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Factors Affecting Bank Customer's Usage of Electronic Banking

Muhammad Usman¹ Sana Rubab² Syed Khalil Ahmed³

Abstract: *This study aims to examine the relationship between E-banking and Usage Behavior with the mediation of Behavioral Intention. To determine factors of E-banking services, consider Usage Behavior as dependent variables and Awareness, Perceived Ease of use, Perceived Usefulness and Perceived Risk as independent variables. In this study, the aspects of consumer behavior, i.e., Behavioral Intention and Usage Behavior, have been examined using different factors of E-banking. These factors have been considered to identify which factors of e-banking are more influential and how they can help in the development of customer intention as well as customer behavior to use E-banking services. This study has used a survey method to collect data from different banks. For data analysis, the Structural Equation Model (SEM) was adopted using partial least squares via smart PLS4. This software is the most recent and relevant software to access data. The tests were applied through PLS for the evaluation of the measure model and for the assessment of the structural model. Assessment of the measure model shows positive results for reliability and validity, and the results of the structural model show that the hypothesis generated for this study has been accepted.*

Key Words: Awareness, Perceived Ease of Use, Perceived Usefulness, Perceived Risk, Behavioral Intention, Usage Behavior with E-banking

Introduction

E-banking can be described as a medium for its customers to get access to information easily and to transact their businesses electronically through electronic devices without being present at the bank (Teka, 2020). E-banking can be defined as those transactions that are conducted through electronic channels like present online branches, ATMs, mobile banking, internet banking, call center banking, point of sales (POS) and e-commerce (Raza et al., 2017). E-banking, known as Electronic Funds Transfer (EFT), is fundamentally an electronic technique being utilized or a means through which cash is electronically moved from one record to another record, as opposed to money or cheque (Rahimuddin, 2010).

The word "E-banking" is very attractive all over the world. E-banking was initiated by phone banking in the 1980s, and it expanded when web services were started to be utilized at home (Cartwright, 2000). In the 1980s, banking and cash organizations in Europe and America began to work on the idea of "home banking." As PCs and the web were not common in those days, phone banking was being emphasized (Nunnally & Bernstein, 1994). The principal web banking application was begun in the U.S.A. in 1996 and was adopted by famous banks, like Citibank and Wells Fargo, who began to offer assistance to their clients in 2001. Web banking began in Turkey in light of the mechanical advancements in the 1990s that were in line with the improvements on the planet. It is also said that a total of 78 % of branches at the moment are offering real-time online banking in the U.S. (Magutu et al., 2009).

E-banking was first initiated in Pakistan in the 1990s by a foreign bank, Standard Chartered Bank. It was in 1987 when the very first ATM was introduced in the country. Indeed, even till the late 1990s, ATM development and issuance of cards remained exceptionally low. After the 1990s, Pakistani domestic banks also adopted banking. HBL (Habib Bank Limited) is the first bank to adopt this new technology and start

¹ Undergraduate Scholar, Department of Management Sciences, University of Loralai, Balochistan, Pakistan.

² Lecturer, Department of Management Sciences, University of Loralai, Balochistan, Pakistan.

³ Lecturer, Department of Management Sciences, University of Loralai, Balochistan, Pakistan.



getting benefits from it. Customers also get benefits from this new technology like Paying bills online, transferring money, Depositing cheques online etc. However, the automation of banking tactics has opened new doorways of possibilities for an IT region in Pakistan (Sandhu & Arora, [2022](#)). The improvement of the cutting-edge banking system and digital banking system has enabled specific offering processes that demand few inner and external resources, leading to lower expenses and higher sales technology for the banks and clients. There are a lot of opportunities created for a range of businesses by the introduction of the Internet, e-commerce, and IT (Ahmad Mir & Dar, [2013](#)). One of the significant powers behind the progressions happening to business today is innovation, which is making new items, administration market open doors and growing more data and framework situated business and the executive's processes (Kaleem & Ahmad, [2010](#)). The appearance of the web has given numerous chances for extraordinary changes in the methodology and working of organizations (Raza et al., [2017](#)). Nowadays, every bank in Pakistan offers an E-banking service. As compared to paper-based money, the growth of electronic banking and money has been witnessed to be more rapid (Huang et al., [2022](#)).

In the current age, the banking model has been modified due to substantial net generation. Now, all enterprises, including trading, purchasing, and selling items, depend upon digital banking. By using new technology, banking services are rapid and least expensive. In short, all around the world, everybody wants to have bank services 24/7, whether they are traveling or on holiday (Kazmi & Hashim, [2015](#)).

There are still many issues faced by customers in adopting e-banking, such as security, money laundering, internet issues, lack of customer awareness, etc. (Khan, [2007](#)). There are many reasons why customers are unable to use online banking, like awareness, money laundering, poor internet service, and security. This study aims to look into such reasons in a way that can study how these reasons can be associated with the intention and behavior of customers towards the usage of E-banking services.

Problem Statement

This study will help bankers understand the importance of factors essential for encouraging customers to use e-banking for their business and personal transactions. Currently, banks have adopted e-banking as a medium of transactions, but it is not being properly accepted and adopted by customers in rural areas. This study will help in focusing on those factors which can enhance e-banking usage. E-commerce is gaining popularity in many different industries as a means of positioning firms, gaining a competitive edge, or adjusting to the rapidly changing environment.

