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Customer Relationship Management, Financial Literacy, and Online Banking Adoption: Moderating Role of Social Influence

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ABSTRACT

Objective: The present aimed to explore the effect of customer relationship management and financial literacy on users' intention to adopt online banking using the Technology Acceptance Model (TAM). Additionally, the study delved into the moderating role of social factors within this realm.

Methodology: The measuring scale in this study was refined iteratively through discussions with domain experts. Data from 524 respondents were collected through a digital survey, and PLS-SEM was used for the analysis.

Findings: The study reveals that the intention strongly depends on attitude, with perceived usefulness and ease of use playing pivotal roles in shaping positive attitudes. Customer relationship management intricately influences user perceptions, despite directly impacting intention denial. Financial literacy positively impacts intention antecedents, social influence moderates positive relationships between financial literacy, customer relationship management, and intention. However, it exhibits a negative relationship with intention.

Implications: This innovative study introduces social impact as a moderator in the perspective of online banking adoption, setting new standards in the field. This important point has not been covered in previous studies.

Keywords: Online banking, users' intention, TAM, customer relationship management, financial literacy, social influence.

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1. INTRODUCTION

"Adoption of technology has become a major force behind human growth, speeding up social, economic, and global connectedness" (Patwardhan, 2018).

In the early 90s, the popularization of the internet boosted the growth of electronic banking. The first online banking transaction was performed in 1995 (DeYoung *et al*., 2007; Polasik & Wisniewski, 2009). Ten years later, virtually all USA and Western European banks offered digital banking services (DeYoung *et al*., 2007). Primary considerations in choosing online banking services included client holding and preserving economic

advantages (DeYoung & Duffy, 2002). The significant reason for online banking is the massive number of advantages it offers to both consumers and suppliers alike. Studies conducted in the USA (DeYoung, 2005) and Italy (Ciciretti *et al*., 2009) demonstrate that the efficiency of banking is positively impacted by online services. Internet banking is more than just a straightforward method of dispensing already available financial services and goods. It facilitates easier online payments, consequently boosting electronic commerce (Safari *et al*., 2022). Additional advantages of online banking include cost reduction, improved bank reputation, and increased appeal to potential new customers (Jayawardhena & Foley, 2000). Moreover, it attracts young people, thereby increasing competition and introducing new financial services to market (Polatoglu & Ekin, 2001). Nowadays, financial services leverage a range of technological advancements, including Web 2.0 technology, mobile wallets, rob advisors, mobile apps, and cryptography (Makina, 2019). Technology is facilitates easier access to and use of monetary amenities (Fanta & Makina, 2019) thereby enhancing the delivery of financial services (Wanof, 2023), and creating new opportunities that enable unbanked people to engage with the financial system through digital monetary services (Makina, 2019). There are several ways to integrate the unbanked into the fiscal structure via digital monetary services (Cull *et al*., 2018). With technology increasingly shaping financial inclusion, financial technology has been shown to have a positive impact in both developing and developed nations (Ozili, 2018), ensuring that consumers can access financial services whenever and wherever they need them (Fanta & Makina, 2019), ensuring that consumers can access financial services whenever and wherever they require (Fanta & Makina, 2019).

The FinTech revolution provides fast, flawless, and convenient financial services reducing transaction costs and enhancing customer convenience for banks and clients(Sumual *et al*., 2023). However, the low adoption rate of adoption of FinTech is a serious challenge for the banking performance (Meyliana & Fernando, 2019). To keep up with growing demand, banks in Pakistan now offer well-established FinTech services like mobile banking, internet banking, digital wallets, E-commerce payments, cardless cash withdrawals, and fast money transfers. Despite the manifold advantages, FinTech adoption in Pakistan remains disconcertingly low. Zafar *et al*. (2021) reveal that only 21% of Pakistani adults utilize financial services. Regrettably, Pakistan's economy is still predominantly cash-based despite being the sixth most populous nation in the world. Several authors examined various factors influencing the acceptance of Internet banking such as subjective norms, risk, security, trust and ubiquity (Obidat *et al*., 2022); performance expectancy, effort expectancy, social influence, and facilitating conditions (Rahman & Islam, 2021); perceived benefits, perceived risk, and fear of Covid-19 (Abdul-Rahim *et al*., 2022a); and effect expectancy, social impact, facilitating environment, and perceived trust (Hassan *et al*., 2022). However, in the banking industry, there is a notable lack of research focusing on customer relationship management and financial literacy, especially concerning the moderating influence of social influence on online banking. A deeper exploration of the critical factors influencing online banking is necessary in the constantly evolving banking sector, given the convergence of changing consumer behavior and technological advancements(Yufriadi *et al*., 2024). Customer relationship management, financial literacy, and the role of social influence are important factors that affect user satisfaction.

