

Fintech Adoption Among Islamic Banking Users in Pakistan

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DOI: <https://doi.org/10.70670/sra.v3i3.881>

Abstract

This study investigates the behavioral intentions of Islamic banking users towards adopting FinTech services in Pakistan, employing the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2) framework. The research aims to analyze the influence of facilitating conditions, perceived value, hedonic motivation, cultural and religious acceptance, and innovative features with public awareness on user intentions. A quantitative, cross-sectional design was adopted, collecting data via a structured questionnaire from 250 Islamic banking customers using FinTech services in Karachi. Structural Equation Modeling (SEM) was used for analysis. The findings reveal that facilitating conditions, perceived value, hedonic motivation, and cultural and religious acceptance significantly influence user intentions, while innovative features and public awareness do not have a notable impact. These results underscore the central role of religious alignment, trust, and emotional satisfaction in FinTech adoption within Islamic banking. Theoretically, the study extends UTAUT2 in a faith-based financial setting, while practically offering insights for Islamic banks to prioritize Shariah-compliant, user-friendly digital services supported by awareness campaigns emphasizing religious congruency. Future research is recommended to explore trust, risk perception, and longitudinal patterns of FinTech adoption in Islamic finance markets.

Keywords: FinTech Adoption, Islamic Banking, Behavioral Intentions, UTAUT2 Framework

Introduction

Background of Research

With the advent of technological innovation, banking growth has increased rapidly, and with consumer awareness and information, the use of fintech applications has increased. The Financial Technology (Fintech) adoption has been rising due to competition and change in technological trends in the banking sector. Islamic and conventional banking use Fintech services to enhance users (bank customers) to use various financial banking services with ease and social influence (Elia, Stefanelli & Ferilli, 2023). Financial Technology (Fintech) brought many changes in business organizations and due to changes in global competition; this is a need of every business including the banking sector. The adoption and use of Fintech applications create ease for businesses in banking transactions and payment, along with ease in business functions. Islamic banks also use Fintech applications for users to perform financial transactions, savings, credits, insurance, and transfers are become ease for financial services (Feyen, Natarajan & Saal, 2023). Financial services have been increasing in the banking sector and Islamic banks focus on financial services through Fintech, transactions, and payments need better internet services and devices to perform these transactions with ease. The use of fintech services customers using online transactions and banks with a low level of technology customers switch their accounts to other

banks, hence all banks need to adapt to the advanced technology and digital shift. The research elaborates that till 2020 banking profits are at risk and they loss \$ 1 billion due to digital disruption and the cost of digitalization. Fintech is the technology banking sector to delivers financial solutions and modern services with mobile payment, e-commerce services, and crowd-based financing with person-to-person lending and transfers (Luo et al., 2022).

Islamic banks use financial services and the adoption of fintech among Islamic banking users in Pakistan has gained considerable attention due to the growing need for digital financial solutions that align with Islamic principles. Islamic banking focuses on interest-free Riba-free transactions and investments with Riba (Interest) free transactions for users of financial services. The increase in fintech solutions, such as mobile banking apps, digital wallets, and Blockchain technology, offers new opportunities for users to engage with financial services in a manner consistent with Islamic Shariah and user literacy of Islamic Finance (Yunita, Utomo & Sundjaja, 2024).

Islamic banking serves its users through online applications for deposits, transfers, payments, applications of loans, savings plans, Islamic Insurance (Takaful), and business and trade transactions through the use of financial technology and applications (Rehman et al., 2023). An Islamic bank offers the Riba free transactions, with no Gharar (uncertainty), and avoids future (derivatives) transactions. Islamic banking provides risk-shared transactions based on the principles of Islam creating better facilities for users and enhancing their behavioral intentions to use online platforms and fintech applications (Hasan, Hassan, & Aliyu, 2020).

Fintech social influence and awareness of fintech solutions play a crucial role in adoption. Individuals who are exposed to positive peer experiences or have a strong awareness of fintech products tailored to Islamic banking are more inclined to use these services.

Fintech (Financial technology) is a modern-day innovative technology used to deliver automated financial services to consumers. Fintech is used by companies and business owners to develop better financial models and specialized software to update the systems and generate automated financial transactions for consumer ease (Lu, 2023). Fintech applications (Fintech apps) are developed to enhance innovation and create ease in the lives of consumers and owners. Fintech applications provide faster transactions, personalized services, investment strategies, and analysis of cost and budget tools to consumers. This section of the report elaborates on the Fintech innovations of Airwallex and Coinbase companies and how they are using Artificial Intelligence (AI), and Big Data Analytics through Fintech implementation (Arnaut & Bećirovic, 2023).

The financial services are the models used by various banks and financial institutions to analyze modes of transaction and promote online and digital banking with the use of online and mobile services. The research analyzes the Fintech is considered a new technology and requires huge investments as well; the research elaborates on the financial services increase customer satisfaction and retention. The research elaborates on the business growth gained by considering the growth in financial services like online payment, online transfers, online facilities of mobile applications, and a range of services to customers to enhance customer satisfaction (Idrees, 2024).

Overview of Islamic Banking and its Services

Banks are financial intermediaries that play the role of financial institutions for financial transactions including payment, deposits, transfers, lending, and borrowing for consumers for their business and economic reasons. Banks provide financial intermediary facilities and also function as payment agents for their clients, handling the processing of checks, providing letters of credit, and offering additional forms of guarantee. Islamic banking as part of a broader strategy to diversify financial services and reach the unbanked population, especially in rural areas where conventional banking services are limited. In Pakistan 40 banks are operating including Islamic and conventional banks, among 40 banks 21 are listed banks listed on Pakistan Stock Exchange (PSX).

