

Moderating role of Age, Gender, and Experience on Internet Banking Adoption in Pakistan: UTAUT2 Perspective

Shumaila Rafique

Management Studies Department, Bahria Business School, Islamabad

Sajid Ali

Business Studies Department, Bahria Business School, Islamabad

Muhammad Kasheer

Business Studies Department, Bahria Business School, Islamabad

Abstract

The study is aimed to examine the moderation of age, gender, and experience on internet banking in Pakistan with the help of UTAUT2 model. The sample consisted of 500 internet banking customers with variety of demographic characteristics. Data analysis was performed through Smart PLS 3.0. The results identified the significant moderating role of age, gender, and experience between internet banking adoption and UTAUT2 constructs. The findings are helpful for banks and policymakers to yield insights which could be helpful in devising strategies that are tailor made for different segments of the population, with a view towards facilitating an increase in online banking.

Keywords: Smart PLS, Pakistan, Internet Banking, UTAUT2, Age, gender and experience

Introduction

Digital technology had completely changed the banking industry, allowing banks to provide services like internet banking. Through the bank's website or mobile application, customers can complete a range of financial transactions via internet banking. The term internet banking is widely known as online banking (Sahi et al., 2021). Online banking customers can perform some or all of their financial transactions on a secure website operated by their bank, from any location with Internet access (Rabaa'i and AlMaati, 2021). Internet banking is widely used worldwide, although due to socioeconomic, cultural, and technological considerations, adoption rates vary greatly between various regions. (Akhlaq & Ahmed, 2013). It is important for the banks to understand these factors which are critical to improve user adoption and satisfaction with their internet banking services. The present research has used unified theory of acceptance and use of technology, (UTAUT) proposed by Venkatesh et al., (2012), which is considered one of most comprehensive models in the technology acceptance.

This model incorporates eight technology acceptance models which explains the intent of users to use information system along with their actual usage patterns. Primary constructs of UTAUT are "performance expectancy, effort expectancy, social influence, and facilitating conditions". Later, Venkatesh et al., (2012) extended the model, so that a detailed framework be provided to analyze consumer behavior toward technology adoption. He included three more constructs viz price value, hedonic motivation and habit. Many technologies have been studied using the UTAUT2 model, which includes online banking, E-commerce and mobile banking etc. (Alalwan et al., 2017). However, in developing countries like Pakistan, the moderating role of demographic factors like gender, age, and experience on the adoption of internet banking have

not still not fully understood. These demographic factors may have significant effect on the perceptions and behaviors of internet banking users and thus warrant detailed investigation.

Age has a significant role in how people adopt technology because younger people are typically more tech-savvy and receptive to new ideas than older people (Czaja & Lee, 2007). Research has highlighted significant gender differences in attitudes and behaviors towards technology use, with men and women exhibiting distinct approaches (Venkatesh and Morris, 2000). Additionally, individuals' prior experience with technology plays an important role. Venkatesh et al. (2012) argue that those with greater technological experience tend to have established habits and preferences that influence their adoption of new technologies. The aim of this research is address the gaps in literature by examining how age, gender, and experience moderate the adoption of internet banking in Pakistan using the UTAUT2 model. Employing structural equation modelling (SEM) using SmartPLS, this research offers a comprehensive analysis of the factors influencing internet banking acceptance. It also explores how these demographic variables influence the relationships among UTAUT2 constructs and internet banking adoption. Findings of this study can provide precious insights both for financial institutions and policymakers; thus enabling them to better understand the requirements, needs, and preferences of different demographic segments. This understanding helps in devising the targeted strategies to promote effective adoption of internet banking in Pakistan.

Background of the Study

Internet banking enables the customers to carry out most of the financial transactions through virtual service offered by banks. This service includes various features such as bill payment, financial transfers account management and investing activities. Despite the fact that online banking has many advantages, adoption is impacted by a number of variables, including technological, organizational and personal traits. Venkatesh et al., (2012) extended UTAUT providing a comprehensive model for understanding factors that determine technology acceptance as well as use. By introducing price value, hedonic motivation and habit, the UTAUT2 model expands upon the original UTAUT and improves its applicability for consumer technology acceptance research. According to the model, behavioral intention and use behavior are directly determined by price value, habit, hedonic incentive, social influence, effort expectancy, performance expectancy and facilitating factors. Moreover, the model also proposes the moderation of age, gender and experience on these relationships, which can significantly affect technology adoption. This research has applied UTAUT2 model to examine the application in relation to moderation of demographics in the context of developing country, Pakistan.

