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Bridging the Financial Gap: Factors Influencing Cryptocurrency Adoption in Pakistan

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ABSTRACT

This study identifies the key factors that contribute to the uptake of cryptocurrency trading in Pakistan and how consumer beliefs to crypto trading are dictated by factors of awareness, ease of use, enjoyment, social influence, financial knowledge, and perceived risk. The research utilizes the Unified Theory of Acceptance and Use of Technology (UTAUT) due to its high explanatory capabilities in adopting technology and was further developed in terms of four additional constructs (awareness, financial literacy, enjoyment, and risk) to be more suitable to the socio-economic situation in Pakistan. The multi-variable relationships between these variables were captured using SEM to acquire the complex relationships between them. Data was measured through an online survey that was filled by 506 participants, and the hypotheses were tested with the help of structural equation modeling (SEM). The analysis supported the importance of all the offered factors. The strongest factor in determining behavioral intention was perceived enjoyment, with awareness, ease of use (effort expectancy), social influence, financial literacy, and perceived risk coming next. In contrast to the traditional studies on UTAUT where perceived risk is a moderating factor, in this research, it impacted positively and significantly. It means that educated Pakistani users are ready to accept some risks to get possible gains, which is a significant contextual deviation of the previous results. It is original empirical research on the adoption of cryptocurrencies in Pakistan, which is a little-studied emerging market, and expands the use of UTAUT framework in this new setting.

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Introduction

Over the last three decades, globalization has significantly improved the lives of people,

communication, and practices in the economic field. The process of globalization has provided the new opportunities to mankind. The result of globalization has been unequal, and this has attracted criticism in the form of business scandals (Alkharafi and Alsabah, 2025). Cryptocurrencies are encrypted using modern encryption techniques to support different financial transactions. Cryptocurrencies also have lower transaction costs to their users. Similar to the traditional cash, cryptocurrency is a digital currency that is utilized in the form of an exchange in a system called a blockchain technology. It can contribute to the economy of the country in many aspects such as increasing financial inclusion, building digital infrastructure, and replacing gold as an investment (Suhrab et al., 2024).

The features of Bitcoin that are worthy of mention are its corruption-free, transparent, and potentially long-term competitive advantage in its transactions. The bitcoin trading can positively affect SDG 6 by possibly financing water management projects (Mustafa et al., 2024). Markedly, the findings suggest that Bitcoin trading has the potential to promote the development of smart cities because it will help monitor water networks and will offer funding water management programs. These are the empirical results that prove earlier studies and indicate the potential of blockchain technology to regulate the water supply and ensure environmental sustainability. When used responsibly, crypto trading can be a big driver of the establishment of smart, inhabitable, and ecologically friendly urban environments (Shin and Rice, 2022).

Cryptocurrency trading offers developing nations like Pakistan the chance to draw in foreign capital, advance digital literacy, and become part of the global financial system. Despite regulatory uncertainty, cryptocurrency trading has seen a rise in Pakistan in recent years.
Pakistan is one of the top 20 nations in the world according to the Global Crypto Adoption Index for 2024 (Qureshi, 2025). Despite regulatory uncertainty, the nation's increasing use of digital assets is reflected in its high ranking.

With almost 20 million users, Pakistan is one of the top nations in the world for cryptocurrency adoption Pakistan Crypto Council (PCC) (Shariff, 2025) . To attract foreign investment, the government launched the PCC with the goal of establishing a legal framework for cryptocurrency trading. Bitcoin and other cryptocurrencies are neither prohibited nor illegal in Pakistan, but they are also not formally regulated. The fact that Pakistan is included among the big economies shows how quickly its people are adopting cryptocurrencies. However, while adoption is increasing, the specific determinants that influence this adoption—such as awareness, ease of use, social influence, financial literacy, and perceived risk—have not been systematically studied in Pakistan. Developing this cause-and-effect context is essential to explain why certain individuals adopt while others hesitate. Offering services to the unbanked through DeFi and giving the widest range of customers access to new investments has been a pillar of the cryptocurrency movement (England, 2023). The tokenization of conventional and alternative assets will enable investors to have easier access to hedge funds, private credit, and direct investment in private equity and alternative investment with reduced minimum requirements. Online wallets and payment systems enable people to deal with transactions easier. This change of experience is especially supported by the fact that, as the study by Forrester Predictions 2025 Payments speculates, the global usage of cash would decrease by 40% this year alone, which is why the non-cash payments become so widespread (Alfawareh et al., 2024). The market being transformed is making real-time payments (RTP), which is one of the fastest-growing technologies in the payment ecosystem. RTP offers quick settlement, which accelerates and guarantees payment and offers the firm with better payment information.