The banking industry gains huge growth and development and due increase in financial inclusion and technology the banking sector growth has been increased. In Pakistan's banking sector

includes both commercial banks and non-commercial banks including Islamic banks. The country's banking sector is dominated by a few large players, such as Habib Bank Limited (HBL), United Bank Limited (UBL), and National Bank of Pakistan (NBP), but Islamic banking has emerged as a key area of growth and development in recent years. In the banking sector, Islamic banking in Pakistan has witnessed remarkable expansion, driven by the increasing demand for Shariah-compliant financial products. In 2022, the share of Islamic banking assets in the total banking sector reached approximately 18.5% growth and, with the total assets of Islamic banks exceeding Rs. 5 trillion in capitalization and Investment by banking sector business owners and public investments. The growth of Islamic banks has been increased with awareness and financial literacy, Islamic banking operates through over 4,500 branches across the country, offering a range of services such as profit-and-loss sharing deposits, Islamic mortgages, and serves with various products and trade-based transactions based on Shariah Compliance.

Problem Statement

The use of Fintech plays a significant role in changing the perceptions and behavior of Islamic banking users and enhancing their business transactions. The Fintech services in Islamic banking provide a facility for users to perform financial transactions online and enhance their experience with better facilities. The purpose of the research was the analysis and the comprehension of the consumer behavior that is to be analyzed and comprehended in relation to the Fintech adoption in Pakistan, and the issues that define the choices of the consumers and the potential obstacles on the way to these choices will be the main focus of the investigations. The study developed on the theory of Unified Theory of Acceptance and Use of Technology- 2 (UTAUT2), the theory explains the behavior and the intentions and the objective is to explain the performance on the expectations in the financial sectors in relation to the use of fintech innovations in Islamic banking. This study done to examine the gaps of practicality in detail, then the following concrete facts can be testimony of the gap feasibility of the study in Pakistani context: A few of the reasons of this low rate of Fintech acceptance is as follows; low financial inclusion rate, low level of financial literacy, and also disparity in trust towards these online financial services (Mansyur & Ali, 2022).

Research Objectives

1. To determine the impact of Facilitating Conditions of Islamic banking on Users behavioral intentions towards Fintech Services.
2. To determine the impact of Perceived Value of Islamic banking on Users behavioral intentions towards Fintech Services.
3. To determine the impact of Hedonic Motivation of Islamic banking on Users behavioral intentions towards Fintech Services.
4. To determine the impact of Cultural and Religious acceptance of Islamic banking on Users behavioral intentions towards Fintech Services.
5. To determine the impact of Innovative Features and Public awareness of Islamic banking on Users behavioral intentions towards Fintech Services.

Research Questions

1. What is the impact of Facilitating Conditions of Islamic banking on Users behavioral intentions towards Fintech Services?
2. Does the Perceived Value of Islamic banking on Users behavioral intentions towards Fintech Services?
3. Is the impact of Hedonic Motivation of Islamic banking being significant on Users behavioral intentions towards Fintech Services?
4. Does the role of Cultural and Religious acceptance in Islamic banking affects Users behavioral intentions?
5. What is the impact of Innovative Features and Public awareness of Islamic banking on Users behavioral intentions towards Fintech Services?

Scope of Study

The research will be conducted to analyze and explore the perspective of Fintech adoption in Islamic banking in Pakistan and its impact on users' behaviors. It is primary in nature and conducted in the banking sector in Karachi, Pakistan. The data will be collected through questionnaires from users of Islamic banks to analyze their behavioral intentions to choose Islamic banking services.

Significance of Study

Theoretical Implications

The research also fills a crucial gap because the current study is undertaken in the Pakistani Fintech environment that is unlikely to appeal to a significant part of the Fintech literature. The study investigates the application of the Islamic banking system which operates under the Shariah law and adds supplementary information to the debate under the title of the discrepancy between operation and consumer perception in contrast to the conventional bank (Sara, 2024). Based on the use of Fintech adoption which have mostly focused on the Google search trends, the study not only compares the Fintech adoption of the users having bank accounts in the Islamic and conventional banking facilities in Pakistan, but also provides the insights on how universal application of two diverse banking systems influences this form of implementation (Pasha, Hassan & Zafar, 2023). Besides carrying out an evaluation of the total factors that influence the adoption of Fintech usage using conceptualization of UTAUT2 framework, the present research also determines whether the proposed research questions can already be answered using available UTAUT1 data set. This study will also take care of a relevant gap relevant, on the fact, that the current study will be carried out within the Pakistani setting of Fintech, which might not be relevant to much of the Fintech literature.

Practical Implications

This research has an immense importance for financial services for Islamic banking and considerations of customer perspectives. First, it highlights the importance of designing fintech services that are accessible and user-friendly for users with varying levels of education. Financial institutions can develop tailored educational programs to enhance digital literacy, particularly for those with lower education levels, to increase fintech adoption. The customer services and public awareness ensuring that fintech offerings align with Shariah principles while with use of modern technology is essential for attracting tech-savvy, educated customers. The research also emphasizes the need for Islamic banks to foster trust in digital platforms by addressing security concerns and highlighting Shariah compliance, ultimately promoting broader fintech usage across diverse customer segments.