The modern financial services landscape has witnessed significant transformations in the dynamics of customer relationships, financial literacy, and banking procedures, largely driven by the integration of technology. This study explores the complex interactions that exist between financial literacy, online banking adoption, and customer relationship management. Of particular interest is how social influence shapes these relationships. Given the widespread impact of digital platforms and the growing dependence on virtual banking channels, it is critical to comprehend the ways in which people interact with financial services. This study aims to contribute to theoretical advancements in technology adoption research as well as practical implications for financial institutions looking to improve customer engagement and financial literacy initiatives by looking at

the moderating role of social influence in online banking adoption. Through this exploration, the study seeks to provide nuanced insights into the factors driving the adoption of online banking.

Section 2 provides a concise review of the relevant literature, highlighting key insights and findings. In Section 3, we focus on detailing the methodologies employed to assess customer relationship management and financial literacy in the context of online banking. Section 4 presents the empirical findings derived from the data analysis. The discussion in Section 5 concludes the paper, synthesizing the results and implications discussed throughout. Finally, Section 6 outlines the practical implementation of the study's findings, along with addressing any limitations encountered during the research process.

2. LITERATURE REVIEW

In the current research, we examine the effects of three potential UPB precursors: OID, i-deals, and WRF. Even though evidence suggests these dimensions produce favorable outcomes; we contend that they are more likely to have an impact on UPB and immoral conduct in general. We elaborate on these claims as follows, inferring from their pertinent works.

Online Banking

Various scholars have interpreted online banking differently (Kaur & Arora, 2023; Rahi *et al*., 2023). To some extent, digital banking offers a range of services through which users can initiate requests and carry out the majority of their financial operations on their computers and mobile devices (Suriya, 2012). Nowadays, debit and credit cards, online banking, as well as online shopping, are replacing cheques and cash as the primary methods of payment (Patwardhan, 2018). Online banking stands out as one of the most crucial aspects of online business (Mukhtar, 2015). It enables customers to carry out financial transactions electronically, eliminating the need to physically visit banks or use traditional banking services (Chang & Hamid, 2010).

Technology Acceptance Model (TAM)

Different theories were utilized in earlier studies to understand users' behavior. with the most prominent ones being the TAM and the Unified Theory of Acceptance and Use of Technology (UTAUT). Among these,the TAM is regarded as the most significant theoretical model for the acceptance and adoption of online banking (Davis, 1989; Kumar *et al*., 2023). The TAM is a development of the Theory of Reasoned Action (TRA) proposed by Fishbein and Ajzen (1975), which was created in psychology to clarify and forecast a wide range of behaviors. In the TAM, the attitude variables from the Theory of Reasoned Action are replaced by two technology measurements called PU and PEoU, which can be utilized to support users decision makingu (Oye *et al*., 2014).

Hypotheses Development for the Proposed Model

Users' Intention (INT)

Intention (INT), according to Omotayo and Adebayo (2015), is the point of an individual's inclination to engage in a particular behavior. Similarly, it has been shown to influence decision-making (Arunkumar, 2008; Keong, 2016). INT is the action and readiness of customers to integrate contemporary knowledge in their regular interactions (Chong *et al*., 2012). The intention is one of the elements of the human brain that gives the item more attention or pleasure and might motivate it to work towards a certain objective (Kusumah, 2017). Perceived usefulness (PU) and users' intentions are significantly and favorably correlated (Widiatmo, 2021).

Attitude (ATT)

Attitude refers to a predisposition to behave favorably or unfavorably towards products and services. When we mention "goods," we are referring to tangible items, events, occasions, gatherings, establishments, individuals, or entities (Ezenwafor *et al*., 2022). According to the TAM and other technology-related models,

attitudes represent an individual's inclination to react positively or negatively to an object. Perceived usefulness (PU), perceived ease of use (PEoU), and other variables are considered to influence attitude. Moreover, since attitudes toward objects are unique to everyone, they may vary from person to person (Keong, 2016). Based on these studies, the following hypothesis is formulated.