This research will determine the factors that affect the use of cryptocurrency trading because Pakistan is yet to pursue a considerable milestone in attaining financial inclusion and the use of digital payments. Pakistan has the third highest unbanked population in the world with 115 million people with no bank accounts. Having significant differences according to gender and economic background, this alarming number highlights the existing limitations to accessing funds. Moreover, only 18 percent of Pakistani

adults have received or sent a digital payment, which is a significant divergence of the world trends in financial digitization. It is possible to regulate the cryptocurrency trade and impose taxes on the trading activity and capital gains by the government. By regulating the trade of bitcoin, the government will be able to impose capital gains and trade taxes. This new revenue stream would prevent the country having budgetary deficits and foreign borrowing requirement. Thus, the study fills an important gap: whereas the country has quickly become one of the leading crypto-trading countries, the behavioral mechanisms that precondition or slow down adoption are poorly understood. By bringing out this gap, this study has defined its theoretical and practical relevance.

The research addresses a vital gap through the empirical investigation of the factors that affect the adoption of cryptocurrency in Pakistan, a promising yet insufficiently studied market. It offers new information on the behavioral intentions towards crypto trading in a developing economy using the UTAUT model. The study provides policy implications to policymakers and regulators on how to increase the inclusion of finance and digital literacy and economic resilience. It also points out that the regulated crypto trading has the potential to develop new sources of revenues, lighten the burden on the foreign borrowing, and enable the creation of intelligent and sustainable cities.

Literature Review

Cryptocurrency has been researched by scholars, but most of them have focused on its application in the west (Ji-Xi et al., 2021) or in some cultural perspectives (Almajali et al., 2022). Consequently, the number of scholarly researches about cryptocurrency is not high, particularly when one speaks about Pakistan. Researchers have pointed out that even though cryptocurrencies have been rapidly embraced in the new world, it still remained on the initial stages of organized uptake rather than the full-blown usage (García-Monleón et al., 2023). This explains the apparent contradiction with the fact that Pakistan is rated as one of the 20 trading countries: most people have been adopted, but the ecosystem and the sophistication of the users are still under development. Moreover, as indicated in (Hasan et al., 2021), only a small percentage of users use this type of money despite the fact that a large number of users may have the right knowledge regarding the currency.

Further, the determinants that play a significant role in promoting the adoption of cryptocurrency including risk, trust, and security have not been empirically studied (Çalıskan and Turan, 2025); moreover, the adoption of cryptocurrency has not been empirically investigated regarding Pakistan. This highlights the importance of research that does not only report adoption trends, but it also elaborates cause and effect relationships that exists between behavioral factors and usage intentions. Put differently, empirical studies are required to test the Behavioral Intention (BI) to adopt cryptocurrency technology, particularly in emerging economies.

As a theoretical framework, the present paper established a hypothetical framework of behavioral intention to use cryptocurrencies among Pakistani students. UTAUT is a popular technology adoption model that focuses on the aspects of successful information systems implementation (Tamilmani et al., 2021). It has a four-core construct framework which includes performance expectancy (PE), effort expectancy (EE), social influence (SI), and facilitating conditions (FC). In the first model, these predict BI which consequently results in Actual Usage Behavior (UB). Nonetheless, as the UB is not measured in the current study, BI is considered the final dependent variable. Irrespective of the existence of other variables, the UTAUT model was applied in a number of studies on user adoption of cryptocurrencies (Ji-Xi et al., 2021), the adoption of cryptocurrencies by small and medium businesses, and the adoption of bitcoin (Nazir et al., 2025). UTAUT has a wide applicability due to its enormous explanatory power. According to (Alomari & Abdullah, 2023), the explanatory power of UTAUT model in comparison to other acceptance theories is high in explaining technology adoption. This has led to the selection of UTAUT in this study. In our case, we expand the UTAUT framework, suggesting the concepts of awareness, perceived enjoyment, financial literacy, and perceived risk as other constructs, which have a direct impact on BI. Structural Equation Modeling (SEM) has been chosen as the method of analysis

since it enables simultaneous testing of these various direct paths to BI which is robust in a complex model.

Unlike many prior works that mostly cite references without building interpretative arguments, this review positions each variable within the Pakistani socio-economic setting. For example, low financial literacy and high social influence from peers may jointly explain why adoption grows despite risks. This interpretative lens strengthens the rationale for each hypothesis.

Hypothesis Development

Perceived risk

The concept of Perceived risk refers to an individual's subjective assessment of the degree of risk or possible unfavorable consequences that might arise from using a certain technology, in this case cryptocurrency (Gidron, 2013). Accordingly, Perceived risk has a negative effect on intention to use cryptocurrency (Gil-Cordero et al., 2024), as a sense of uncertainty about cryptocurrency functions as a deterrent to its use. However, risk preference did not seem to have a substantial impact on the intention to use cryptocurrency in several research, such as those conducted in Spain by (Steinmetz et al., 2021a), Korea by (Yue et al., 2021), Malaysia by (Ji-Xi et al., 2021), and Taiwan by (Quan et al., 2023).