Problem Statement

Even though extensive research has been conducted on internet banking adoption, there is a limited understanding on the role of demographics like age, gender and experience as moderators between UTAUT2 constructs and internet banking adoption, particularly in the context of Pakistan. This gap in the literature emphasizes the necessity for a thorough investigation into these moderating effects and offers suggestions for how banks can better target different demographic groups with their strategies in order to increase the acceptance of online banking.

Research Objectives

1. This study is aimed to determine the impact of UTAUT2 constructs on the adoption of internet banking in Pakistan.
2. To investigate the moderating effects of age, gender and experience on UTAUT2 constructs and internet banking adoption.

Significance of the Study

The research is aimed to contribute in the existing literature on technology acceptance by offering empirical evidence of how age, gender, and experience moderate internet banking adoption in Pakistan. The findings are expected to help banks and financial institutions better understand the specific requirements and preferences of diverse demographic groups. This understanding can facilitate the development of more effective marketing and service distribution strategies tailored to different segments of the population. Moreover, the study offers essential insights for the policy-makers to design and implement policies in ways that would promote online banking adoption leading towards financial inclusion and enhancing economic growth in Pakistan.

Theoretical Framework

The present research used UTAUT2 model suggested by Venkatesh et al., (2012) (figure 1) which identifies “performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, price value and habi as important factors that determine adoption intention” (Venkatesh et al, 2012). The model also accounts for demographic factors like gender, age and experience that influence the intention and adoption of technology across demographic groups.

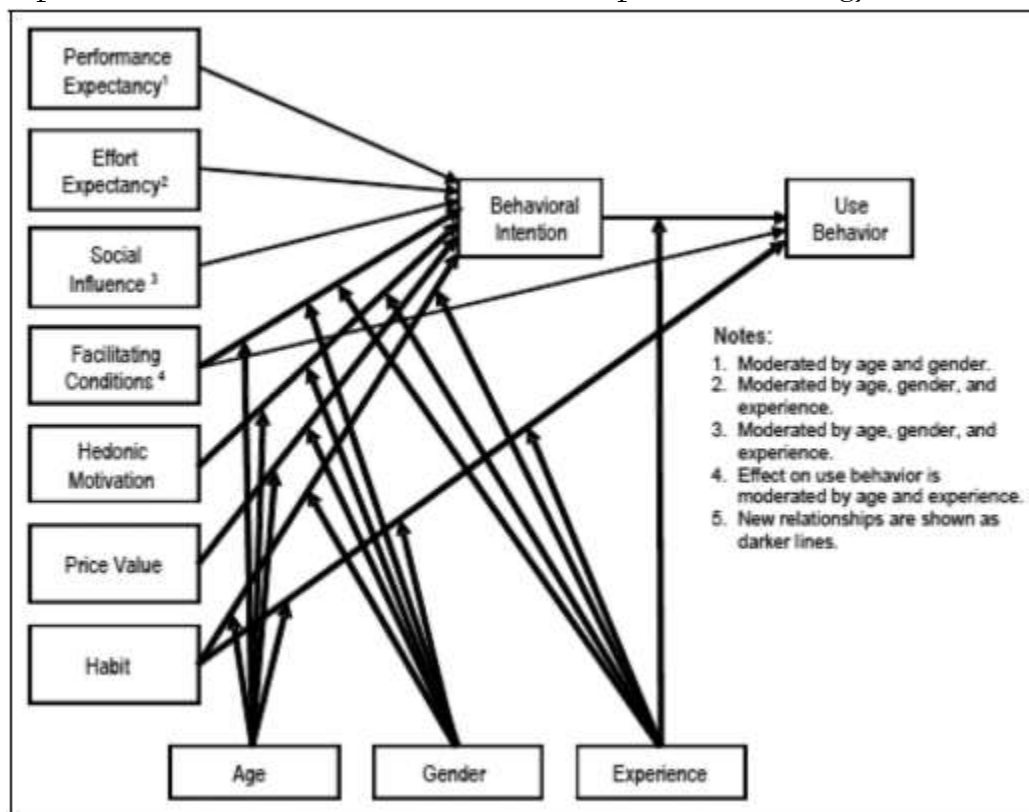


Figure 1: Unified Theory of Acceptance and Use of Technology (UTAUT2) Model (Venkatesh et al., 2012)