Purpose of Study

The key purpose is to enhance e-banking services by giving insights to bankers about the factors that seem more crucial for customers while making decisions regarding the usage of e-banking services.

Research Gap

Earlier studies have focused majorly on analyzing the relationship between bank performance and the adoption of e-banking services (Raza et al., [2017](#)). This research focuses on the factors that can be of importance in developing some positive or negative influence on the usage of e-banking services. This research is conceptualized to focus on the behavioral aspect by incorporating 'Behavioral intention' and 'Usage behavior,' which have not been studied much previously.

Research Questions

- RQ1:** Does awareness impacts the behavioral intention?
- RQ2:** Does perceived ease of use impact the Behavioral intention?
- RQ3:** Does perceived Usefulness impact the behavioral intention?
- RQ4:** Does perceived risk impact the behavioral intention?
- RQ5:** Does awareness impact the usage behavior?
- RQ6:** Does perceived ease of use impact the usage behavior?
- RQ7:** Does perceived Usefulness impact the usage behavior?
- RQ8:** Does perceived risk impact the usage behavior?
- RQ9:** Is there an impact of behavioral intention on usage behavior?

Research Objectives

This study aims

- RO1:** To examine the impacts of awareness on customer Behavior Intention.
- RO2:** To examine the impacts of Perceived Ease of use on customers' Behavior intention.
- RO3:** To examine the impacts of Perceived Usefulness on customers' Behavior intention.
- RO4:** To examine the impacts of Perceived Risk on customer Behavior Intention.
- RO5:** To examine the impacts of Awareness on customer usage behavior.
- RO6:** To examine the impacts of Perceived Ease of Use on customer Usage Behavior.
- RO7:** To examine the impacts of Perceived Usefulness on customer Usage Behavior.
- RO8:** To examine the impacts of Perceived Risk on customer Usage Behavior.
- RO9:** To examine the impact of Behavioral Intention on Usage Behavior.

Significance of Study

This study is designed to show the factors that have transformed the banking system. It will help bankers emphasize the most relevant factors influencing the intention and behavior of customers towards the usage of e-banking.

Scope of the Study

This study can be helpful for bankers to understand the factors that can give advantages to banks by including e-banking services, which will ultimately benefit the growth of the economy. It will also help in developing such services which will be according to the customer's satisfaction.

Literature Review

E-Banking

E-banking can be termed as a system where a platform has been established by banks to facilitate their clients' access to information and perform their business transactions electronically without being physically present at the bank (Teka, 2020). A great number of benefits of using electronic banking for customers have been recognized by experts (Rahimuddin, 2010). Conducting transactions from remote places has become possible for customers due to Internet banking and electronic banking services, which include free account checks, deposits, awareness of new products, and debit and credit card know-how. For the banking sector, it is essential to add up services like Internet banking as it lets the consumer interact freely and easily with the bank, as well as it also lets the bank interact with the customers in order to provide awareness and information about new products and services. (Kaur & Arora, 2021)

Awareness

At the time of the introduction of technology, which is totally new, the factor that can become a key barrier to a good introduction is its acceptance. Acceptance relies upon the way information of awareness has been spread regarding its proper use (Noreen, 2015). The same fact is very valid for e-banking. The banking sector needs to take precautionary steps in order to ensure that customers are properly informed about the advancements made in e-banking. Media has played a vital role in spreading awareness to the urban cities along with banking sector has also been active in making efforts to educate the general public about E-banking services and has been successful in making E-banking services a part of their lifestyle (Shaji, 2020). The help of advertisement and promotion activities has been proven to be very important in spreading awareness (Teka, 2020). It is necessary that concerned authorities engage themselves in planning and taking steps that can accelerate the spreading of information among the clients as it will increase customer interest and the size and growth of banks (D, 2016).

Perceived Risk

Perceived Risk is termed as the expectation of loss by a customer using the internet as a medium (Huang et al., 2022). Bank clients fear their accounts being hacked from remote areas as well as from regions far apart from one another (Kaur & Arora, 2021). However, banks claim that these are customers' PINs and passwords that are hacked. Perceived Risk can be expressed as the probability of loss of a customer using electronic banking in order to conduct a transaction (Andrian & Selamat, 2022). It is one of the elements



that influence users' adoption of e-banking, and there are various ways to look at its elements, such as privacy risk and security risk. Loss of data is typically linked to security risk. The likelihood of unfavorable consequences resulting from the use of internet services is referred to as perceived risk (Marafon daiane Lampugnani, Kenny Basso, [2018](#)). Each of these dangers acts as a deterrent to the utilization of E-banking. Errors in transactions and mishandling of data are connected to compromising the privacy of clients by sharing their information with third parties (Sandhu & Arora, [2022](#)).