Literature Review

Underpinning Theories

The added constructs like Facilities conditions, perceived value and Hedonic Motivation addresses the pleasure or enjoyment derived from using technology, which can significantly affect user engagement. Price Value considers the cost-benefit analysis of using a technology, making it particularly relevant in contexts where financial constraints are a concern. Previous and current usage determines the behaviors and the intentions of the user in the current and future usage. As a complete model of action, UTAUT2 gives a fulfilling survey of the numerous elements influencing technology maturation to embrace it in the fintech circle, and hence is advantageous in appreciation of fintech inventions and adaptation of fintech in Islamic banks (Sara, 2024). Unified Theory of

Acceptance and Use of Technology 2 (UTAUT2) are propositions with a full picture of analyzing the choice of technology adoption and usage. UTAUT2 incorporates several important variables that include performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, price value, and habit, and is especially applicable in studying those variables that will determine consumer behavior towards the newer technological innovations in the banking industry. This model is perfect to investigate the process of adoption of FinTech services in Islamic banking by its Pakistani customers where technological integration is a complex phenomenon in such a highly traditional and culturally particular ecosystem. Also included in this study is the education level as a variable in the moderation of the adoption process, which will help to emphasize the significance of the educational aspect as affecting the perception of the ease of use of a technology and its utility among users, in particular, when responding to the availability of innovations of the FinTech segment. This is an enormous contribution because this attempts to explore the relationship between technological acceptance and user characteristics which is underrepresented within the available sources of research about FinTech within the Islamic banking system (Pasha, Hassan & Zafar, 2023).

The Unified Theory of Acceptance and Use of Technology 2 (UTAUT2) and the Technology Acceptance Model (TAM) are two important theories in the setting of FinTech adoption of the users of Islamic banking in Pakistan. UTAUT2 as an extension of UTAUT model in its turn focuses on a wide range of determinants of technology uptake, including performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, price value, and habit. UTAUT2 in the case of Islamic banking will aid in determining the impact of these factors on FinTech service adoption by the user, which includes consideration on cultural and religious concepts like Shariah compliance.

The Technology Acceptance Model (TAM) complements UTAUT2 by focusing on perceived ease of use and perceived usefulness as the core determinants of technology adoption. For Islamic banking users, FinTech solutions must not only be user-friendly but also clearly demonstrate utility, particularly in ensuring that they meet Shariah compliance. The incorporation of these theories, understanding FinTech adoption in Pakistan's Islamic banking context (Sara, 2024).

The Technology Acceptance Model (TAM) further enriches this discussion by emphasizing the roles of perceived ease of use and perceived usefulness in technology adoption. For Islamic banking users, FinTech solutions must not only be easy to use and demonstrate clear utility but must also align with Islamic principles, particularly regarding Shariah compliance. Thus, the compatibility of FinTech innovations with religious values is an additional layer of consideration, particularly in a market like Pakistan where Islamic banking is widely practiced.

Users Behavioral Intentions towards Islamic Banking Services

The intention to use the services of Islamic banking with innovative processes of financial technology (Fintech) is the behavior of the Users. Fintech is more likely to leave the tasks easy, save money and to have more control of their cash. The development of phone applications and internet websites has facilitated the use of money services to every individual. Now, users are able to make transactions, handle their investments, and take a loan without major issues being present previously (Elia, Stefanelli & Ferilli, 2023). Additionally, such contributions as artificial intelligence and machine learning to Fintech also made it possible to offer more individualized finance assistance. This may feature tips in terms of investment depending on the requirements of an individual or prevention of frauds before they occur. Thus, large money centers must substitute and collaborate with the Fintech companies. This makes them be at the forefront of the rest and fulfills what people are demanding these days as far as banks are concerned. The ongoing global revolution in Fintech utilization does not only transform the realm of finance, but it also may enable the provision of more people with money services and expansion of the economies (Agboola, Adelugba, & Eze, 2023).

Within our research model, we focus on users' behavioral intentions to Fintech services in Pakistan. PE delves into users' self-assurance and inspiration to use Fintech services, while EE assists in gauging users' intent in utilizing these services. Considering deep-rooted influence of culture and family in Pakistani society, we aim to examine the result of SI on users' intentions to avail Fintech services. Following SI, it becomes crucial for all Fintech service providers to make applications that facilitate users in conducting e-payments. Therefore, our investigation extends to understanding and concluding consumers' behavioral intentions within FC. Furthermore, we recognize the importance of the EL of users and introduce it as a moderating variable in the model. This inclusion is vital to comprehending the nuanced effects of users' EL on their behavioral intentions reference to Fintech services (Almahadin & et al., 2023).

The users' behavioral intentions towards Islamic banking in Pakistan considered due to services shaped by various factors that influence their decisions to opt for these services over conventional banking. The growth of Islamic banking has been increased and fintech innovations Islamic banking attracts the customers with enhanced services develop trust and comfort, knowing that their financial transactions are in line with their beliefs. The other important thing is the level of trust in Islamic banking institutions plays a significant role in determining users' behavioral intentions. Trust built through transparency, reliability, and consistent adherence to Shariah compliances and Islamic rules of finance and trade (Agboola, Adelugba, & Eze, 2023).