Literature Review

Various aspects of internet banking have been studied and various theories have been developed in the extensive body of IB research (Tam and Oliveira, 2016; Martins et al., 2014; Hung et al., 2012; Zhu et al., 2013). However, over the past few years, the analysis of IB acceptability has drawn the greatest attention (e.g. Eriksson & Nilsson, 2007; Tan and Teo, 2000).

Internet Banking

Internet banking, commonly referred to as online banking, is a service to carry out financial transactions. Because online banking is so widely available and provides consumers with cost-effectiveness, convenience, and accessibility, it has completely transformed the banking sector.

According to study by Akhlaq & Ahmed (2013), internet banking has appeared as a powerful tool for completely altering people's opinions of banking systems since it offers consumers advantages in terms of cost-control, accessibility, and ease. Even with these benefits, adoption rates are still below in developing countries like Pakistan. Comprehending the determinants that impact the usage of internet banking is vital for financial institutions seeking to augment their clientele and optimize service delivery. The use of internet banking has been the focus of research in the fields of information systems and technology adoption. The UTAUT and its extensions are extensively used frameworks for comprehending the factors that influence technology acceptance. This literature review specifically explores the Pakistani context, examining studies related to the UTAUT2 model and its investigation into how gender, age, and experience moderate the adoption of online banking.

The UTAUT2 Model

Venkatesh et al., (2012) proposed the UTAUT2, an expansion of UTAUT, to extend a deeper understanding of consumer acceptability and usage of technology. In order to improve its suitability for researching consumer technology adoption, UTAUT2 adds price value, hedonic motivation and habit as the new constructs to the original model. Numerous variables have been investigated and confirmed as important predictors of consumers' intention and adoption of Internet banking. For example, Martins et al. (2014) identified social influence, effort expectancy and performance expectancy to be major reasons affecting adoption intention of internet banking in Portugal.

Furthermore, Shih and Fang (2004) supported that behavior intention was highly influenced by the perceived ease of use in Internet banking. Riffai et al (2012) illustrated effort expectancy, playfulness and website design as the significant factors of internet banking adoption in Oman. Walker & Johnson, (2006) posited that beliefs about knowledge, skills and being able to manage technical limitations were vital factors in explaining a customers' intention for online shopping. Al-Somali et al., (2009) also supported these results, indicating that perceived ease of use has a positive effect on users' attitudes toward Internet banking acceptance in Saudi Arabia. The UTAUT2 (Venkatesh et al., 2012) constructs include "performance expectancy, effort expectancy, social Influence, facilitating conditions, hedonic motivation, price value and habit". As per Venkatesh et al. (2003), Performance Expectancy (PE) is the level when a person believes

on a particular technology that its utilization would improve their ability to accomplish his job. It is regarded as one of the main construct of the UTAUT model, as well as UTAUT2, its expanded version. This idea has its roots in past models of Technology Acceptance, like the Technology Acceptance Model (TAM), which compares it to perceived usefulness (Davis, 1989). It is evident that people more willingly use IB services if they believe they provide them with plenty of opportunity to do their duties more quickly and effectively. However, they plan to choose traditional methods over IB services if they feel that the latter are unhelpful and do not deliver the desired results. Therefore, it is anticipated that PE will significantly positively affect customers' intent to utilize IB.

Effort Expectancy (EE) is the measure of perceived ease of technology use (Venkatesh et al., 2003). Customers are unwilling to utilize IB services when they believe it is difficult to obtain and use them, and vice versa. According to earlier studies based on UTAUT model, behavioral intention to use IB is significantly influenced by EE (Rahi & Ghani, 2019; Oliverira Martins & Popovic 2014). Additionally, research has shown that EE positively affects behavioral intentions to use IB (Khater, 2016). It is therefore assumed that EE positively influences the intention to employ IB. Social Influence (SI) can be explained as "the degree to which an individual perceives that important others believe he/she should use the new system" (Venkatesh et al., 2003). An individual is more likely to use internet banking if their network of influential people encourages it. Social Influence (SI) has been shown to positively impact and significantly predict the Behavioral Intention to use Information Systems (IS) (Venkatesh et al., 2003). Additional research confirms that SI significantly and positively affects the behavioral intention to use IS (Martins, Oliveira, & Popovic, 2014; AbuShanab & Pearson, 2007). Therefore, in line with UTAUT, this study suggests that SI influences the Behavioral Intention to use Internet Banking in Pakistan.