Perceived Usefulness

The initial definition of perceived usefulness is the belief of the individual that the use of new technology will amplify or improve one's enactment (Kaleem & Ahmad, [2010](#)). Perceived Usefulness can be further explained as one's belief that by using a particular technique or method, there can be an enhancement in the (Jahangir & Begum, [2008](#)). In the world of e-banking, perceived usefulness has managed to grab tremendous consideration (Golubova, [2012](#)). According to Davis (1989), Perceived Usefulness refers to how customers view the results of their experiences. It is assumed that perceived usefulness is a key factor in generating users' acceptance of technology (Chin, [1998](#)).

Perceived Ease of Use

PEU is termed as the extent to which technology is supposed to be effortless to use (Davis, 1989). The level to which a novel technology is seen as being simple to use, comprehend and learn symbolizes ease of use (Shaji, [2020](#)). Perceived Ease of Use significantly affects an individual's attitude (Chin, [1998](#)). It is argued that the user's sensation of control increases the perception of ease of use of the system (Huang et al., [2022](#)). Additionally, a simple-to-use tool will give users the impression that he is in charge of what he is doing (Khaled, [2013](#)). It is argued that attitude and perceived ease of use are directly related to intrinsic motivation and can significantly improve the Intention to use anything (Bandura, 1982; Lepper, 1985). Ease of use simply refers to how stress-free it is to utilize E-banking (Geffen and Straub, 2000). As a result of being at ease, consumers are more likely to adopt an application that they view as being simpler to use than others (Magutu et al., [2009](#)). The findings from earlier studies showed that perceived Ease of Use would positively affect users' perceptions in their interactions with e-banking systems, either directly or indirectly, through its impact on Perceived Usefulness and behavior (Shaji, [2020](#)).

Behavioral Intention

BI (Behavioral Intention) is defined as the likelihood of customers assuming certain behaviors (Nusapatuah, [2022](#)). Behavioral intention is the behavior of consumers who are loyal to the company so that they are willing to purchase or undergo something because they had a positive encounter with certain information regarding that something (Al-Ajam & Md Nor, [2013](#)). The reason provided for having a positive attitude toward Internet banking services is because it is a faster and simpler way of conducting transactions. Theories state that compatibility has a strongly positive and highly significant impact on attitude. On the other hand, theories also state that the reason customers do not favor e-banking is that it is uncomfortable for them. Clients remain aware that they don't need such development-driven organizations to the same extent because they anticipate that e-banking offers a wide range of organizations. They lack the desire to abandon their current financial system or alter their banking practices to include more (Sandhu & Arora, [2022](#)).

Usage Behavior

Usage Behavior refers to the designs, behavior and learning that individuals or groups reveal when interacting with new products, services, technologies, or any kind of system (Malik et al., [2022](#)). Usage behavior in E-banking refers to the patterns and actions displayed by customers when they interact with E-banking services, typically through online platforms or mobile applications (Teka, [2020](#)). E-banking usage behavior encompasses the types of transactions users perform online. This includes activities such as checking account balances, transferring money between accounts, paying bills electronically, setting up automatic payments, and initiating wire transfers. The customers enjoy the accommodations as well as what the electronic financial system has to offer (Jain & Arya, [2021](#)). However, they also require

customization in some situations where communication with the expert organization is required. When they were looking for answers to direct questions or comfort on a few simple exchanges, personalization seemed to be a key factor in the direct selection. Understanding Usage Behavior is crucial for both banks and customers, as it helps to improve the overall banking experience, enhance security, and tailor services to meet individual needs. Usage behavior in e-banking is a multifaceted approach that involves tracking various aspects of customers' interactions with online banking services (Yadgar, 2020). The accessibility or availability of a high-quality internet connection or network connection directly influences how people actually use e-banking in a good and meaningful way. The implication is that having a reliable internet or network connection has a high impact on how users actually use e-banking. The study suggests that the availability of a fast, reliable, and reliable network or internet connection increases the degree of E-Banking adoption among the banking community and that the more readily available a network or internet connection is, the better their Usage Behavior and vice versa (Samuel et al., 2018). The Ease of Use and accessibility of E-banking services can greatly impact Usage behavior. User-friendly interfaces, quick login processes, and 24/7 availability tend to encourage more frequent and extensive use. Concerns about the privacy of personal financial information can affect usage behavior. Banks that effectively address these concerns through robust data protection measures can build trust with their customers (Butt, 2021).

Hypotheses Development

Relationship between Awareness of E-banking Services and Customer's usage Behavior

Nawaz et al. used awareness to find the relationship between awareness and the use of digital information resources among students in universities. The result of the said study concluded that there is a significant relationship between awareness and digital information resources. The respondents' degree of satisfaction is directly correlated with the availability of information resources at the university library (Nawaz et al., 2022). Awareness has been used in the study, which shows that awareness has an impact on e-banking usage. Awareness has a positive and significant effect on customers' attitudes toward the usage of e-banking (Sandhu & Arora, 2022). For this study, it is hypothesized that:

H1: Awareness of e-banking services is significantly associated with customer's usage behavior.

Relation between Perceived Ease of Use of E-banking Services and Customer's usage Behavior

Perceived Ease of Use has been studied earlier to predict ERP (enterprise resource planning) systems in small and medium-sized enterprises (SMEs), and software dealers have been repackaging their ERP systems for SMEs with a current focus on cloud-based systems. While cloud ERP suggests the best solution for SMEs without the enormous investment and management costs that are associated with customary ERP systems, the SME area faces many challenges in their acceptance, and they conclude that SMEs have shifted from traditional ERP to the cloud-based ERP systems due to the usefulness of the system (Venkatraman & Fahd, 2016).