The products and services Islamic banks offer with trade concepts and ease of use of products that cater to everyday financial needs, such as home financing, car loans, and savings accounts, makes Islamic banks an attractive option for users who seek Shariah-compliant alternatives. The growth in number of Islamic banking branches and digital platforms enhances their accessibility, leading to greater adoption. Perceived financial benefits also contribute to users' behavioral intentions. When Islamic banking products offer competitive returns, lower fees, and favorable terms compared to conventional banks, users are more inclined to consider them as affordable options for customers (Alsamdi, 2023).

Fintech adoption and Facilitating Conditions of Islamic banking

Facilitating conditions defined as the level to which a person have strong confidence in a firm's technical infrastructure fully supporting them in using a technology to improve their performance (Venkatesh et al., 2003). Additionally, technical innovation serves to encourage and assist users in understanding and effectively resolving technical issues that may arise during task performance, as noted by Hassan et al. (2022). These activities contribute to positive and robust user experiences, as highlighted by Odei-Appiah et al. (2022). Contrary, various research works have recognized the favorable influence of FC on Fintech services and similar domains. It's affirmed that the positive influence of FC on the adoption of Fintech services (Kurniasari et al., 2022). In our current study, we have examined and established a direct relationship of FC with users' behavioral intentions to adopt Fintech services in Pakistan.

The facilitation of conditions in Islamic banking enhances the user's behaviors and create impact on user behavior and the overall performance of Islamic banks. In recent years, the rise of fintech has transformed the banking sector, making financial services more accessible, convenient, and efficient. For Islamic banking, the integration of fintech solutions such as mobile banking, online platforms, and digital wallets offers significant advantages by making Shariah-compliant financial services more widely available for users of Islamic banks (Song, Yu & He, 2023)

The products and services include includes the user-friendly platforms, and reliable customer support and play a critical role in this adoption process. When Islamic banks invest in robust digital systems and ensure their services are easily navigable, it reduces barriers for users and encourages use that is more widespread. The convenience of digital tools, combined with the reassurance that these services comply with Islamic principles, strengthens user trust and loyalty towards Islamic bank and create better trust of Islamic banks. The use of financial technology enables Islamic

banks to offer innovative products that appeal to users seeking more personalized and flexible financial solutions (Bhutto, Jamal and Ullah, 2023). These products, ranging from digital savings accounts to Islamic-based investment platforms, tailored to meet modern financial needs while adhering to Islamic principles to retain the customer satisfaction with ease of use in services. The Fintech growth and integration change the dynamics of people and users of banks and positively influences operational efficiency and customer satisfaction. With automation and streamlined processes, Islamic banks can reduce operational costs and improve service delivery. The increased ease of access and product diversification contributes to greater market share, customer retention and Islamic banking growth and profits (Yunita, Utomo & Sundjaja, 2024).

H1: There is significant impact of Facilitating Conditions of Islamic banking on Users behavioral intentions towards Fintech Services.

Fintech adoption and Perceived Value of Islamic banking

Due to Fintech adoption and growth, the consumer perceptions have been changed a perceived value is often considered as a tradeoff between benefits and sacrifices (Ramdhani, Rachmawati, Sidiq, & Prabowo, 2017). The change in consumer perceptions an fintech adoption in Islamic banking is influenced by several factors, including the ease of use, accessibility, security, and the ability to offer Shariah-compliant financial products. If users perceive fintech platforms as providing a seamless and secure experience that aligns with their religious values, they are more likely to engage with and adopt these services. The change in user's behavioral intentions significantly impacted by their trust in the technology and the institution offering it. In the Islamic banking sector, trust is especially crucial as customers expect financial institutions to adhere to ethical standards that respect their religious beliefs. If fintech platforms fail to meet these expectations, it can lead to resistance to adoption because of low literacy and education level of users (Khan and et al, 2024).

The use of financial services with fintech innovation, social influence cannot be overlooked in shaping behavioral intentions. In Pakistan, word of mouth, social networks, and the influence of family and community play a significant role in determining whether individuals adopt fintech services. If customers perceive that adopting, fintech in Islamic banking enhances their social status or is considered socially acceptable and customers are engaged with value added services. In Pakistan, the adoption of fintech in Islamic banking has seen significant growth in recent years, influenced by factors like digital transformation, evolving customer expectations, and advancements in technology. The perceived value of fintech services plays a crucial role in shaping users' behavioral intentions towards adopting these services, particularly in the context of Islamic banking, where adherence to Shariah principles is a key consideration. Perceived value refers to the customer's overall and users are motivated to use Islamic Banking services with Shariah principles (Yunita, Utomo & Sundjaja, 2024).

H2: There is significant impact of Perceived Value of Islamic banking on Users behavioral intentions towards Fintech Services.

Fintech adoption and Hedonic Motivation of Users

Hedonic motivation refers to inner feeling of joy and being motivated with use of financial services provide the hedonic motivation in the context of Islamic banking becomes increasingly important, especially given the unique cultural and religious dynamics that shape trust, value and user experience (Campino, Brochado & Rosa, 2021).

The feeling of satisfaction and Hedonic motivation has significant role in determining how users perceive and engage with Fintech solutions. In Islamic banking, where services must align with Shariah principles, the design and user experience of Fintech platforms can greatly influence user satisfaction. For instance, a well-designed mobile banking application that offers a seamless and enjoyable user experience can attract more customers, as users are more likely to engage with

platforms that are visually attractive applications. Considering the Fintech solutions cannot be and users often seek not only practicality but also emotional gratification in their banking experiences. Fintech applications that incorporate elements of social interaction, community engagement, or even charitable giving can resonate deeply with users, tapping into their hedonic motivations as customer facilitate Zakat donations or provide insights into ethical investments can enhance user satisfaction by aligning with their values while also providing a fulfilling experience of users (Elia & et al., 2023).

