mobile banking in the government-to-person payment sector for financial inclusion in Pakistan</p>	<p>Atika Ahmed Kemal</p>	<p>Information Technology for Development</p>	<p>For this research case study method is used taking the case of BISP in Pakistan social cash program in account. For primary data collection qualitative methods underpinning interpretive stance using 33 semi-structured interviews.</p>	<p>Jan-19</p>	<p>The core concern is to explore role of MB considering Benazir Income Support Programme (BISP); a government social cash program in Pakistan targeting cases where women as the only beneficiaries.</p>	<p>Finings determine that MB enable women to get complete number of grants from agent, conveniently and securely. Duality of Technology framework ensure women's empowerment. The paper accentuates the modernization of mobile banking to suit the strengths of women and to provide them with financial and technical preparation.</p>	<p>Finings determine that MB enable women to get complete number of grants from agent, conveniently and securely. Duality of Technology framework ensure women's empowerment. The paper accentuates the modernization of mobile banking to suit the strengths of women and to provide them with financial and technical preparation.</p>

## **FINDINGS**

The research articles incorporated in this systematic review indicate that the literature on MB acceptance is not fragmented, and a majority of studies; nearly one third are relying upon factors affecting the acceptance of MB technology in the country. All such studies are revealing that the compatibility with the device and life styles, attitude, and perceived usefulness are the most vital drivers of Pakistani customers' intentions to embrace MB services in various urban and rural areas of the country.

The research articles incorporated in this systematic review recognized and explored numerous influences on the Pakistani customer adoption behaviour towards the technology of MB. These researches relied upon distinct techniques to gather their empirical data. Questionnaire research was the most prevalent one. Moreover, technology acceptance model (TAM) is a very famous framework for assessing MB intentions in the included studies.

These studies are imparting interesting understandings into the diffusion pattern of MB technology. For a majority of studies, the fundamental objective was to explore the deeper associations and motivations that substantially impacted possible adopters' intentions and attitudes across the numerous societal systems so that these studies could communicate behavioural intentions towards the adoption of MB in Pakistan.

Multiple researches strived to recognize factors affecting MB adoption in Pakistan; including studies by Abbas, Hassan, Asif, Junaid and Ahmed (2018), Afshan and Sharif (2015), Albashrawi and Motiwalla, (2020), Alshannag, Eneizan, Odeh, Ngah and Abutaber, (2020), Farah, Hasni and Abbas (2017), Kazi and Mannan (2013), Kemal (2019), Malik, Abbasi, Chaudhry and Mirza (2011), Muhammed, Jabbar, Mujahid and Lakhani (2013), Mostafa and Eneizan, (2018), Raza, Shah and Ali (2018), Saleem and Rashid (2011) and Siyal, Ding and Siyal (2019). A particularly prominent element identified by all of these studies is the customer trust. Some synergy between trust and customer satisfaction also emerged from these researches that report that trust considerably impacts the extent of satisfaction and is hence a vital variable for MB environments. Other leading factors impacting Pakistani customers' intent to adopt MB technology incorporate ease of use, privacy, security, reliability, and lesser element of risk according to the several authors. Such outcomes prove that the customers who think that the services of MB are useful and possesses higher privacy and lower transactions risks are inclined to embrace this technology in Pakistan. All of these studies also demonstrated that the Pakistani customers are attractive towards MB services, as it is a convenient source for fast and reliable financial services providing greater yields to the banks too.

Furthermore, studies carried out by Mazhar, Rizwan, Fiaz, Ishrat, Razzaq and Khan (2014); Rawwash et al., (2020); Shaikh, Glavee-Geo and Karjaluoto, (2015) have particularly emphasized upon the TAM (technology acceptance model) to recognize culture and social elements as strong influences on the adoption of MB technology in Pakistan. Likewise, combining these elements with an array of demographic elements exhibit that the influence of cultural and social features is vital.

Few of the limitations present opportunities for further studies. First, this systematic review focuses on studies relevant to the customer acceptance of MB framework in Pakistan, but MB

is huge in scope, consisting aspects like innovation, technology, and infrastructure. It also presents both the potential pitfalls and growth potentials. Including all of these MB aspects into upcoming systematic reviews would be useful for outlining the developing banking medium. Second, the acceptance of MB technology in Pakistan is the core of this research, so it excluded elements that prompt after adoption usage or the continuous intentions of the customers to utilize MB. Third, even though mobile payments and MB are two significant elements of mobile financial apps, this systematic review was carried out with the key word “mobile banking”, so excluding the scarce specific studies on mobile payments from the scope of this review. Nevertheless, as most of the included studies did not distinguish between mobile payments and mobile banking, this systematic review is restricted in that as it was not possible to scrutinize particular classifications of MB system, such as mobile payments. Likewise, researches particularly discussing elements that may avert the acceptance of MB were also regarded as beyond this study’s scope.

### **CONCLUSION AND RECOMMENDATION**

This research provides a systematic review on MB adoption published from the years 2011-2019. All the 12 relevant articles represent a rationally deep view of the acceptance of the MB framework in Pakistan research. Since the year 2011, both the conceptual and empirical research activities on this research field have increased and are expected to increasingly grow pervasive.

Nevertheless this study exhibits that the present research on the MB is not fragmented, constituted by numerous theoretical frameworks. Moreover, it mostly depends upon the technology acceptance model (TAM) and its modifications to elucidate customers’ intentions to utilize MB. An evaluation of the conceptual models specifically acknowledged in the included researches reveals different frameworks employed to research different constructs, factors, and attributes that lead to the adoption of MB framework in Pakistan. In addition, some of the included studies impart customized research models that present both the external and the internal factors impacting MB framework in the country.

In a developing country like Pakistan, MB is undoubtedly is gaining a secure foothold. Nevertheless, as an emerging banking service, the utilization of mobile phones to access financial information and to carry out banking transactions has not extensively adopted in the country. Impediments to the acceptance of MB framework are many and banks functioning in Pakistan have to work on them so that this modern technology can become more prevalent in the country.

Most of the researches of consumers’ intent to adopt MB in Pakistan are cross-sectional or restricted to a single demographic location assessing the intentions and perceptions of consumers at one point in time. As an outcome, it is not probable to elicit widespread generalizations from their conclusions. To enhance the relevance and quality of all such studies, researchers may gather more empirical data, backed by distinct guiding theories, to elucidate patterns of MB adoption across an array of customers. Combinations of quantitative and qualitative techniques also may effectually assess these conceptual models and examine semantic associations among the constructs or applied factors.

Most of the researches have restricted their data accumulation to a single country. For overcoming this, various areas propose the opportunity to deliver additional and pertinent insights. Thus, intercontinental and cross cultural studies would surely assist the scholars to determine how detailed social and cultural attributes of the society affect the adoption of MB. Moreover, a comparative evaluation of the customers living in the urban and rural areas of Pakistan can also be carried out, as no previous research has focused on this crucial aspect.

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