PEU is an imperative aspect in the adoption process of technological advancement as It is possible that despite acknowledging the usefulness of E-Banking, customers might not adopt it due to the perception that it is a complex way of conducting transactions. The technology that, in the minds of customers, is easier to use and learn would be more likely to be accepted by users (Kumar & Ravi Kumar, 2020). Hence, it can be derived that Perceived Ease of Use (PEU) is directly related to consumer acceptance. Perceived ease of use has been used in previous studies in relationship with attitude to use E-Banking and has shown positive results (Sandhu & Arora, 2022). It is, therefore, hypothesized that:

H2: Perceived ease of use of E-banking is Significantly Associated with Customer's usage behavior

Relationship between Perceived Usefulness of E-banking Services and Customer's Usage Behavior

Perceived Usefulness (PU) has been used in studies to investigate the university lecturers' perceptions.

Usefulness, Ease of Use of mobile technologies for research collaboration. The findings discovered that mobile technologies are a crucial part of academics, and in current times, these newer and rapidly evolving



technologies have proven to be of great assistance in facilitating academic research for publication (Samuel et al., 2018).

Customers' belief that E-Banking may improve their job performance is considered to be its Perceived Usefulness. Previously, a study was conducted, and it stated that there is a relationship between technology acceptance and perceived usefulness (Jain & Arya, 2021). Perceived usefulness has been used in the study, which shows that Perceived usefulness has a direct positive effect on customers' attitudes towards the usage of e-banking services (Samuel et al., 2018). For this study, it is hypothesized that:

H3: Perceived Usefulness of e-banking services is significantly associated with customer usage behavior.

Relationship between Perceived Risk of E-banking Services and Customer's Usage Behavior

Perceived Risk (PR) has been used in an Indonesian study to find the factors that influence customers' intentions to make online purchases based on technology acceptance models and perceived risks and hypothesized that online purchase intention is mostly determined by perceived Ease of Use, Perceived Usefulness, and Perceived Risk. The results of this study concluded that Perceived Usefulness and Ease of Use have a positive influence on a User's attitude and Intention to shop online, whereas Users' Attitude and Purchase Intention are negatively influenced by perceived risk (Nusapatuah, 2022). Perceived risk is considered to be a negative event from something estimated (Kazmi & Hashim, 2015). Perceived risk has been used in a study that shows that It has a negative effect on customers' attitudes toward usage behavior (Nusapatuah, 2022). For this study, it is hypothesized that:

H4: Perceived risk of e-banking services is significantly associated with customer's usage behavior.

Relationship between Awareness of E-banking Services and Behavioral Intention

Awareness is considered the most frequently used measure for subjective evaluation (Shaji, 2020). In the research on IT adoption, Awareness has been linked to the actual level of consumer digital literacy (Golubova, 2012). Howard and Moore concluded that customers must be aware of a new product before planning to use it (Nawaz et al., 2022). It is crucial to increase client awareness of a service or product so that an urge to use it arises (Anouze & Alamro, 2020). It's probable that Jordanian clients don't utilize e-banking as they're not aware of it or the benefits it provides. Awareness has been used in a (Sudhakaran, 2021) study revealing that awareness has a significant relationship with users' intentions. For this study, it is hypothesized that:

H5: Awareness of e-banking services is significantly associated with behavioral intention.

Relationship between Perceived Ease of Use of E-banking Services and Behavioral Intention

Perceived Ease of Use has been used in the literature to find its effect on the Intention to Use T-Pay as a digital transaction instrument, and a significant positive relationship was concluded between the perceived ease of use and intention to use T-Pay (Suroso et al., 2022). Another major finding of research revealed that perceived usefulness affects purchase intention directly or indirectly (Rahimuddin, 2010). It was indicated in the study that consumers' perceptions of credibility while interacting with e-banking systems would be positively impacted by perceived ease of use (Hair et al., 2017). A better perceived ease of using the internet would positively affect users' adoption of e-banking, according to Chin and Gopal (1995). Perceived ease of use has been used in a study and shows that the perceived ease of use has a significant relationship with users' intention (Sudhakaran, 2021). Hence, in this study, it is hypothesized that:

H6: Perceived ease of use of e-banking services is significantly associated with behavioral intention.

Relationship between Perceived Usefulness of E-banking Services and Behavioral Intention

The theoretical justification for the claimed link between perceived usefulness and behavioral intention is provided by (Zikmund et al., 2013) (Nunnally & Bernstein, 1994) et al. found that PU had a substantial impact on Taiwanese people's intention to utilize E-Banking services. Perceived usefulness has been used to examine its relationship with behavioral intention toward the usage of 3G mobile services, and it concludes that PU will have a positive effect on behavioral intention towards using 3G mobile services (Suki & Suki, 2011). For this study, it is hypothesized that:

H7: Perceived usefulness of e-banking services is significantly associated with behavioral intention.