H_1: *ATT significantly and favorably influences users' intention.*

Perceived Usefulness (PU)

Perceived usefulness (PU) is recognized as a key factor in the Technology Acceptance Model (TAM) for the adoption of information technologies. It is defined as the extent to which a user's work efficiency would increase by using the new technology (Davis, 1985). In the context of this research, "perceived usefulness" refers to the decision individuals make to use online banking when they believe it will have a positive impact (Ryu, 2018). Several experimental studies have demonstrated that PU positively influences users' intentions (Barakat & Hussainey, 2013; Featherman & Pavlou, 2003; Hong & Zhu, 2006; Ng & Kwok, 2017). Thus, we have proposed this hypothesis:

H_2: *Users' attitudes are influenced by their perception of the usefulness of technology.*

Perceived Ease of Use (PEoU)

Consumers' intention to use Internet services is indeed influenced by perceived ease of use (PEoU) (Tyagi, 2019). User-friendly and functional systems are crucial to increasing the adoption of online banking (Hassan *et al*., 2009; Pikkarainen *et al*., 2004). Previous research has shown that customers are more likely to accept technological innovations when they require minimal effort (Davis, 1989; Pikkarainen *et al*., 2004). PEoU positively influences the adoption of Internet banking (Celik, 2008; Chiou & Shen, 2012; Lee, 2009; Wang *et al*., 2003). This study aims to evaluate the direct impact of PEoU on online banking adoption. Based on the material mentioned above, the following hypothesis was formulated:

H_3: *PEoU positively influences users' attitudes toward the intention to adopt online banking.*

Customer Relationship Management (CRM)

In the banking industry, customer relationship management (CRM) has evolved into a vital component for enhancing the quality of services provided to customers. As highlighted by Arafat *et al*. (2013), banks can offer their clientele round-the-clock services, thereby promoting and fostering consumer loyalty. The necessity for CRM solutions in the banking sector arises from evolving financial market conditions, changing consumer preferences and behaviors (Ngau *et al*., 2023), and the diverse delivery channels for banking services, each requiring varying levels of customer focus and communication methods (Cvijović *et al*., 2017). Additionally, CRM technology serves as a valuable tool for addressing customer-related issues and establishing a robust market position vis-à-vis competitors (Reddy & Cherukuri, 2019). The following hypotheses developed from the literature mentioned above:

H_{4a}: *CRM positively influences users' intention.*

H_{4b}: *CRM positively influences PU towards users' intention.*

H_{4c}: *CRM positively influences PEoU towards users' intention.*

H_{4d}: *CRM positively influences ATT towards users' intention.*

Financial Literacy (FL)

FL, or financial literacy, encompasses the understanding of individual finance concepts and the ability to apply them to one's own life to facilitate wise financial decisions (Susdiani, 2017). From a different perspective, FL is seen as the capacity to utilize information and manage monetary resources for long-term financial security (Pertiwi & Purwanto, 2021b). FL has been found to be positively correlated with financial behavior (Tyagi, 2019). The level of user involvement required by electronic banking may be the highest because it necessitates regular maintenance and interaction with additional equipment (Kolodinsky *et al*., 2004). The above-mentioned literature served as the basis for the following hypotheses:

H5a: *FL positively influences users' intention.*

H5b: *FL positively influences PU towards users' intention.*

H5c: *FL positively influences PEoU towards users' intention.*

H5d: *FL positively influences ATT towards users' intention.*

Social Influence (SI)

Users of novel equipment are typically impacted by the opinions of others, particularly in the social media era (de Sena Abrahão *et al*., 2016). Customers may accept new technologies if their friends, co-workers, and family give them favorably suggestions (Beldad & Hegner, 2018). Therefore, social influence is defined as a person's critical perception of those who think that person ought to use online banking. Numerous research discovered that people's desire to use online banking, was positively influenced by social influence (Al Nawayseh, 2020; Alalwan *et al*., 2018; Chiu *et al*., 2012; De Luna *et al*., 2019; de Sena Abrahão *et al*., 2016). Therefore, the following hypotheses were proposed:

H6a: *SI positively influences users' intention.*

H6b: *SI moderates the association between FL and users' intention.*

H6c: *SI moderates the association between CRM and users' intention.*

The research framework developed by modifying items from the online banking research background is shown in Figure **1**, which represents the model recommended in this article, which is based on current research.