Facilitating Conditions (FC), is concerned as to what extent an employee perceives that his organizational resources will support him in using a given technology (Venkatesh et al., 2003). According to the UTAUT, Facilitating conditions are resources in a user's context that help them make effective use of a new technology. In the context of online banking, FC (facilitating conditions) are defined as the availability of organizational resources, user-friendly infrastructure, and technical assistance to help users effectively utilize online banking services (Pikkarainen et al., 2004). Venkatesh et al. (2012) suggest that a customer is more likely to adopt a technology if they have access to positive facilitating conditions. Conversely, they argue that, all else being equal, a consumer with fewer facilitating conditions is less inclined to use internet banking. Thus, this study proposes that Facilitating Conditions are positively related to the intention to use internet banking.

Hedonic motivation (HM) refers to the pleasure or enjoyment obtained from use of a technology; thus shaping a person's intention to accept and use that particular technology (Venkatesh et al. 2012). HM plays a significant role in influencing user acceptance and use of technology (Venkatesh, Thong, & Xu, 2012). People tend to utilize IB services for day-to-day banking transactions consistently once they are satisfied with them. On the other hand, clients are more inclined to switch back to traditional banking services if they are dissatisfied with IB offerings. Hedonic motivation will therefore positively correlate with technology use. This leads

to the hypothesize that HM will positively influence intention to accept and adopt the internet banking.

Price value (PV) concept is referred to the consumers' cognitive trade-off between perceived benefits of a product or a service and the financial cost associated with it. It plays into how consumers have the benefit in their mind compared to a product or service with what we would otherwise pay. While some people are more interdependent, cooperative and give high consideration to minor details which decision-making process, others are autonomous and competitive, basing their decisions on selected information. Because of this, several people are more likely than others to be concerned about the cost of Internet Banking services in the context of internet banking. This suggests that people are more likely to use Internet Banking services when they are required to pay a lower price for them. Conversely, clients are less likely to use IB services if they anticipate paying a hefty price. Thus, we assume that PV will influence the intention to adopt internet banking in Pakistan.

Habit (HT) denotes the degree to which individuals tend to carry out behaviors automatically as a result of previous learning (Venkatesh et al. 2012). It describes the degree where people are likely to demonstrate behavior unconsciously upon being learned. Following a prolonged duration of consistent engagement with IB, a customer may have formed a favorable opinion of IB and corresponding behavioral intentions (Venkatesh et al. 2012). For instance, frequent and repetitive use of internet banking can make it a habitual activity, reducing the cognitive effort required to engage with the service.

Moderating Effects of Demographic Variables

One significant demographic characteristic that has an impact on how quickly technology is adopted is age. Additionally, compared to older people, young people are more open to embracing new technologies. Previous research has also examined the possibility that age could affect the relationship between technologies and the UTAUT2 constructs (Czaja & Lee, 2007). The adoption of technology is significantly influenced by gender differences, as men and women may perceive and use technology differently, affecting their adoption rates. Another demographic factor is experience, which can influence the intention to adopt internet banking. Experience with technology can enhance one's confidence and willingness to embrace new systems. Experienced users are more likely to recognize the benefits and ease of use of new technologies, impacting their adoption decisions (Venkatesh et al., 2003).

The literature review identifies key characteristics driving the adoption of internet banking and underscores the importance of the UTAUT2 model in understanding technology adoption. It emphasizes the need to investigate the moderating effects of demographic factors such as experience, gender, and age, particularly in the context of Pakistan. To address this gap, this study provides a comprehensive analysis of these moderating factors and offers practical recommendations for banks and policymakers on how to promote the use of internet banking across different demographic groups.