The component of perceived risk has not yet been included in the examination of cryptocurrency usage. In some way, some potential users have voiced worries about possible data leaks due to malware attacks, theft, or user-intentional private key loss (Im et al., 2008). Additionally, prospective users have voiced their concerns about possible cryptocurrency failures. Because of this, a user's attitude and desire to use Bitcoin are strongly predicted by their perception of risk (Bommer et al., 2023). The following hypothesis is put forth in this study based on prior relevant evidence:

H1: Perceived risk significantly reduces the intention to use cryptocurrency.

Effort expectancy

Effort expectation is the amount of work required to understand new technologies (Ji-Xi et al., 2021). Bitcoin is a new technology that is unstable and that using it for financial transactions requires some degree of understanding (Birnbaum, 2024). In order to protect customers from scammers, a fundamental understanding of bitcoin usage is necessary. The behavioral intention to use bitcoin is influenced by effort expectation (Alomari & Abdullah, 2023).

When deciding whether to embrace a technology, people consider the amount of work involved. Nonetheless, (Li et al., 2023) found that effort expectancy had no discernible impact on the uptake of cryptocurrencies. Therefore, more research on the relationship between effort expectation and behavioral intention to utilize cryptocurrencies is required. It is expected that Pakistani students' behavioral intent to use cryptocurrencies may increase if they believe that they are simple to use (Jariyapan et al., 2022). Therefore, we suggested:

H2: Behavioral intention to utilize cryptocurrencies is positively impacted by effort expectancy.

Social Influence

Social influence is the degree to which people believe that their family members and friends are influencing them to use cryptocurrencies (Almajali et al., 2022). Peer groups, family members, and other current technology users' attitudes have a big influence on a person's behavioral intent to use technology (Tadpatrikar et al., 2021) . Furthermore, literature has validated the impact of word-of-mouth on altering people's perspectives.

It was suggested that when consumers have little knowledge about new technology, social influence plays a critical role in determining their inclination to utilize it (Kulviwat et al., 2009). Since bitcoin is still a relatively new technology, students at Pakistan's public universities don't know enough about it.

Thus, it is anticipated that friends' or loved ones' good opinions about the advantages of cryptocurrencies may have a beneficial behavioral impact on students' intentions to utilize them in Pakistan's universities (Lopez, 2023). According to research by (Nseke, 2018), social influence has a motivating effect on users' intentions to use cryptocurrencies. Thus, the researchers came up with:

H3: The behavioral intention to utilize cryptocurrencies is positively impacted by social influence.

Awareness

Awareness is the degree to which a person is knowledgeable about innovation and the advantages of implementing it (Goorha & Potts, 2016). This study defines awareness as the degree to which Pakistani students are knowledgeable with cryptocurrencies and their advantages. An innovation diffusion theory was the first to suggest the significance of awareness for technology adoption. The new technology is cryptocurrency. As a result, customers are not well-informed about the advantages of cryptocurrencies, particularly in developing nations like Pakistan (Mbatha, 2024).

According to (Sukumaran et al., 2022), a person's degree of knowledge about the technology and its advantages improves their perception of those advantages and, eventually, their behavioral intention to utilize it. According to certain studies, individuals' intentions to utilize cryptocurrencies are positively impacted by awareness (Li et al., 2023). However, a lack of knowledge about cryptocurrencies may also prevent people from adopting them. Therefore, it is necessary to investigate how awareness affects Pakistani university students' behavioral intentions regarding cryptocurrency use. As a result, it is stated:

H4: Behavioral intention to utilize cryptocurrencies is positively impacted by awareness.

Perceived enjoyment

According to (Sagheer et al., 2022) perceived enjoyment is the conviction that utilizing cryptocurrency is enjoyable and results in contentment and happiness. Complex new technology and difficulty in its use have been linked to cryptocurrency. Nevertheless, there was still insufficient empirical research on cryptocurrency, particularly those that used DIT and TRA. According to pertinent research, (Sagheer et al., 2022) found that felt enjoyment positively impacted perceived ease of use, which in turn positively impacted attitudes and intentions to use cryptocurrency. Furthermore, it seems that the discomfort aspect prevented people from using cryptocurrency (Katte, 2024). Additionally, it was discovered that using cryptocurrency is hampered by its complexity. The following theories were established:

H5: Perceived enjoyment has a significant positive effect on behavioral intention to utilize cryptocurrencies.

Financial Literacy

Financial literacy is the ability of an individual to make financial decisions that are in their best interests (Lusardi & Messy, 2023). In this study, financial literacy is defined as the knowledge a person needs to comprehend the information that cryptocurrencies may offer. Numerous financial decisions are influenced by financial literacy. One digital technology used in financial transactions is cryptocurrency. As a result, a person's decision to embrace cryptocurrencies will be influenced by both the features of the technology and their level of financial understanding. It might be argued that a person's degree of financial literacy affects how well they understand and value the potential benefits of cryptocurrencies (Anas et al., 2024).