The use of Islamic banking, hedonic motivation can also mitigate concerns about technology adoption. Users who may initially be hesitant due to cultural or religious apprehensions might be more willing to explore Fintech solutions if they perceive them as enjoyable and beneficial. Positive emotional experiences can lead to increased openness toward technology, ultimately driving adoption rates. The core understanding hedonic motivation can inform the development of marketing strategies for Fintech products. Marketing campaigns that highlight user experiences, testimonials, and the enjoyment derived from using innovative banking solutions can effectively engage potential customers for usage of Islamic banking (Bhutto, Jamal and Ullah, 2023).

H3: There is significant impact of Hedonic Motivation of Islamic banking on Users behavioral intentions towards Fintech Services.

Fintech adoption and Cultural and Religious acceptance

Islamic banking works with Shariah compliance and this factor is influencing for users along with cultural and religious acceptance with user behavioral intentions in Islamic banking is a critical area of research, particularly as financial technology (Fintech) evolves in Muslim-majority countries like Pakistan. Islamic banking operates under a framework that is deeply rooted in Shariah law, which governs not only the types of financial transactions permitted but also the ethical dimensions of banking transactions and ease in use in financial transactions (Idrees & Ullah 2024).

The Islamic banking offers Riba free transaction and people cultural acceptance include the broader societal norms, values, and beliefs that influence individuals' decisions and behaviors. In the context of Islamic banking, this includes adherence to principles such as profit sharing, risk sharing, and the prohibition of interest (Riba). Users who perceive that a banking institution respects and adheres to these cultural tenets are more likely to develop positive behavioral intentions towards using its services. Conversely, if users perceive disconnect between the services offered and their cultural or religious beliefs, they may exhibit reluctance or resistance to adopting those services (Elia & et al., 2023).

The user's intention towards Islamic finance as follow and use Islamic banking is Sharia compliance is not merely a regulatory requirement; it is a matter of faith for many consumers. Financial products must not only avoid Riba but also comply with ethical standards concerning gambling (Maysir) and excessive uncertainty (Gharar). Research shows that users are more inclined to adopt banking solutions that explicitly demonstrate compliance with these religious principles due to these factors Islamic banking is core thing for usage of customers (Lu, 2023).

The people and users guide to others regarding Islamic financial transactions and influence of community and peer networks cannot overlook. In many cultures, especially in Islamic societies, decisions regarding financial matters are often communal rather than solely individual. Recommendations from family members, friends, and religious leaders can significantly affect an individual's willingness to engage with certain banking services. Therefore, building a strong community presence and fostering discussions around fintech solutions can enhance cultural and religious acceptance and people can easily use without any issues of Interest rates and others (Synder, 2019).

H4: There is significant impact of Cultural and Religious acceptance of Islamic banking on Users behavioral intentions towards Fintech Services.

Fintech adoption and Innovative Features and Public awareness

The growth of fintech adoption has greater impact of innovative features and public awareness on users' behavioral intentions is significant and multifaceted. As fintech, solutions continue to evolve, the ability of Islamic banking institutions to integrate innovative features while effectively raising public awareness is crucial for enhancing user engagement and adoption.

Innovative features in banking technology refer to the unique functionalities and services that differentiate a banking product from commercial banking products as Islamic banks provides the Takaful Islamic insurance, Sukuk Islamic banks and many sources of savings and investment with ease of use (Saha, Bishwas &Arshi, 2023).

The users of Islamic banks perceive that a banking platform offers innovative solutions tailored to their specific needs, they are more likely to develop positive behavioral intentions toward using those services. For instance, an app that provides real-time insights into the compliance of financial products with Islamic law can enhance trust and encourage users to engage more deeply with the bank's offerings. The change in financial transactions provides friendly interface, seamless transaction processes, and robust security measures can enhance user satisfaction and increase the likelihood of continued engagement. As customers, become more comfortable with technology, their expectations for innovation in banking rise. Therefore, banks that invest in developing cutting-edge features that resonate with users' needs and preferences are likely to foster loyalty and encourage word-of-mouth promotion (Diaz & et al., 2023).

Fintech adoption and marketing of financial innovation and use of Islamic banks also put greater impact on developing image and awareness of fintech based solutions and their benefits. Awareness campaigns that highlight the features and advantages of Islamic banking products can help dispel misconceptions and educate potential users about the compatibility of technology with Islamic principles. Effective communication strategies, including social media engagement, community outreach, and educational workshops, can significantly enhance public understanding of Fintech offerings in Islamic banking. When users well informed about how these innovations can meet their financial needs while adhering to their religious values, they are more likely to develop favorable attitudes for services of Islamic banks (Saha, Bishwas &Arshi, 2023).