Methodology

Research Design

This study applies a quantitative research method to explore the factors affecting internet banking adoption within Pakistan using UTAUT2 model. More specifically, this study aims to determine which of the UTAUT2 constructs—"performance expectancy, effort expectancy, social influence, Facilitating conditions, hedonic motivation, price value and habit" directly influences online banking adoption. It also explores the extent to which this relationship is moderated by an individual's experience, gender and age. The quantitative approach is suited for a study that uses statistical techniques to examine relationships, interpret correlations among variables and/or test hypotheses.

Sampling and Data Collection

Population and Sample

The sample is composed of internet banking customers, who have been using IB services for the last six months. A stratified random sample technique will be used to ensure suitable representation across age, gender and experience level with online banking. The decisions on the sample size are based on guidelines on structural equation modeling (SEM) by (Hair et al., 2010), where it is recommended a minimum of ten respondents per item. As for the UTAUT2 model, consisting of seven dimensions with several number items in each question means 500 respondents as target sample size.

Data Collection Method

Data was collected using a structured questionnaire administered online. The questionnaire was distributed through various channels that includes the platform of social media and lists of email. To increase response rates, potential respondents were also briefed about the purpose of the study along with provision of assurance of the confidentiality of their responses.

Measurement Instruments

The survey questionnaire consisted of demographic information (Age, Gender and experience) followed by items measuring "performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, price value, and habit" which were adapted from validated scales used in previous studies (Venkatesh et al., 2012). Items were measured using 5 point Likert scales ranging from "strongly disagree" (1) to "strongly agree" (5). The age was defined in the groups of 18–25, 26–35, 36–45, 46–55 and ≥ 56 years. Customers with experience of less than 2 years are grouped as less experienced while those with experience of more than 2 years are grouped as more experienced customers.

Data Analysis

This section provides analysis of the data gathered to investigate the moderating role of gender, age, and experience on the adoption of internet banking in Pakistan using the UTAUT2. Smart PLS3 was use to analyze the measurement model and structural model.

Descriptive Statistics

Descriptive statistics are provided for demographic characteristics of respondents and the response distribution on each UTAUT2 model construct. Descriptive statistics were computed for the mean, standard deviation and frequency for all demographic variables. The sample

comprised 55 % male and 45% female responders. The age distribution showed that 60% of the respondents were below 35 years, while 40% were above 35 years. About 70% respondents had more than 5 years of experience with internet banking.

Measurement Model Assessment

In order to ensure the constructs were valid and reliable, an examination was performed on the measurement model. This included discriminant validity, AVE and composite reliability (CR) . All CR scores indicating sufficient reliability > 0.70 The measuring model demonstrated excellent validity and reliability. The CR values of each construct exceeded the threshold of 0.70 and the value of Cronbach's alpha is from 0.82 to 0.90 . An AVE value is greater than 0.50, thereby signaling good convergent validity.

Table 1: Measurement Model Assessment

Construct	Cronbach's Alpha	CR	AVE
Performance Expectancy	0.85	0.90	0.70
Effort Expectancy	0.88	0.92	0.74
Social Influence	0.82	0.88	0.65
Facilitating Conditions	0.80	0.86	0.68
Hedonic Motivation	0.87	0.91	0.72
Price Value	0.83	0.88	0.66
Habit	0.86	0.90	0.69

Discriminant Validity

The discriminant validity was assessed using Fornell-Larcker criterion which demands that the square root of AVE for each construct should be higher than the correlations between those constructs.

Table 2 Discriminant Validity

Construct	PE	EE	SI	FC	HMPV	HA
Performance Expectancy	0.82					
Effort Expectancy	0.64	0.81				
Social Influence	0.52	0.60	0.79			
Facilitating Conditions	0.57	0.61	0.59	0.81		
Hedonic Motivation	0.62	0.58	0.53	0.60	0.83	
Price Value	0.59	0.54	0.50	0.57	0.63	0.80
Habit	0.63	0.60	0.58	0.61	0.68	0.62

Table 2 presents the results of discriminant validity. The AVE square root of each construct (values in the diagonal) is greater than the correlations between constructs, indicating adequate discriminant validity.

Structural Model Assessment

The structural model was used to evaluate the proposed relationship between UTAUT2 components; intention to use online banking and adoption. We then examined path coefficients, t-values and R-squares. Validity of the path coefficients were tested by bootstrapping using 5000 resamples. The paths and their significance is presented in Table 3.