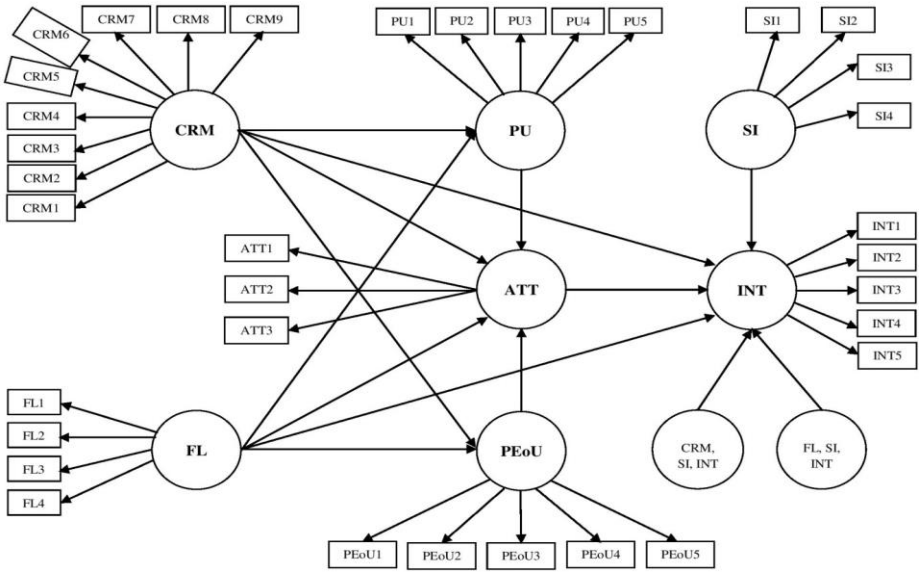

Figure 1. Conceptual model.

3. METHODOLOGY

Designing the Survey Instrument

The constructs and items from previous research were utilized for this study to develop the online banking adoption survey instrument (Figure **1**); PU, PEoU, and SI from (Al-Somali *et al*., 2009); CRM from (Padmavathy *et al*., 2012); FL from (Pertiwi & Purwanto, 2021a; Ramos, 2017); and attitude from (Grabner-Kräuter & Faullant, 2008; Yee-Loong Chong *et al*., 2010). Measurement was conducted using a 5-point Likert scale, with 1 demonstrating *"Strongly disagree"* and 5 demonstrating *"Strongly agree"*. Previous studies have also used a 5-point Likert scale (Kurniasari *et al*., 2022; Obidat *et al*., 2022; Rahman & Islam, 2021). Before field investigation, rigorous procedures were followed, including pre-testing for validity with expert input and pilot testing with 50 participants to refine the questionnaire.(Awang *et al*., 2016).

Data Analysis Techniques

This study employed Structural Equation Modeling (SEM) as recommended by (Alshari & Lokhande, 2022; Anderson & Gerbing, 1988). The SEM model is an incredible multivariate approach used to investigate causative relations (Fan *et al*., 2016). The proposed model examined using SEM with Smart-PLS 4. PLS is frequently used in FinTech research (Henseler *et al*., 2016; Urbach & Ahlemann, 2010) and is advantageous as it does not make assumptions about the distribution of data and ensures high reliability and accuracy (Urbach & Ahlemann, 2010). Moreover, PLS is particularly useful when the research model is complex with numerous constructs and indicators (Nitzl & Chin, 2017). The PLS approach includes two models: the Measurement model and the Structural model (Urbach & Ahlemann, 2010).

Sample and Sampling Design

The population for this research comprises bank clients across the entirety of Pakistan. The aim is to increase response rates and reduce biases, ensuring that the study has enough participants to accurately reflect the target population. According to Wolf *et al*. (2013), a sample size ranging from 30 to 460 respondents is deemed adequate for SEM.

The present research employed the stratified technique to ensure a demonstrative sample and reduce selection bias (Saif *et al*., 2022). In stratified sampling, the population is divided into two or more relevant and important strata based on specific characteristics, resembling a modified version of random sampling (Sekaran & Bougie, 2016). To put it another way, every pertinent and clearly defined strata guarantees a proportionate representation of the research population (Saunders *et al*., 2007; Sekaran & Bougie, 2016). In this study, male and female were identified as the strata or subgroups to achieve such representation.