High financial literacy has been found to support people's choices about financial alternatives, including the use of cryptocurrencies (Lusardi & Messy, 2023), but low financial literacy undermines those choices. People with higher financial literacy may be more inclined to utilize cryptocurrencies

than those with lower financial literacy because they can absorb cryptocurrency information faster and make better judgments (Jones et al., 2024). Hence, we propose that:

H6: Financial literacy has a significant positive impact on behavior intention to adopt crypto trading.

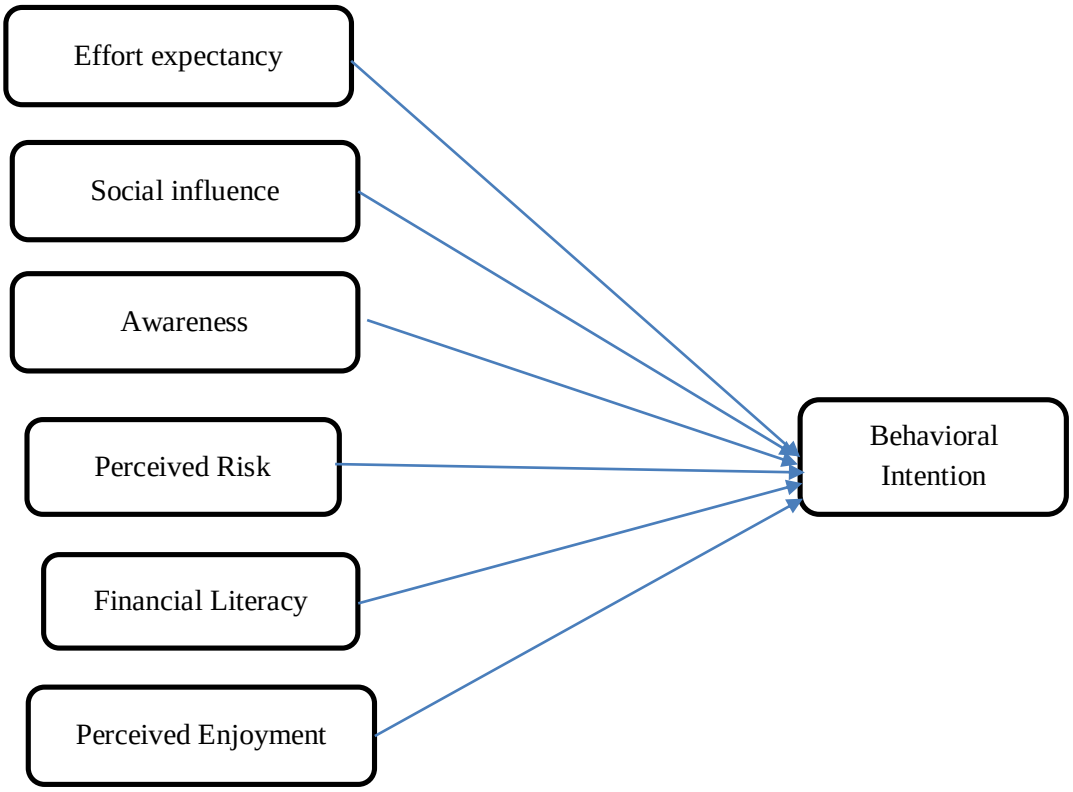

Figure 1: Conceptual Framework

Methodology

The study verified its conceptual model and evaluated hypotheses using data from a questionnaire issued to participants over the internet. The study's participants were 20 to 29 years old and frequent Facebook users. Pakistan has over 60.4 million Facebook users, the majority of them are aged 20-29 (Zafar, 2024). Of the 1430 Facebook users who received the survey link, 540 replied. The study employed an online survey to obtain quantitative data for replicability and effectiveness.

The survey URL was circulated on Facebook, and many people completed it. Using Facebook, the most popular social media platform among Pakistani, was beneficial for data collection since it allowed for more reach (Author, 2025). The survey was hosted on the Google Drive platform. The study's purpose was explained to the willingly participating individuals. Participants were informed of their anonymity and the option to withdraw from the study at any moment (Dahal, 2024).

The study employed a random sampling procedure, ensuring that each individual in the population had a fair chance of being picked. As a result, 67% of participants responded. Due to inception, 28 replies were deleted, leaving 506 responses for analysis.

The questionnaire had 43 items that examined the components of the proposed conceptual model. All pieces were based on prior comparable works. (Almajali et al., 2022) developed items to capture the perceived risk and enjoyment dimensions. (Ghazanfar Ali Abbasi et al., 2021) provided items to represent the social influence construct; (Almuraqab, 2019) provided items to represent the awareness

construct; (Ji-Xi et al., 2021) provided items to represent financial literacy and effort expectancy constructs; and (Almajali et al., 2022) provided items to represent the behavioral intention construct. The questionnaire comprised five closed-ended questions about respondents' demographic attributes. The survey asked respondents about their demographics, including age, gender, income, education level, and internet usage history.