Relationship between Perceived Risk of E-banking Services and Behavioral Intention

According to researchers, perceived risk is a significant factor affecting online customer behavior, and the results are consistent with their findings (Stroeken & Hawkins, 2001). It was discovered that illegal activities may be carried out quickly and without physical contact in the world of the internet. This is due to the possibility that user perceptions of the validity of security and privacy may influence the inclination to use online banking (Jahangir & Begum, 2008). Perceived ease of use has been used in the study and shows that PEOU will have a positive effect on Behavioral Intention towards using 3G mobile services (Suki & Suki, 2011). For this study, it is hypothesized that:

H8: Perceived risk of e-banking services is significantly associated with behavioral intention.

Relationship between Customer's Behavioral Intention and Customer's usage behavior

BI (Behavioral Intention) is defined as the likelihood of customers assuming certain behaviors (Nusapatuah, 2022). Behavioral intention is the behavior of consumers who are loyal to the company so that they are willing to purchase or undergo something because they had a positive encounter with certain information regarding that something (Al-Ajam & Md Nor, 2013).

Usage behavior in E-banking refers to the patterns and actions displayed by customers when they interact with E-banking services, typically through online platforms or mobile applications (Teka, 2020). E-banking usage behavior encompasses the types of transactions users perform online. This includes activities such as checking account balances, transferring money between accounts, paying bills electronically, setting up automatic payments, and initiating wire transfers. The customers enjoy the accommodations as well as what the electronic financial system has to offer (Jain & Arya, 2021).

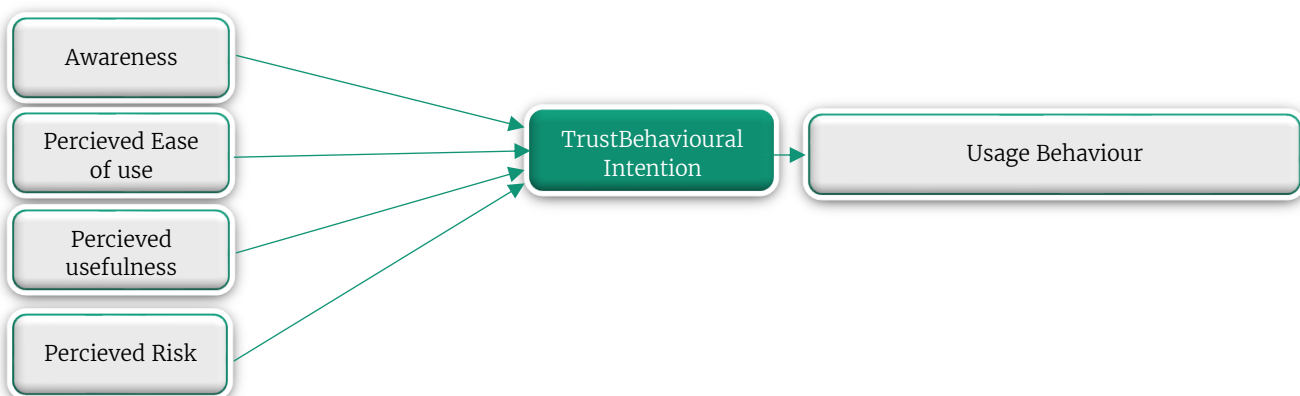
A great amount of research has been done to support the relationship between intention and actual behavior. For instance, a study was conducted to examine the Intention to use mobile banking services among the Millennial Generation. The results showed a positive relationship between the two variables (Nusapatuah, 2022). For this study, it is hypothesized that:

H9: Behavioral Intention mediates the relationship between e-banking services and customer Usage Behavior.

Research Model

The research of this study consists of 4 independent variables with one mediator and one dependent variable. Behavior Intention has been used as a mediator in the study.

Figure 1



Methodology

This chapter describes what type of approach has been used in our research. How do you choose the sample/population for data analysis, what type of method has been used for data collection and at the end, what type of software was used for data analysis.



Research Methodology

In research methodology, understanding behavioral intention as it relates to mediation is an important aspect of studying human behavior and mindfulness practices. Behavioral Intention' often associated with the theory of planned behavior, focuses on an individual's willingness and readiness to engage in a particular behavior. That's why we use behavioral Intention as a mediator in a study.

Research Philosophy

This study followed a positivistic paradigm, as Positivism focuses on the confirmation of existing theory in a quantitative manner. It stresses cause–effect associations of phenomena that can be deliberated, recognized, and generalized. Positivism stemmed from empiricism and foundationalism; positivists value objectivity and proving or disproving hypotheses (Item, 2018). It follows both nomothetic and etic perspectives. Positivism serves as the primary foundation and anchor for quantitative research.

Research Approach

In this research, the deductive approach was used for data analysis.

Methodological Choices

In this research, we use a quantitative approach, which explains the whole procedure related to the data collection part of the research.

Research Strategy

For data collection, we used the survey method as a research strategy.

Research Design

The nature of this study is quantitative, finding out the impact of independent variables on dependent variables with one mediator. The data is collected through a questionnaire.

Sample Design

Sampling Techniques

A sample is a relatively small portion of the population that serves as a representative of the entire population and whose characteristics are researched to learn more about the entire population (Berndt, 2020). Sampling approaches are used because they are more efficient than population analysis in terms of time and cost. The sample selected for this study was the customers and employees of banks at the managerial level who use different apps for their daily basis business or shopping transactions.