Efficacy of Responses and Data Cleansing

The present study began with a set of screening questions like many survey research studies do (Saif *et al*., 2022). The screening questions are designed to ensure that only individuals who meet the study's requirements, participate in the survey (Hair Jr *et al*., 2021). Initially, a total of 558 questionnaires were collected. However, 73 were disqualified due to suspecious answers and missing data. Therefore, 524 replies were used for the study, resulting in a response rate of approximately 94%.

4. RESULTS AND ANALYSIS

Table **1** presents a comprehensive analysis of the 524 participants, revealing several important conclusions. Firstly, 62.98% of respondents reported being single, indicating a strong preference for single status among the sample. Furthermore, the bulk of individuals in the sample (62.02%) are male. Regarding age distribution, 20.80% of the sample fell within the significant age group of 26–35 years old. Additionally, 73.85% of respondents resided in urban areas, suggesting a predominantly urban sample. A significant majority of

respondents (66%), who reported monthly wages under PKR100,000, belonged to the moderate to lower income band. Finally, the educational attainment data indicates a reasonably educated sample population, with 43.13% of participants holding at least a bachelor's degree. These demographic insights present a valuable background for further data analysis and interpretation.

Table 1. Respondents' Profile.

Category	Sub-Category	Frequency Total = 524	Percentage Total = 100%
Gender	Male	325	62.02
	Female	199	37.98
Marital status	Single	330	62.98
	Married	194	37.02
Age	Less than 26	137	26.15
	26 – 35	109	20.80
	36 – 45	89	16.98
	46 – 55	95	18.13
	56 – 65	76	14.50
	Above 65	18	3.44
Academic qualification	Under matric	5	0.95
	Matric	8	1.53
	Intermediate	25	4.77
	Bachelor	226	43.13
	Master	211	40.27
	PhD	49	9.35
Monthly income (PKR)	Less than 100,000	350	66.80
	100,000 – 200,000	99	18.89
	200,000 – 300,000	26	4.96
	300,000 – 400,000	11	2.10
	400,000 – 500,000	16	3.05
	More than 500,000	22	4.20
Residential location	Rural	137	26.15
	Urban	387	73.85

Source(s): Authors' creation

Measurement Model Assessment

The first step involves importing data from an Excel file and creating a research framework. To assess the validity and reliability of the developed model, path analysis will be conducted, with indicator loadings ideally exceeding 0.708 (Hair *et al*., 2019). According to Hassan *et al*. (2022), internal consistency reliability should be greater than 0.70 as measured by Cronbach's alpha and composite reliability. The assessment of convergent validity, determined by AVE scores greater than 0.50, will be examined later (Hassan *et al*., 2022). Heterotrait-Monotrait (HTMT) ratio tests, cross-loading, and Fornell-Larcker criteria (Fornell & Larcker, 1981) are used to confirm discriminant validity.

Table 2. Construct Validity and Reliability.

Variables	Cronbach's Alpha	Composite Reliability rho A	Composite Reliability rho_c	Average Variance Extracted (AVE)
ATT	0.7	0.8	0.8	0.7
CRM	0.9	0.9	0.9	0.6
FL	0.8	0.8	0.9	0.7
INT	0.9	0.9	0.9	0.7
PEOU	0.9	0.9	0.9	0.7
PU	0.9	0.9	0.9	0.7
SI	0.8	0.8	0.9	0.6

Source(s): Authors' creation

Table **2** indicates that Cronbach's Alpha and reliability coefficients for every construct have values greater than 0.70. Similar results have been found in past research on technology adoption (Abdul-Rahim *et al*., 2022b; Al Nawayseh, 2020; Chen *et al*., 2019; Hu *et al*., 2019; Saif *et al*., 2022; Widiatmo, 2021). Additionally, the AVE are > 0.50, demonstrating the satisfaction level of the model.

Table 3. Discriminant Validity – Fornell-Larcker Criterion.