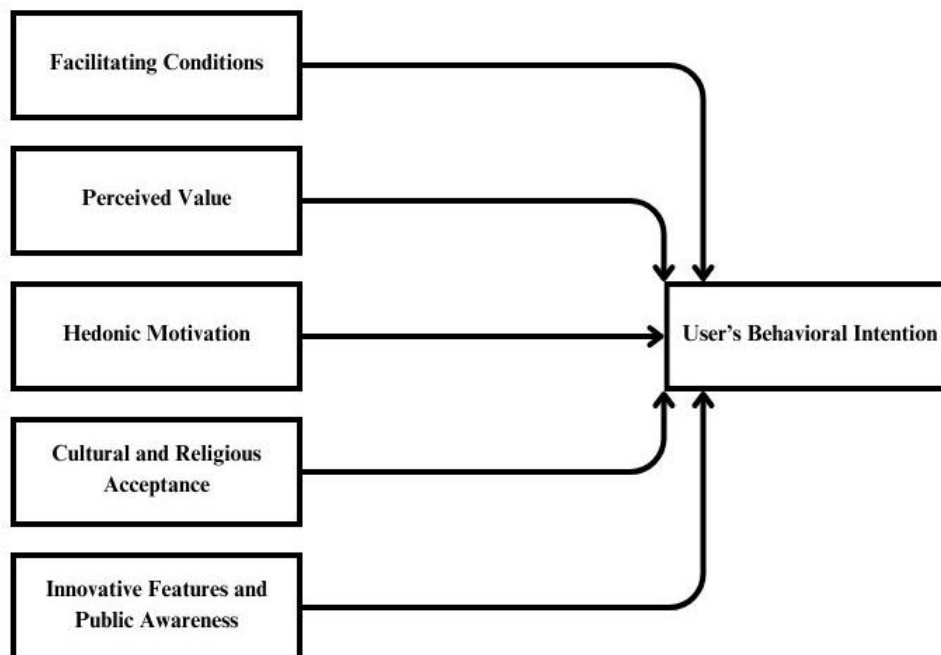
H5: There is significant impact of Innovative Features and Public awareness of Islamic banking on Users behavioral intentions towards Fintech Services.

Theoretical Framework

This research conducted based on theory of Unified Theory of Acceptance and Use of Technology 2 (UTAUT2), this theory explores the technological innovations a set of innovation required in banking sector. The theories utilize the bases of user's behaviors and analyze a wide range of individuals, including consumers, users, and customers (Idress & Ullah, 2024).

Technology Acceptance Model (TAM) explored that perceived ease of use and perceived usefulness are critical determinants of technology acceptance. In the context of Islamic banking, Fintech solutions like mobile banking and digital payment systems must be user-friendly and demonstrably beneficial for users to adopt them. Islamic banking customers, who are often concerned with Shariah compliance, may evaluate Fintech innovations based on how well these services align with their religious values while also fulfilling the customers financial transactions needs (Hussain, Hussain, Marri & Zafar, 2021).

Figure 1: Conceptual framework



Source: Adapted from; Mansyur & Ali (2022) and Idrees & Ullah (2024).

The conceptual framework provides the understanding the adoption of Fintech solutions among Islamic banking users encompasses several independent variables, a moderating variable, and a dependent variable that collectively shape user behavioral intentions. The above graph describes the relationship of independent and depend variable. The independent variables include **Facilitating Conditions**, Perceived value, hedonic motivation, Cultural and religious acceptance and innovative features in public awareness and dependent variable is users' behavioral intention in Islamic banking. The facilitation services include technological infrastructure, access to financial services, and user support systems that enable smoother interactions with digital banking platforms. When facilitating conditions are favorable, users are more likely to engage with Fintech services, leading to higher adoption rates (Bhutto, Jamal and Ullah, 2023).

The second variable is Perceived Value is another crucial independent variable, encompassing both utilitarian and emotional benefits associated with Fintech usage. In Islamic banking, perceived value may include the effectiveness of Fintech solutions in enhancing financial transactions while adhering to Shariah principles and needs of customers towards banking sector.

Hedonic Motivation is the inner motivation to follow Islamic Shariah principles and gain the better services of banks this explores the enjoyment and pleasure derived from using technology. For Islamic banking users, this may relate to the experience of using engaging and user-friendly fintech applications that make banking enjoyable.

The Islamic banks also promote the Cultural and Religious Acceptance is essential in the context of Islamic banking, as it determines whether users find Fintech solutions compatible with their cultural and religious beliefs. Innovations that align with Islamic values are more likely to gain acceptance, influencing users and Innovative **Features** of Fintech solutions also play a significant role in adoption. Features such as user-friendly interfaces, security protocols, and unique financial products tailored to Islamic banking needs can enhance user interest and Increase technology acceptance and customer can use the services of Islamic banks. Higher education

levels can enhance users' understanding of Fintech solutions, increase their perceived value, and improve their ability to utilize facilitating conditions effectively. Educated users may also possess a greater awareness of the innovative features and advantages of fintech, making them more likely to learn and use the technological adoptions and innovative services and becomes motivated with services of Islamic banks (Bajunaied, Hussin & Kamarudin, 2023).

Literature Gap

The growth of technology and online facilities change the pattern of financial transactions and banking sector also gains the huge growth with increasing in range of customers. The growth in fintech adoption increase the growth of Islamic banking due to services and specific factors and Fintech solutions within the context of Islamic banking in Pakistan gain the customer trust. Most existing studies focus broadly on Fintech or general banking adoption, failing to explore the unique cultural and religious dimensions that affect Islamic banking customers. This gap highlights the need for research that addresses how Shariah compliance and religious beliefs shape user perceptions and acceptance of Fintech innovations (Maniam, 2024).

The fintech adoption and Islamic banking practices often rely on community trust and social networks, research is needed to assess how peer influence and social norms affect user intentions. The Islamic banking evolving nature with Fintech adoption particularly in developing economies like Pakistan raises questions about the long-term sustainability and user retention of these technologies. Most existing studies focus on initial adoption rather than ongoing usage and satisfaction, leaving a gap in understanding the factors that contribute to sustained engagement with Fintech solutions (Mansyur & Ali, 2022).