Sample Size

According to Green (1991), $N = 50 + 8p$, the sample size has been selected where p is the number of predictors and is the appropriate sample size for a multiple regression. Likewise, this study has six predictors; hence, the minimum sample size required for this is 98, but as it is the minimum limit, it was anticipated that a sample size of 250 respondents could be conveniently achievable. After the collection of the data, the sample size was reduced from 250 respondents to 226.

Population Frame

Data was collected from male and female customers; some of the customers were bank employees at the managerial level.

Sample Selection

The sample was selected from different users who had bank accounts. First of all, the data was gathered from university students and employees who had bank accounts.

Unit of Analysis

The units of analysis for the study are bank employees of Al-Habib Bank Ltd, Allied Bank Ltd, MCB Bank Ltd, Bank Islamic Ltd and United Bank Ltd and academic and non-academic employees as well as students of the University of Loralai and the University of Baluchistan. Each response was considered as a single unit of analysis and was counted as an individual source of data.

Instrumentation

The instruments for measuring variables were well-defined and have been used in previous studies. A questionnaire was used for data collection. Two different types of questionnaires were created to collect the information from the respondents. One for the customers and the other one for bank employees. The questionnaire contained two parts: Demographics and variable questions. Items in the questionnaire were adopted from the previous relevant studies. (e.g., Teka, 2020). The overall questionnaire contained 24 items. Awareness was measured by four items. Perceive Ease of Use (PEU) was measured by four items. Perceived Usefulness (PU) was measured by five items. Perceived Risk (PR) was measured by three items. Behavioral Intention (BI) was measured by four items. Usage Behavior (UB) was measured by four items.

Questionnaire

In this study, primary data was collected through a structured questionnaire. The questionnaire was developed by implementing variables from different sources and combined into a single entity.

Survey

An instrument was developed to conduct a survey. There were two parts of the questionnaire; the first part contained the demographic details, and the second part contained constructs measures such as the independent variable (Awareness, Perceived Ease of Use, Perceived Usefulness, Perceived Risk, Behavioral Intention, Usage behavior) and the dependent variable (satisfaction with e-banking) composed from previous studies. In the current study, the collection of data was done by using five 5-point Likert scale apart from demographic characteristics. The scale was comprised of 5 points: 1-Strongly Disagree, 2-Disagree, 3-Not Sure, 4-Agree, 5-Strongly Agree.

Data Collection Procedure

Any study needs data to be shown, and the researcher must follow data collection procedures to meet this need. The process of obtaining and organizing data is called data collection. The main goal of data collection is to measure variables in a systematic method in order to evaluate stated hypotheses and produce findings. In this, a questionnaire was used to collect information from respondents regarding undergoing the survey method. The questionnaire was developed in the English language. This study was cross-sectional. The units of analysis for all variables were the bank account holders.

Ethical Requirement

The information and responses of the participants were kept private throughout the data collection process.

Discussion and Conclusion

This chapter discussed the findings of the research work, the conclusion and consequences that were drawn on the basis of these findings, and the conclusion assumed from the objectives and analysis of the study. The recommendations for future research are also mentioned in this chapter. There are sections to explain: findings, summary of findings, discussion, consequences (empirical and theoretical), future directions, limitations, and conclusion of the study.

Findings and Discussions

The purpose of this study is to find out the relation between the independent variable (Awareness, Perceived Ease of Use, Perceived Usefulness and Perceived Risk) and the dependent variable (Usage



behavior). It is quite obvious that people of the present era have improved their lives by using new technology. People use e-banking for ease and to save their time. Equating the findings with the research objectives entails significant results. This study aimed to examine the impact of Awareness, perceived Ease of Use, Perceived Usefulness and Perceived Risk of Behavioral Intention or Usage Behavior with e-banking. All the research objectives were achieved after analyzing that all the aforementioned independent variables positively and significantly influenced the intention and behavior of the customers towards the use of e-banking services.

Table 1

Summary of findings

Hypotheses	Description	Remarks
H1	Awareness of e-banking services is significantly associated with customer Usage Behavior.	Accepted
H2	Perceived ease of use of e-banking is significantly associated with Customer Usage behavior.	Accepted
H3	Perceived Usefulness of e-banking services is significantly associated with customer Usage Behavior.	Accepted
H4	The perceived risk of e-banking services is significantly associated with customer Usage behavior.	Accepted
H5	Awareness of e-banking services is significantly associated with Behavioral Intention.	Accepted
H6	Perceived ease of use of e-banking services is significantly associated with behavioral intention.	Accepted
H7	The perceived usefulness of e-banking services is significantly associated with Behavioral Intention.	Accepted
H8	Perceived risk of e-banking services is significantly associated with Behavioral Intention.	Accepted
H9	Behavioral Intention mediates the relationship between e-banking services and customer Usage Behavior.	Accepted

Study Implications

This study will help the banking sector identify the e-banking features that are more likely to develop the intention and actual usage behavior of the customers. Furthermore, this study will help customers by creating awareness that they can use e-banking services at any time, anywhere, whenever they need, which they can use easily feasters who are, customers and the general public.