Variables	ATT	CRM	FL	INT	PEOU	PU	SI
ATT	0.81	-	-	-	-	-	-
CRM	0.39	0.77	-	-	-	-	-
FL	0.43	0.47	0.81	-	-	-	-
INT	0.71	0.37	0.44	0.82	-	-	-
PEOU	0.70	0.43	0.46	0.70	0.82	-	-
PU	0.72	0.40	0.46	0.76	0.76	0.82	-
SI	0.51	0.52	0.63	0.47	0.50	0.51	0.77

Source(s): Authors' creation

In Table **3**, all the diagonal values are bigger, demonstrating that the Fornell-Larcker criterion is met. Discriminant validity is the degree to which a construct empirically differs from other items (Hair *et al*., 2019). In Table **3**, the R^2 of the AVEs is displayed in bold, and the criterion states that shared correlations cannot exceed the values of the R^2 of the AVEs (Ezenwafor *et al*., 2022). As a result, the data show discriminant validity. According to Table **4**, none of the variables have an HTMT index greater than 0.9.

Table 4. Discriminant Validity Hetero-Trait Mono-Trait (HTMT) Values.

Variables	ATT	CRM	FL	INT	PEOU	PU	SI
ATT		-	-	-	-	-	-
CRM	0.45	-	-	-	-	-	-
FL	0.55	0.53	-	-	-	-	-
INT	0.87	0.40	0.52	-	-	-	-
PEOU	0.86	0.47	0.55	0.80	-	-	-
PU	0.88	0.43	0.54	0.87	0.86	-	-
SI	0.65	0.61	0.79	0.57	0.61	0.61	-

Source(s): Authors' creation

Structural Model Assessment

In this study, SmartPLS 4.0 was employed to apply the SEM model, generating t-values and β coefficients used to evaluate the study's hypotheses. In general, if $t > 1.96$, the coefficient test is significant with a p-value of 0.05 confidence level. If $t > 2.58$, the coefficient test is significant with a p-value of 0.01 confidence level and if $t > 3.1$, the coefficient test is significant with a p-value of 0.001 confidence level. Figure **2** below displays the results of the tests conducted on the hypotheses.

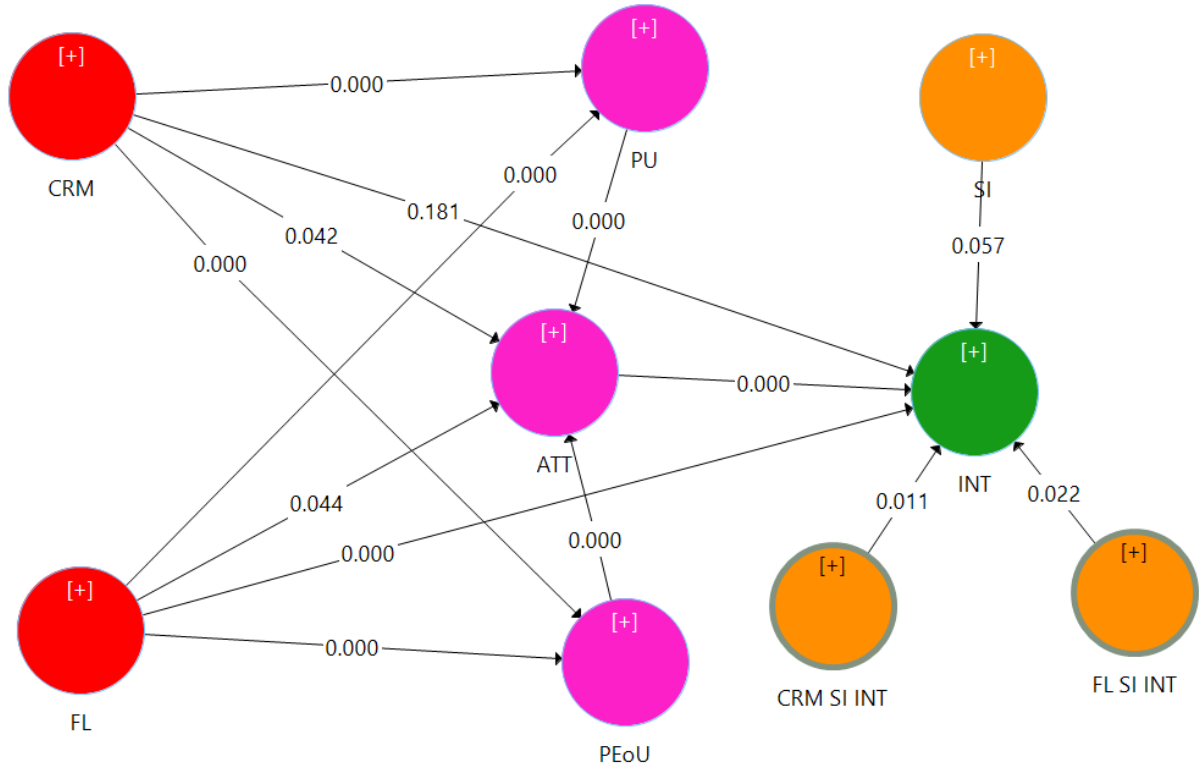

Figure 2. Diagram of the estimated model for users' intention to adopt online banking.