The research explores that there is a need for longitudinal studies that can track changes in user behavior over time, particularly in response to technological advancements and shifts in market conditions. Addressing these gaps will enhance the body of knowledge surrounding Fintech adoption in Islamic banking and provide practical implications for stakeholders and building customer trust with experience (Maniam, 2024).

Research Methodology

This research adopts a positivist epistemological philosophy, emphasizing objective reality and observable phenomena, aiming to empirically examine factors influencing FinTech adoption among Islamic banking users in Pakistan. A quantitative, explanatory, and deductive research design is employed, using a cross-sectional approach with data collected through a close-ended, Likert-scale-based questionnaire distributed via Google Forms. The study focuses on variables like performance expectancy, ease of use, and Shariah compliance, testing hypotheses derived from UTAUT2 and TAM models. The target population comprises users of mobile banking and digital payment systems offered by Islamic banks in Pakistan, with a calculated sample size of 385 respondents selected using a non-probability convenience sampling technique, acknowledging its limitations in generalizability due to time and resource constraints. Data collection is planned over six months (January–June 2025), with rigorous ethical standards upheld, including informed consent, anonymity, and voluntary participation. Data analysis will be performed using SPSS software, applying reliability analysis, factor analysis, regression, and correlation to ensure the validity, reliability, and empirical strength of the findings.

Data Analysis

Descriptive Analysis

The gender situation among the respondents is even with 56:44 in favor of male respondents. The 18-25 years age accounts 55 percent of respondents and 26-35 years of age accounts to 42 percent of the respondents showing that the respondents are mainly younger. Education-wise, most (54%) have a graduate degree and 22 percent have a master level education of education. In terms of the level of income, 28 percent of the respondents earn Rs. 100,001 and 200,000 with 26 percent

earning Rs. 30,001 and 60,000 indicating a wide range of sample with majority being middle to upper-middle income classes. The above demographic distribution would shed some light to the interpretation of the following structural modal relationships.

Table 1: Descriptive Analysis

		Frequency	Percent	Cumulative Percent
Gender	Male	140	56.00%	56.00%
	Female	110	44.00%	100.00%
Age	18-25 Years	138	55.00%	55.00%
	26-35 Years	105	42.00%	97.00%
	36-45 Years	2	1.00%	98.00%
	Above 45 Years	5	2.00%	100.00%
Education	Matriculation	19	8.00%	8.00%
	Intermediate	41	16.00%	24.00%
	Graduate	135	54.00%	78.00%
	Masters	55	22.00%	100.00%
Income	Less than Rs. 30,000	29	12.00%	12.00%
	Rs.30,001 to 60,000	66	26.00%	38.00%
	Rs.60,001 to 100,000	48	19.00%	57.00%
	Rs.100,001 to 200,000	70	28.00%	85.00%
	Above Rs. 200,000	37	15.00%	100.00%

Measurement Model

The reliability and validity of the measurement model was analyzed in the table 2. The outer loading measures of all items are above the suggested threshold of 0.70, ascertaining the high reliability of indicators regarding each construct. CR of all the constructs is good as they follow a scale of 0.89-0.91 which is greater than the minimum acceptable value of 0.70. Also, construct-wise, all graphs of the Average Variance Extracted (AVE) are above the 0.50 value, indicating good convergent validity, 0.693 to 0.725 respectively. All these findings are indicative that there is a reliable and valid measurement model in place.

Table 2: Outer Loadings, Composite Reliability & Average Variance Extracted

Constructs	Items	Outer Loadings	Composite Reliability	Average variance extracted (AVE)
Behavioral Intention	B1	0.837	0.904	0.725
	B2	0.771		
	B3	0.893		
	B4	0.869		
	B5	0.882		
Cultural and Religious	CR1	0.853	0.897	0.708
	CR2	0.879		
	CR3	0.803		
	CR4	0.843		
	CR5	0.827		
Facilitation Conditions	FC1	0.846	0.902	0.718
	FC2	0.873		
	FC3	0.832		
	FC4	0.848		
	FC5	0.839		
Hedonic Motivation	HM1	0.854	0.904	0.724
	HM2	0.874		
	HM3	0.858		
	HM4	0.794		
	HM5	0.87		
Innovation Features & Public Awareness	IF1	0.85	0.89	0.693
	IF2	0.836		
	IF3	0.826		
	IF4	0.813		
	IF5	0.837		
Perceived Value	PV1	0.818	0.903	0.72
	PV2	0.859		
	PV3	0.864		
	PV4	0.834		
	PV5	0.868		

Discriminant Validity

The Fornell-Larcker criteria evaluate discriminant validity that square root of AVE of each construct (on the diagonal) is higher than the correlation of that construct with the rest (of-diagonal values). It is also evident that the diagonal values in this model value are always higher than associated off diagonal correlations, thus confirming that each construct is distinct empirically as compared to the rest. It means that the constructs tap into distinctive aspects of the conceptual framework thus, meeting the discriminant validity criterion.