Theoretical Implications

This study will add to the body of information by focusing on factors of E-banking and their influence on consumer behavioral aspects. In theory, factors of e-banking services are studied with attitude and subjective norms (Teka, 2020). E-banking factors are also studied in relation to security and reliability (Khan, 2007). This model implicates the behavioral aspects and leads to the study of the factors of the customer behavior model, such as in future post-usage behavior or comparison of pre-usage and post-usage behavior can be studied. Furthermore, this study can be applied to larger data by comparing urban and rural population.

Practical Implications

This study can help the banking sector design new e-banking services. Bank can seek insight from the results of this study. Also, the results of this study can help improve existing e-banking services.

Limitations and Future Research Direction

This study has been conducted in limited time and with limited resources. Hence, this study fails to state

respondents in different categories for further detail. Hence, respondents can be categorized as those who haven't used any e-banking services themselves but are aware of it and those who are using e-banking services in any form. Along with this, this study limits its scope by generalizing and considering all e-banking services. While each service can be studied separately and in comparison with each other as well.

Conclusion

Based on the findings discussed above, it is likely to be concluded that Awareness, Perceived Ease of Use (PEU), Perceived Usefulness (PU), Perceived Risk (PR) and Behavioral Intention (BI) have a significant positive impact on customer's Intention to Use and Usage Behavior towards E-Banking service. However, perceived risk has a significant negative impact. Hence, the study suggests that the basic infrastructure (ICT) for e-banking adoption currently in place is unable to meet all of the needs of e-banking technology in Pakistan.

References

- Ahmad, M. R., & Dar, A. A. (2013). Customer Attitude and Factors Influencing Users Acceptance of E-Banking in J&K. *International Journal of Business and Management Invention ISSN*, 2(7), 68–78.
- Al-Ajam, A. S., & Nor, K. M. (2013). Influencing factors on behavioral intention to adopt internet banking service. *World Applied Sciences Journal*, 22(11), 1652–1656. <https://doi.org/10.5829/idosi.wasj.2013.22.11.2896>
- Andrian, A., & Selamat, F. (2022). The Influence of Consumer's Perceived Risk on Consumer's Online Purchase Intention in Indonesia. *Proceedings of the 3rd Tarumanagara International Conference on the Applications of Social Sciences and Humanities (TICASH 2021)*, 655(Ticash 2021), 669–676. <https://doi.org/10.2991/assehr.k.220404.105>
- Berndt, A. E. (2020). Sampling Methods. *Journal of Human Lactation*, 36(2), 224–226. <https://doi.org/10.1177/0890334420906850>
- Butt, S. (2021). Impact of E-Banking Service Quality on Customers' Behavior Intentions Mediating Role of Trust. *Global Management Journal for Academic & Corporate Studies (GMJACS) Fall*, 11(2), 2305–0756.
- Chin, W. (1998). The partial least squares approach to structural equation modeling. In G. Marcoulides(Ed.). *Modern Methods for Business Research*, January, 295–358.
- Fornell, C., & Larcker, D. F. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research*, 18(1), 39. <https://doi.org/10.2307/3151312>
- Golubova, S. (2012). E-commerce Adoption and Implementation Strategy for a High-Tech Firm. November.
- Hair, J. F., Ringle, C. M., Hult, G. T. M., & M, S. (2017). A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM). <https://doi.org/10.1017/CBO9781107415324.004>
- Huang, F., Teo, T., & Scherer, R. (2022). Investigating the antecedents of university students' perceived ease of using the Internet for learning. *Interactive Learning Environments*, 30(6), 1060–1076. <https://doi.org/10.1080/10494820.2019.1710540>
- Hulland, J. (1999). Use of Partial Least Squares (PLS) in Strategic Management Research: A Review of Four Recent studies. *Strategic Management Journal*, 20(2), 195–204. <https://doi.org/10.1002/smj.233>
- Item, J. (2018). Open Research Online. <https://doi.org/10.7748/nr.2018.e1466>
- Jahangir, N., & Begum, N. (2008). The role of perceived usefulness , perceived ease of use , security and privacy , and customer attitude to engender customer adaptation in the context of electronic banking. *African Journal of Business Management*, 2(1), 32–40.
- Jain, V., & Arya, S. (2021). An Overview of Electronic Commerce (e-Commerce). *Journal of Contemporary Issues in Business and Government*, 27(3), <https://doi.org/10.47750/cibg.2021.27.03.090>
- Kaleem, A., & Ahmad, S. (2010). Bankers perceptions of electronic banking in Pakistan. *Business Review*, 5(1), 131–148. <https://doi.org/10.54784/1990-6587.1261>
- Kaur, S., & Arora, S. (2021). Role of perceived risk in online banking and its impact on behavioral intention: trust as a moderator. *Journal of Asia Business Studies*, 15(1), 1–30. <https://doi.org/10.1108/JABS-08-2019-0252>
- Kazmi, S. S. A., & Hashim, M. (2015). E-Banking in Pakistan: Issues and Challenges. *International Journal of Academic Research in Business and Social Sciences*, 5(3), 50–54. <https://doi.org/10.6007/ijarbss/v5-i3/1498>