To strengthen methodological rigor, the online survey method was selected because it allows access to a large and geographically dispersed group of young, tech-savvy respondents who are most likely to engage with cryptocurrency. This ensures that the data collected reflects the demographic most relevant to early adoption. Furthermore, SEM (Structural Equation Modeling) was chosen as the analysis technique because it is well-suited for testing complex causal relationships between multiple latent constructs simultaneously, which aligns with the extended UTAUT framework adopted in this study. SEM not only validates measurement models but also captures both direct and indirect effects, offering stronger explanatory power compared to simple regression or correlation techniques.

Data analysis and results

Overall, 506 valid surveys were conducted among consumers who either trade bitcoin or know someone who does so in their social circle. According to the data obtained, 69% of respondents were men and 87% were between the ages of 20 and 29. The research revealed that most respondents (36%) earned between 31k and 40k PKR per month, with 32% earning more than 41k PKR per month. When it comes to education, the majority (57% of respondents) are pursuing a bachelor's degree, and the majority (82% of respondents) have more than three years of online purchasing experience, which is regarded acceptable. Table 2 displays the characteristics of the respondents (N=506).

Table 1: Characteristics of the respondents. (N = 506)

Characteristics	**Number**	**Percentage**
Gender - Male	347	69%
Gender - Female	159	32%
Gender - Total	**506**	**100%**
Age - Less than 20	35	7%
Age - 20-29	440	87%
Age - 31-40	30	6%
Age - Total	**506**	**100%**
Education level - High school or less	64	13%
Education level - College degree	153	30%
Education level – Enrolled in Bachelors degree	288	57%
Education level - Total	**506**	**100%**
Income per month - 20k-30k	163	32%
Income per month - 31k-40k	182	36%
Income per month - More than 41K	161	32%
Income per month - Total	**506**	**100%**
Online buying experience - Less than 1 year	28	6%
Online buying experience - 1-3 years	61	12%
Online buying experience - More than 3 years	417	82%

Online buying **experience - Total**	**506**	**100%**

Statistical analysis

The reliability of the scales was evaluated using Cronbach's alpha, CR, and AVE of the latent components (see Table 2). The findings indicate that the Cronbach alpha of all latent variables was higher than the suggested cutoff value of 0.70, namely between 0.73 to 0.84. In the meanwhile, the study construct' acquired CR is above the 0.70 threshold (Hair et al., 2020). Table 2 demonstrates that Behavioral intention at 1.02 produced the highest CR value. Additionally, it displays AVE values that are greater than the threshold value of 0.50, ranging from 0.50 to 0.63.

Table 2

	Cronbach's alpha	CR	AVE
Awareness	0.782	0.793	0.603
Effort expectancy	0.734	1.178	0.509
Social Influence	0.732	0.766	0.533
Perceieved Enjoyment	0.843	0.874	0.556
Perceived Risk	0.772	0.785	0.530
Behavioral intention	0.799	1.024	0.635
Financial Literacy	0.840	0.834	0.531

Fornell-Larcker criterion

Table 3 shows the findings of the Fornell-Larcker criteria, which was used to test discriminant validity among constructs. The square root of the AVE for each concept exceeds the corresponding inter-construct correlations, indicating appropriate discriminant validity. The square roots of AVE are 0.776 for awareness, 0.703 for effort expectancy, 0.713 for social influence, 0.720 for perceived enjoyment, 0.730 for perceived risk, 0.746 for behavioural intention, and 0.728 for financial literacy. In each example, the diagonal value outperforms the off-diagonal correlation values in the corresponding rows and columns. For example, Awareness (0.776) has a greater internal consistency than its greatest correlation with Perceived Risk (0.643). Similarly, Behavioural Intention (0.746) retains higher discriminant validity than its associations with other dimensions. As a result, the findings demonstrate that each concept in the research is empirically unique from the others and meets the Fornell-Larcker criterion for discriminant validity.

Table 3: Fornell-Larcker criterion

Awareness	0.776						
Effort expectancy	0.216	0.703					
Social Influence	0.400	0.090	0.713				
Perceieved Enjoyment	0.606	0.088	0.315	0.720			
Perceived Risk	0.643	0.105	0.478	0.440	0.730		
Behavioral intention	0.524	0.062	0.324	0.462	0.550	0.746	
Financial Literacy	0.389	0.118	0.365	0.359	0.424	0.562	0.728