Table 3: Fornell-Larcker Criterion

Construct	B	CR	FC	HM	IF	PV
B	0.851					
CR	0.934	0.841				
FC	0.808	0.801	0.848			
HM	0.946	0.897	0.805	0.851		
IF	0.88	0.849	0.942	0.912	0.833	
PV	0.841	0.921	0.796	0.85	0.839	0.848

Multicollinearity

The table 4 assesses multicollinearity of the indicators. The range of VIF values is between 1.828 and 3.243 that is significantly less than the critical value of 3.3. This shows that the model does not contain considerable multicollinearity issues. At low VIFs, the explanatory variables have been found not to be too coloring in terms of explaining the dependent construct and as such the path coefficients used in the structural model will not be problematic.

Table 4: VIF

Construct	VIF
B1	2.253
B2	1.828
B3	3.169
B4	2.86
B5	3.243
CR1	2.633
CR2	2.941
CR3	2.279
CR4	2.581
CR5	2.161
FC1	2.462
FC2	2.976
FC3	2.33
FC4	2.471
FC5	2.374
HM1	2.739
HM2	2.98
HM3	2.485
HM4	1.89
HM5	2.586
IF1	2.554
IF2	2.245
IF3	2.479
IF4	2.333
IF5	2.305
PV1	2.242
PV2	2.691

PV3	2.619
PV4	2.443
PV5	2.716

Model Fitness

The R-square (R^2) of Behavioral Intention is 0.941 with adjusted R^2 of 0.940. Hair et al. (2021) explain that R^2 value of more than 0.75 will be regarded as high. In this way, this outcome suggests that 94.1% of the Behavioral Intention variance is determined by the predictor constructs in the model, i.e. the Cultural and Religious aspects, the Facilitation Conditions, the Hedonic Motivation, the Innovation Features and the Public Awareness, and the Perceived Value. Such a high value of the R^2 as the existing suggests a very good fit of the model containing significant amounts of explanation power.

Table 5: Model Fitness

	R-square	R-square adjusted
B	0.941	0.94

Hypothesis Testing

The hypothesis testing results on the basis of T-statistics and P-values are presented in the table 6. The associations of Cultural and Religious factors (CR RT B), Facilitation Conditions (FC RT B), Hedonic Motivation1 (HM RT B), and Perceived Value (PV RT B) and Behavioral Intention are statistically significant since their T-statistics are higher than 1.96 and p-value is less than 0.05. Nonetheless, Innovation Feature to Public Awareness (IF -> B) also does not hold up with T-statistic value of 0.695 and P-value of 0.487. There is not a significant effect. The results indicate that the majority of predicted associations are confirmed whereas innovation aspects, as well as the level of public awareness, do not significantly correlate with the behavioral intention.

Table 6: Hypothesis Testing

Hypothesis	T statistics	P values	Result
CR -> B	9.487	0	Supported
FC -> B	2.184	0.029	Supported
HM -> B	8.371	0	Supported
IF -> B	0.695	0.487	Not Supported
PV -> B	4.657	0	Supported

Discussion and Conclusion

Discussion

The present study sought to investigate the behavioral intentions of Islamic banking users towards the adoption of FinTech services in Pakistan, employing the UTAUT2 framework to examine the influence of facilitating conditions, perceived value, hedonic motivation, cultural and religious acceptance, and innovative features with public awareness. The results revealed that facilitating conditions, perceived value, hedonic motivation, and cultural and religious acceptance played a significant positive role in influencing behavioral intentions of users to use FinTech, whereas the innovative features and the awareness of people sample did not show a statistically significant relationship value. These findings are consistent with the previous studies in terms of significance in the presence of well-developed infrastructure, perceived utility of financial services, and enjoyment of emotional response after using technology in the adoption of technology in a culturally and religiously delicate context as Islamic banking industry in Pakistan. This influential effect of cultural and religious acceptance demonstrates the non-expendable role of Shariah-compliant financial solutions in manipulating the customer confidence, and decision-making procedures, which corresponds with research findings stating that religion considerations take a position of priority during Islamic financing activities. The insignificant relationships between innovative features and on the one hand, the understanding of people and behavioral intention on the other hand indicate that it is not enough to invent some kind of innovative features just to create awareness or promote advanced technical solution because it is culture, alignment with religion and confidence in the reliability and security of the system that should be vital.

Conclusion

To summarize the research, it proves that the way to make the overall acceptance of FinTech innovation among Islamic banking users in Pakistan is more extensive is to focus on developing trustworthy and user-oriented, Shariah-compliant financial service promoted by stable digital infrastructure the emotional and cultural desirability of service over and above the technological novelty or marketing. These findings have various implications. Theoretically, the study broadens the use of the UTAUT2 in the Islamic banking environment, and it shows the importance moderating role of socio-religious values in the models of technology acceptance. In practice, financial institutions ought to maintain an emphasis on attributes, such as simplification of use and utility, of their FinTech services provided that compliance in full with Islamic tenets of financial transactions, along with inculcation of convenient, cross-culturally adapted interfaces that enable an element of personal and religious satisfaction. Also, awareness programs need not only dwell on the presentation of the features of the products but also on the assuring of religious congruency and acceptance by the community to cultivate trust and acceptance. Regulators and policymakers must help these initiatives by ensuring that there are guidelines that stimulate the digital innovation in Shariah-compliant systems, by addressing concerns of consumers over data security, as well as digital financial literacy across demographic lines. Lastly, future studies are obliged to conduct longitudinal studies of the use pattern of FinTech by Islamic Banking customers and look into more independent variables like trust, perceived risk, and personalization of services to learn more about the dynamics of long-term adoption of FinTech within faith-based financial markets.

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