- Khaled, M. S. F. (2013). Exploring The Influence Of Perceived Risk And Internet Self - Efficacy On Consumer Online Shopping Intentions: Perspective Of Technology Acceptance Model. *International Management Review*, 9(1), 67–78. <http://americanscholarspress.us/journals/IMR/pdf/IMR-1-2013/v9n113-art7.pdf>
- Khan, S. (2007). Adoption Issues of Internet Banking in Pakistani ' Firms. *International Affairs*, 1(2), 1–101.
- Kumar, G. A., & Ravi Kumar, A. (2020). A study on consumer awareness towards online shopping. *Journal of Advanced Research in Dynamical and Control Systems*, 12(1 Special Issue), 378–385. <https://doi.org/10.5373/JARDCS/V12SP1/20201085>
- Magutu, P. O., Mwangi, M., Nyamwange, S. O., Nyaoga, R. B., Kagu, M., Mutai, K., Kilonzo, H., & Nthenya, P. (2009). E-commerce products and services in the banking industry: The adoption and usage in commercial banks in Kenya. *Knowledge Management and Innovation in Advancing Economies: Analyses and Solutions - Proceedings of the 13th International Business Information Management Association Conference, IBIMA 2009*, 3(August 2014), 1598–1610. <https://doi.org/10.5171/2011.678961>
- Malik, G., Singh, D., & Stakić, N. (2022). Understanding the behavioural intention to adopt Internet banking: An Indian perspective. *The European Journal of Applied Economics*, 19(1), 110–120. <https://doi.org/10.5937/ejae19-35277>
- Nawaz, R., Naeem, S. Bin, & Ramzan, M. (2022). Relationship between Awareness and Use of Digital Information Resources among University Students of Southern Punjab. *Library Philosophy and Practice (e-Journal)*. <https://digitalcommons.unl.edu/libphilprac/6907>
- Noreen, A. (2015). Awareness of Electronic Banking and the Customer'S Level of Satisfaction in Pakistan. *Arabian Journal of Business and Management Review*, 3(11),
- Nunnally, J. C., & Bernstein, I. (1994). This Week ' s Citation Classic. *Psychometric Theory*, 1978. <https://doi.org/10.1016/j.stemcr.2015.10.016>
- Nusapatuah, K. S. (2022). Behavioral Intentions to Use Mobile Banking for Millennial Generation Customers of Bank Syariah Indonesia Yogyakarta. 1, 1–7.
- Raza, M. A., Naveed, M., & Ali, S. (2017). Determinants of Internet Banking Adoption by Banks in Pakistan. *Management and Organizational Studies*, 4(4), 12. <https://doi.org/10.5430/mos.v4n4p12>
- Samuel, N., Onasanya, S. A., & Olumorin, C. O. (2018). Perceived usefulness, ease of use and adequacy of use of mobile technologies by Nigerian university lecturers. *International Journal of Education and Development Using Information and Communication Technology (IJEDICT)*, 14(3), 5–16.
- Sanayei, A., & Bahmani, E. (n.d.). Integrating TAM and TPB with Perceived Risk to Measure Customers' Acceptance of Internet Banking.
- Sandhu, S., & Arora, S. (2022). Customers' usage behaviour of e-banking services: Interplay of electronic banking and traditional banking. *International Journal of Finance and Economics*, 27(2), 2169–2181. <https://doi.org/10.1002/ijfe.2266>
- Shaji, A. K. (2020). Journal of International Women ' s Studies A Study of the Awareness of Electronic Banking Services among Rural Women of Nelamangala , Bangalore , India. 21(5),
- Stroeken, J., & Hawkins, R. (2001). E-commerce in the banking sector. July, 1–43.
- Suki, N. M., & Suki, N. M. (2011). Exploring the relationship between perceived usefulness, perceived ease of use, perceived enjoyment, attitude and subscribers' intention towards using 3G mobile services. *Journal of Information Technology Management*, XXII(1), 1–7. <http://jitm.ubalt.edu/XXII-1/article1.pdf>
- Suroso, I., Afandi, M. F., & Galushasti, A. (2022). Does perceived risk? A study of technology acceptance model on online shopping intention. *Academy of Strategic Management Journal*, 21(3), 1–12.
- Teka, B. M. (2020). Factors affecting bank customers usage of electronic banking in Ethiopia: Application of structural equation modeling (SEM). *Cogent Economics and Finance*, 8(1), <https://doi.org/10.1080/23322039.2020.1762285>
- Venkatraman, S., & Fahd, K. (2016). Challenges and success factors of ERP systems in australian SMEs. *Systems*, 4(2), <https://doi.org/10.3390/systems4020020>
- Yadgar, Y. T. (2020). The effect of individual factors on user behaviour and the moderating role of trust: an empirical investigation of consumers' acceptance of electronic banking in the Kurdistan Region of Iraq. *Financial Innovation*, 6(1), <https://doi.org/10.1186/s40854-020-00206-0>
- Zikmund, W. G., Carr, J. C., & Griffin, M. (2013). Business Research Methods. In *South-Western, Cengage Learning* 58(3), <https://doi.org/10.1111/j.1468-3156.1975.tb00170.x>