Source(s): Authors' creation.

As depicted in Figure **2**, the p-values indicate significant positive impacts of CRM on PU (p = 0.000), ATT (p = 0.042), and PEoU (p = 0.000). Similarly, FL demonstrates significant positive influences on PU (p = 0.000), ATT (p = 0.044), INT (p = 0.000), and PEoU (p = 0.000). Both PU and PEoU exhibit a significant impact on ATT (p = 0.000), suggesting a positive influence on attitude, which, in turn, positively affects intention. However, CRM and SI show p-values of 0.181 and 0.057, respectively, indicating an insignificant impact on intention. SI fully moderates the relationships between CRM and INT and FL and INT. Table **5** presents the findings of the study and provides comprehensive insights into the hypotheses examined. The results indicate that the intention is strongly influenced by attitude (H1), which is consistent with established behavioral theory. Perceived usefulness (PU) influences attitude in a favorable way (H2), highlighting its critical function in influencing users' opinions.

Table **5** presents the findings of the study and provides comprehensive insights into the hypotheses examined. The results indicate that intention is strongly influenced by attitude (H1), which aligns with established behavioral theory. Perceived usefulness (PU) positively influences attitude (H2), underscoring its critical role in shaping users' perceptions. Similarly, perceived ease of use (PEoU) positively affects attitude (H3), highlighting the importance of user-friendly interfaces. The significant associations with PU (H4b), PEoU (H4c), and attitude (H4d) underscore the nuanced impact of customer relationship management (CRM) on user perceptions, even in the absence of a direct effect on intention (H4a). Furthermore, PU, PEoU, and attitude are identified as antecedents of intention that are positively influenced by financial literacy (FL) (H5a, H5b, H5c, and H5d). While social influence (SI) does not directly impact users' intentions, it effectively moderates the relationships between users' intentions and FL (H6b) and CRM (H6c).

Table 5. The Outcome of Path Analysis.

Rank	Hypothesis	Relationship	p-value	Supported?
1	H1	ATT → INT	0.000	Yes
2	H2	PU → ATT	0.000	Yes
3	H3	PEoU → ATT	0.000	Yes
4	H4a	CRM → INT	0.181	No
5	H4b	CRM → PU	0.000	Yes
6	H4c	CRM → PEoU	0.000	Yes
7	H4d	CRM → ATT	0.042	Yes
8	H5a	FL → INT	0.000	Yes
9	H5b	FL → PU	0.000	Yes
10	H5c	FL → PEoU	0.000	Yes
11	H5d	FL → ATT	0.044	Yes
12	H6a	SI → INT	0.057	No
13	H6b	FL × SI → INT	0.022	Yes
14	H6a	CRM × SI → INT	0.011	Yes

Source(s): Authors' creation.

5. DISCUSSION AND CONCLUSION

This study examines the factors influencing users' intention to use online banking, particularly with a focus on social influence as a moderator—a factor that has not been thoroughly examined previously. With a broad scope it incorporates financial literacy and customer relationship management as exogenous variables, while attitude, perceived usefulness, and ease of use acr as mediators. The findings highlight the interplay between these variables and revealing the complex dynamics shaping adoption intentions. . By including social influence, the study enhances our theoretical understanding and offers fresh insights into how users' attitudes are influenced by external factors. This empirical contribution lays the groundwork for further studies on the moderating influence of social influence on acceptance of technology, especially in online banking.