Hypothesis testing

Table 4 shows the hypothesis testing findings, which look at the impact between numerous independent factors and behavioral intention. All predicted routes are statistically significant at the 0.05 level, as evidenced by T-statistics more than 1.96 and P-values less than 0.05. Awareness significantly increases

the chance of engaging in a behavior (β = 0.267, T = 2.753, P = 0.003). Effort Expectancy has a positive impact on behavioral intention (β = 0.304, T = 2.432, P = 0.005), showing that when users perceive a platform as easy to use, their desire to adopt it increases. Perceived enjoyment had the biggest positive effect on behavioral intention (β = 0.392, T = 3.281, P = 0.001), indicating that users' enjoyment strongly influences their intents. Social influence has a positive impact on behavioral intention (β = 0.274, T = 2.246, P = 0.002), indicating how peer and social influences influence behavior. Financial literacy had a positive influence on behavioral intention (β = 0.270, T = 2.523, P = 0.002), indicating that persons with higher levels of financial literacy are more likely to engage in online shopping. Perceived risk, although being seen as a barrier, exhibits a positive and significant influence on behavioral intention (β = 0.291, T = 2.910, P = 0.003). This suggests that people who perceive and manage risk effectively are nevertheless motivated to engage in the behavior. Overall, the data substantially supports all of the assumptions.

Table 4: Hypothesis Assessment

Hypothesis	O	M	STDEV	T statistics	P values
Awareness -> Behav	0.267	0.216	0.097	2.753	0.003
Effort -> Behav	0.304	0.305	0.125	2.432	0.005
Enjoyment -> Behav	0.392	0.324	0.089	3.281	0.001
Influence -> Behav	0.274	0.236	0.122	2.246	0.002
Literacy -> Behav	0.270	0.244	0.107	2.523	0.002
Risk -> Behav	0.291	0.255	0.100	2.910	0.003

Discussion

This research was aimed at examining the elements that influence behavioural intention to online behaviour, as well as the functions of awareness, expectancy of effort, perceived enjoyment, social influence, financial literacy, and perceived risk. The results of the hypothesis testing indicate that all the hypothesized associations are positive and statistically significant. The behavioural intention was considerably enhanced by awareness, which is in line with previous studies (Liang et al., 2024), as consumer cognition is seen to be the most applicable in embracing new technologies and online platforms. The more awareness people have, the more they will understand the benefits and risks of using the product, which will make them more likely to use it. A recently established financial instrument, cryptocurrency has brought a paradigm shift to the manner in which we understand and conduct monetary transactions. These digital assets have been the cause of concerns not only regarding technological complications, but also awareness, usability, and trust since their advent (Kayani and Hasan, 2024).

The behavioural intention was also linked substantially with the expectation of effort (0.304, p = 0.005). The result is consistent with the UTAUT paradigm which also mentions perceived ease of use as one of the dominant predictors of intention (Xue et al., 2024). The same has been noted in studies conducted on online buying and adoption of mobile banking and this indicates that the usability of the platform enhances the user acceptability. This implies that the ease of use of cryptocurrency will result in more people adopting it. The conclusion is aligned with the previous studies, including (Khan et al., 2019) that proposes that in case bitcoin is inconvenient to utilize, the intent to act diminishes.

The strongest predictor of behavioral intention was perceived enjoyment (= 0.392, = 0.001). This observation corroborates the earlier studies (Teo and Noyes, 2011), findings of which indicated that pleasure is a significant factor in the change of perception of consumers as far as online involvement is concerned. The results suggest that emotional pleasure is an important driving force of behavioural intentions in online contexts as well as functionality. Perceived satisfaction as the sensation of joy and entertainment received during the activity or the possibility of high profits may be caused by market swings or intensive earnings (Steinmetz et al., 2021b). Other types of trading have features of

gamification, and they can make the process a lot more entertaining and positively influence attitudes to investing.

The study conducted earlier established a significant positive impact of social influence on behavioral intention (β = 0.274, p = 0.002) which validates the role of societal and peer pressures. Like in the past studies on adoption of e-commerce, social norms and peer evaluations still have a role to play in influencing consumers to adopt online activities. The researchers have discovered that the perceptions of close and loved ones, such as friends and relatives on the benefits of bitcoin can determine how people intend to use it (Kim, 2021). The willingness of people to use cryptocurrencies can be boosted by spreading information with friends and family about the advantages of using it.

There is a positive relationship between the financial literacy and behavioral intention (= 0.270, = 0.002). This finding aligns with (Lusardi and Messy, 2023), who discovered that individuals who have higher financial literacy have high chances of making informed financial choices even in purchasing online. The results highlight the usefulness of consumer education in enhancing online participation. Financial literacy could assist people to examine and make informed choices concerning the adoption of technology, such as cryptocurrencies. Financial literacy can be improved in order to make better choice about bitcoin. In Pakistan, cryptocurrency enthusiasts are able to establish online forums, blogs, social networks, and websites that would facilitate the use of cryptocurrency (Rana, 2025).

Surprisingly, perceived risk contributed to behavioural intention significantly and positively (87-0.358 = 0.291, p = 0.003). Though the perceived risk was often perceived to be an obstacle to adoption in traditional theories (Gaube et al., 2019), recent studies have proven that individuals adopt in spite of risk, particularly when they feel that the benefits would be more than the uncertainties (Tomova et al., 2021). Based on the results of this research, the users who are informed about potential dangers, yet, possess some type of coping strategies (such as having a safe payment system and the knowledge of consumer rights) tend to participate in online behaviour more frequently (El Asam and and Katz, 2018).