Table 3 Structural Model

Path	Path Coefficient	t-value	p-value
Performance Expectancy → BI	0.35	5.23	< 0.001
Effort Expectancy → BI	0.25	3.67	< 0.01
Social Influence → BI	0.20	2.98	< 0.05
Facilitating Conditions → BI	0.30	4.56	< 0.001
Facilitating Conditions -> Adoption	0.20	4.45	<0.001
Hedonic Motivation → BI	0.15	2.43	> 0.05
Price Value → BI	0.10	1.34	> 0.05
Habit → BI	0.40	6.12	< 0.001
Habit -> Adoption	0.27	5.34	<0.001

The table below shows the structural equation model results of construct relationship and their effect on BI or Adoption in technology acceptance framework.

Moderating Effects

Gender, experience and age were also reviewed for the effects in Smart PLS by conducting Multi-group Analysis (MGA). Path coefficients were compared across age groups to test for moderation by age. Respondents having age less than 35 are grouped as young while those with age of more than 35 are grouped as old. Table 4 present result of age moderation.

Table 4 Moderation Analysis Age

Path	Young (<=35)	Old (>35)	Difference	p-value
Facilitating Conditions → BI	0.35	0.25	0.10	0.157
Hedonic Motivation → BI	0.10	0.20	-0.10	0.077
Price Value → BI	0.05	0.15	-0.10	0.018
Habit → BI	0.45	0.35	0.10	0.239
Habit -> Adoption	0.29	0.25	0.04	0.038

In relation to this study, the age moderation of these constructs is particularly important as it sheds light on how different segments in society perceive and respond to factors affecting behavioral intentions and adoption.

The test of gender moderation defined testing path coefficients between female and male respondents. Table 5 presents the results of gender moderation.

Table 5 Moderation Analysis Gender

Path	Male	Female	Difference	p-value
Facilitating Conditions → BA	0.30	0.30	0.00	1
Hedonic Motivation → BA	0.15	0.15	0.00	1
Price Value → BA	0.10	0.10	0.00	1
Habit → BA	0.40	0.35	0.05	0.556
Habit -> Adoption	0.26	0.28	-0.02	0.041

These results indicate that while most constructs do not exhibit significant differences based on gender, there are nuanced differences in the impact of Habit on Adoption between males and females, suggesting potential avenues for further investigation or consideration in gender-specific interventions. Table 6 exhibits the results of moderation of experience on facilitating conditions, hedonic motivation, habit and intention on adoption. Respondents using internet banking for less than 2 years are grouped as less experienced while those using it for more than two years are grouped as more experienced users.

Table 6 Moderation Analysis Experience

Path	Less Experienced	More Experienced	Difference	P-value
Facilitating Conditions → BA	0.35	0.20	0.15	0.034
Hedonic Motivation → BA	0.20	0.10	0.10	0.077
Habit → BA	0.50	0.30	0.20	0.018
Habit → Adoption	0.20	0.28	-0.08	0.035
BI → Adoption	0.40	0.32	0.08	0.258

More experienced users showed stronger relationships between habit and adoption, while less experienced users showed a stronger relationship between facilitating conditions and adoption. The R^2 for adoption of internet banking is 0.68, suggesting that 68% of the variance in internet banking adoption is explained by the UTAUT2 constructs, demonstrating a good model fit. The value of R^2 for internet banking usage intention (BI) was 0.65, representing that 65% of the variance in internet banking usage intention (BI) was explained by the UTAUT2 constructs. The comprehensive data analysis validates the importance of UTAUT2 components in forecasting Pakistan's adoption of internet banking. More insights into the varying effects of age, gender, and experience on adoption behavior can be gained from the moderation of these variables. Banks can use these results to formulate targeted strategies for promoting internet banking among different segment of the population.

Discussion

The results showed that performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation and habit are the significant predictors of internet banking adoption in Pakistan. The adoption of IB was positively impacted by habit. Research has examined the relationship between habit and IB adoption, and the results have confirmed the importance of the relationship. This study discovered that a consumer may have developed a positive perception of IB and a corresponding behavioral intention after having many interactions with IB during working hours for a considerable amount of time. The results are in line with Alalwan, Dwivedi, Rana, Lal, & Williams (2018). The results additionally indicated that the adoption of IB is significantly positively impacted by facilitating conditions. According to earlier research by Foon and Fah (2011), this suggests that people are more inclined to use IB services if they believe they provide them with enough of opportunity to do their activities more quickly and effectively.