According to the TAM, PU, PEoU, and intention are strong predictors of actual technology usage (Davis, 1989; Singh *et al*., 2020), a finding of this research is consistent with previous studies (Obidat *et al*., 2022; Widiatmo, 2021). demonstrating the positive effect of financial literacy on users' intentions. (Pertiwi & Purwanto, 2021b;

Tyagi, 2019). However, this study also highlights situation-specific characteristics of these phenomena. Discrepancies in results between earlier research by Thaker *et al*. (2023) and Kumar *et al*. (2023), which show the positive effect of social influence on users' intentions, and Singh *et al*. (2020), which indicates the insignificant effect of social influence on users' intention, underscore the need for a rigorous analysis of moderating variables, demographic changes, or geographical differences that may account for these discrepancies (Singh *et al*., 2020).The study reveals a complex relationship between the aspirations to use online banking and customer relationship management (CRM).. CRM influences intentions by shaping attitude, PU, and PEoU. Social influence considerably moderates this relationship, amplifying the positive effects of customer relationship management. Comprehending these intricate pathways highlight the crucial role of social influence in changing users' attitudes and perceptions regarding the adoption of online banking.

Investigating the role that each variable plays in the model is crucial when analyzing the hypotheses. Firstly, users' attitudes were strongly influenced by the system's perceived usefulness, consistent with earlier studies on technology acceptance. Users' perceptions of ease of use also significantly influenced their opinions. In this situation, customer relationship management may not directly affect users' intentions, as the association between CRM and intention to use was not statistically significant. Interestingly, the interaction effects of social influence with both flow and CRM did exhibit significance, indicating that social influence may amplify the impact of these factors on user intention, even though social influence alone did not significantly improve the intention to use. These results highlight the importance of a comprehensive understanding of each variable's role in the model and the intricate interplay of factors influencing users' attitudes and intentions towards embracing technology.As a result, this study sheds light on the complex interactions between different elements by exploring the multidimensional dynamics impacting customers' desire to use online banking. By incorporating social impact as a moderator, this study enhances our theoretical understanding of technology acceptability, particularly in the context of online banking. In addition to highlighting the importance of attitude, perceived usefulness, and ease of use as significant mediators, the results also underscore the crucial roles of financial literacy and customer relationship management as exogenous variables. The discrepancies observed in earlier research findings underscore the need for a contextualized examination of situational variables and demographic differences. Furthermore, the study elucidates the intricate processes through which social influence and customer relationship management interact to shape customers' perceptions and intentions regarding the adoption of online banking. These findings contribute to a deeper understanding of the nuances associated with technology adoption and pave the way for further exploration in this area.

Theoretical Implications

This study makes a significant theoretical contribution to the adoption of online banking by introducing and analyzing important mediators such as perceived usefulness, attitude, and perceived ease of use. By incorporating these factors into the theoretical framework, we enhance our understanding of the cognitive processes guiding users' intentions. Additionally, by including financial literacy and customer relationship management as independent variables, we broaden the scope of our investigation and address significant gaps in the existing literature. Furthermore, by employing social influence as a moderator, we delve deeper into the contextual factors influencing user behavior. This comprehensive approach provides valuable insights into the complex interactions between variables influencing user intentions, while also enriching the theoretical landscape of online banking adoption. Overall, our research contributes to bridging theoretical gaps and advancing understanding of how technology is utilized in the realm of digital banking.

Practical Implications

This research provides valuable guidance for industry practitioners by emphasizing the importance of fostering positive attitudes, personalized client engagement, and user-friendly interfaces. By acknowledging the significance of financial literacy and customer relationship management, practitioners can implement targeted interventions to enhance user adoption. Moreover, by recognizing social impact as a moderator, practitioners can optimize strategies for effective adoption, underscoring the need to consider broader socio-cultural contexts when designing marketing campaigns. This holistic approach enables industry practitioners to tailor their initiatives to better meet the needs and preferences of their target audience, ultimately fostering greater acceptance and utilization of online banking services.

Limitations

Despite the strengths of the present research, it is important to acknowledge its limitations. Firstly, the exclusive focus on data collection in Pakistan restricts the applicability of the results to a broader international context. Future research projects should prioritize cross-cultural studies to gain a more comprehensive understanding of the issue. Secondly, the small sample size represents another limitation. Larger sample sizes would be advantageous for improving reliability and generalizability in future research endeavors. Thirdly, the moderating effects of demographic parameters on users were not investigated. Future studies should explore how these demographic characteristics influence the relationships identified to provide a more nuanced understanding of the factors driving the adoption of online banking. Addressing these limitations will contribute to the advancement of knowledge in this area and enhance the practical implications of future research findings.

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