Contributions of the Study

This study makes multiple contributions to the existing accumulation of research on the adoption of cryptocurrency. It is empirically one of the earliest large-scale studies (N= 506) of the determinants of cryptocurrency adoption in Pakistan, a poorly studied emerging economy. Utilizing and expanding the UTAUT framework, the study brings theoretical contributions by including awareness, financial literacy, perceived enjoyment, and perceived risk as other predictors of behavioral intention. In a methodological perspective, Structural Equation Modeling (SEM) has a higher level of rigor because it provides the opportunity to test a set of direct effects on the behavioral intention simultaneously, and this approach increases the explanatory level of the model. Such contributions are relevant to the study not only to theory-building in literature on technology adoption but also to policy-makers and practitioners who might want to develop effective policies to promote safe and inclusive cryptocurrency adoption in Pakistan.

Conclusion

This paper looked at the key determinants of the behavioral intentions of the consumers to adopt cryptocurrency with respect to their awareness, expectations of effort, perceived enjoyment, social influence, financial literacy, and perceived risk. The results affirmed that all hypotheses put forward were significant in the first place indicating that both cognitive and emotional variables are relevant in influencing behavioral intentions towards adoption of cryptocurrencies. Among them, the perceived enjoyment was the most predictive and this implies that the feeling that comes along the online activity has a significant impact on the user engagement.

It was discovered that the effects of awareness, expectancy to exert effort, social influence and financial literacy have a significant positive effect, which confirms the previous studies and emphasizes the

importance of consumer education, perceived ease of use, and social processes on the implementation of new technologies. Surprisingly, perceived risk which has been viewed as a negative factor also positively influenced behavioral intention. This implies that the more consumers are informed, the more they tend to negotiate, and deal with risks instead of risk avoidance.

Overall, such results add to the literature on consumer behaviors on the Internet and provide meaningful information to policymakers, marketers, and online platforms that need to increase the level of user adoption. Moderating variables that include trust, platform security and demographic differences should be examined in future research to come up with more detailed report on behavioral intentions patterns.

Practical Implications

The analysis provides practical and theoretical information to cryptocurrency users, service providers, and the Pakistani government. People can become more likely to use cryptocurrency to conduct financial transactions because making it safer and more convenient can make it easier (Ghosh et al., 2020). The results of this study may influence more individuals to use cryptocurrencies in making financial transactions. This fact can enable the estimation of future thoughts and actions of potential cryptocurrency users. It also helps to develop specific regulations and campaigns that will be able to induce interest in technology. Legal, economic, and environmental impacts of using bitcoin both in the short term and long term will be discussed.

References

Alfawareh, F. S., Al-Kofahi, M., Johari, E. E. C., & Chai-Aun, O. (2024). Digital payments, ownership structure, and bank performance: Insights from Jordan. *International Journal of Bank Marketing*, *43*(2), 262–291. https://doi.org/10.1108/IJBM-01-2024-0062

Alkharafi, N., & Alsabah, M. (2025). Globalization: An Overview of Its Main Characteristics and Types, and an Exploration of Its Impacts on Individuals, Firms, and Nations. *Economies*, *13*(4), Article 4. https://doi.org/10.3390/economies13040091

Almajali, D. A., Masa'Deh ,Ra'Ed, & and Dahalin, Z. M. d. (2022). Factors influencing the adoption of Cryptocurrency in Jordan: An application of the extended TRA model. *Cogent Social Sciences*, *8*(1), 2103901. https://doi.org/10.1080/23311886.2022.2103901

Almuraqab, N. A. S. (2019). *Predicting determinants of the intention to use digital currency in the UAE: An empirical study—Saif Almuraqab—2020—THE ELECTRONIC JOURNAL OF INFORMATION SYSTEMS IN DEVELOPING COUNTRIES - Wiley Online Library*. https://onlinelibrary.wiley.com/doi/full/10.1002/isd2.12125?msockid=3dfb9353aec8638d358b87b7afad62d6

Alomari, A. S. A., & Abdullah, N. L. (2023). Factors influencing the behavioral intention to use Cryptocurrency among Saudi Arabian public university students: Moderating role of financial literacy. *Cogent Business & Management*, *10*(1), 2178092. https://doi.org/10.1080/23311975.2023.2178092

Anas, M., Shahzad, S. J. H., & Yarovaya, L. (2024). The use of high-frequency data in cryptocurrency research: A meta-review of literature with bibliometric analysis. *Financial Innovation*, *10*(1), 90. https://doi.org/10.1186/s40854-023-00595-y