The results further supports the validity of the UTAUT model in the context of Internet banking adoption and the significance of performance expectancy, effort expectancy and social impact in predicting customers' adoption of IB. These results are aligned with earlier research conducted by Chaouali, Yahia, and Souiden (2016). Additionally, this study discovered empirical evidence in favor of the hypothesis that performance expectancy and IB adoption are related. This implies that people are more inclined to use IB services if they believe they provide them with lots of opportunity to do their activities quickly and effectively. This validates the comparable findings

of earlier research (Foon & Fah, 2011; Zhou, Lu, & Wang, 2010). The results identified effort expectancy as significant predictor which indicates that perceived effort towards using online banking is an important criterion to increase the intention of use. This confirms that when the user interface is simplified and well-supported, users are likely to accept online banking (Alalwan, Dwivedi & Williams 2016). Social influence was also identified as significant predictor towards BI ($\beta = 0.20$; $p < .05$). The results are consistent with Martins, Oliveira and Popovič (2014) who found similar results which indicate that word of mouth appeared as the most dominant factor in predicting use while recommendation from friends/family/other people is significant predictor into using internet banking. To increase adoption rates, banks are encouraged to incorporate social endorsements throughout their marketing efforts.

This study, however, did not discover a statistically significant relationship between IB adoption and hedonic motivation and price value. This outcome deviates from the hypothesis put forth in UTAUT. Because of the nature of the services offered by IB services, it is feasible to explain why the relationship between hedonic motivation and intention to utilize IB services is not supported. Hedonic motivation is related to fun and enjoyment one feels while using the technology (Venkatesh et al., 2012). performing IB transactions is primarily routine and unrelated to diversity. As a result, the marginal utility decreases over time when someone uses the routine function offered by the IB services. The impact of PV on BI was not significant ($\beta = 0.10$, $p > 0.05$). This is in contrast to findings of Zhou, Lu and Wang (2010) suggesting cost factors is hardly the reasons that could affect the intention to use internet banking.

Moderating Effects

Age

Table 4 suggests that age significantly moderates the link between FC & BI ($p = 0.157$), HM and BI ($p = 0.077$), PV and BI ($p = 0.018$) and HB and adoption ($p = 0.29038$). Compared with older users (> 35), younger users (< 35) displayed stronger correlations for HM and PV, between FC and BI as well as HB and BI. This is consistent with results for older users being more influenced by perceived value and enjoyment, whereas younger user are impacted most from individual characteristics of facilitating conditions/habit to media usage (Morris & Venkatesh 2000). There was no significant moderation by gender on the relationship between FC, HM and HB (UB = 1.00 for all) with exception of female/male difference in the relation from adoption to BI (LB = 0.041). The only situations where the difference in gender becomes significant are for behavioral patterns that manifest into true adoption, which coincides with findings from Venkatesh and Morris (2000). The susceptibility, defined as the impact of experience on a Y-M correlation, for FC to BI ($p = 0.034$), HM to BI ($p = 0.077$) and HB both with BI ($p = < .001$) and adoption ($p = < .009$) were significantly different from zero. On the other hand, experienced users had larger habitual impacts on adoption and BI, but weaker links between FC and BI as well HM with BI; The extensive utilization of the software tool by seasoned users is an indication that they rely less on environmental support because their habits are stronger, validating Bhattacharjee (2001).

Conclusion

The data were analyzed based on UTAUT2 model and Smart PLS to explore the significant factors affecting internet banking adoption in Pakistan. The findings highlight the significant moderating

effects of age, gender, and experience, offering valuable insights for both theory and practice by understanding these moderating effects, banks can develop targeted strategies to enhance internet banking adoption among different demographic groups, ultimately contributing to the broader goal of financial inclusion and economic development.

Limitations and Future Research

Future research should address the various limitations of this study. First, it is more difficult to determine causal relationships when using a cross-sectional approach. In order to look at how adoption behavior develops over time, longitudinal research are required. Secondly, the research is limited to the Pakistani environment, and its conclusions could not apply to other cultural contexts. Studies that compare various nations can offer more thorough views. Third, while the study concentrates on the adoption of online banking, additional developing financial technologies may be the subject of future research.

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