Author, G. (2025, February 12). *How Facebook Usage Is Changing in Pakistan: A Digital Shift*. ProPakistani. https://propakistani.pk/2025/02/12/how-facebook-usage-is-changing-in-pakistan-a-digital-shift/

Birnbaum, D. (2024). *What Is Bitcoin And How Does It Work? A Guide in April 2025*. Forbes. https://www.forbes.com/sites/digital-assets/article/what-is-bitcoin-and-how-does-it-work/

Bommer, W. H., Milevoj, E., & Rana, S. (2023). The intention to use cryptocurrency: A meta-analysis of what we know. *Emerging Markets Review*, *55*, 100962.

https://doi.org/10.1016/j.ememar.2022.100962

Çalışkan, K., & Turan, A. H. (2025). Factors influencing blockchain-based cryptocurrency adoption: Empirical evidence from an emerging economy. *The Bottom Line*, *ahead-of-print*(ahead-of-print). https://doi.org/10.1108/BL-11-2024-0212

Dahal, B. (2024). Participants' Right to Withdraw from Research: Researchers' Lived Experiences on Ethics of Withdrawal. *Journal of Academic Ethics*, *22*(1), 191–209. https://doi.org/10.1007/s10805-024-09513-y

El Asam, A., & and Katz, A. (2018). Vulnerable Young People and Their Experience of Online Risks. *Human–Computer Interaction*, *33*(4), 281–304. https://doi.org/10.1080/07370024.2018.1437544

England, J. (2023, April 24). *Financial Inclusion: Cryptocurrency and DeFi for the Unbanked*. https://fintechmagazine.com/articles/crypto-regulations-and-building-financial-inclusion

García-Monleón, F., Erdmann, A., & Arilla, R. (2023). A value-based approach to the adoption of cryptocurrencies. *Journal of Innovation & Knowledge*, *8*(2), 100342. https://doi.org/10.1016/j.jik.2023.100342

Gaube, S., Lermer, E., & Fischer, P. (2019). The Concept of Risk Perception in Health-Related Behavior Theory and Behavior Change. In M. Raue, B. Streicher, & E. Lermer (Eds.), *Perceived Safety: A Multidisciplinary Perspective* (pp. 101–118). Springer International Publishing. https://doi.org/10.1007/978-3-030-11456-5_7

Ghazanfar Ali Abbasi, Mahavithya Jagaveeran, & Yen-Nee Goh. (2021). The impact of type of content use on smartphone addiction and academic performance: Physical activity as moderator | Request PDF. *ResearchGate*. https://doi.org/10.1016/j.techsoc.2020.101521

Ghosh, A., Gupta, S., Dua, A., & Kumar, N. (2020). Security of Cryptocurrencies in blockchain technology: State-of-art, challenges and future prospects. *Journal of Network and Computer Applications*, *163*, 102635. https://doi.org/10.1016/j.jnca.2020.102635

Gidron, Y. (2013). Perceived Risk. In M. D. Gellman & J. R. Turner (Eds.), *Encyclopedia of Behavioral Medicine* (pp. 1453–1453). Springer. https://doi.org/10.1007/978-1-4419-1005-9_1554

Gil-Cordero, E., Ledesma-Chaves, P., Sánchez, R. A., & Mariano, A. M. (2024). Crypto-wallets revolution! Key factors driving behavioral intention to adopt the Coinbase Wallet using mixed PLS-SEM/fsQCA methodology in the Spanish environment. *International Journal of Bank Marketing*, *42*(3), 536–570. https://doi.org/10.1108/IJBM-01-2023-0035

Goorha, P., & Potts, J. (2016). Awareness in innovators: From 'outside the box' to 'inside the bubble.' *Journal of Global Entrepreneurship Research*, *6*(1), 15. https://doi.org/10.1186/s40497-016-0058-7

Hair, J. F., Howard, M. C., & Nitzl, C. (2020). Assessing measurement model quality in PLS-SEM using confirmatory composite analysis. *Journal of Business Research*, *109*, 101–110. https://doi.org/10.1016/j.jbusres.2019.11.069

Hasan, M., Naeem, M. A., Arif, M., & Yarovaya, L. (2021). Higher moment connectedness in cryptocurrency market. *Journal of Behavioral and Experimental Finance*, *32*, 100562. https://doi.org/10.1016/j.jbef.2021.100562

Im, I., Kim, Y., & Han, H.-J. (2008). The effects of perceived risk and technology type on users' acceptance of technologies. *Information & Management*, *45*(1), 1–9. https://doi.org/10.1016/j.im.2007.03.005

Jariyapan, P., Mattayaphutron, S., Gillani, S. N., & Shafique, O. (2022). Factors Influencing the Behavioural Intention to Use Cryptocurrency in Emerging Economies During the COVID-19 Pandemic: Based on Technology Acceptance Model 3, Perceived Risk, and Financial Literacy. *Frontiers in Psychology*, *12*. https://doi.org/10.3389/fpsyg.2021.814087

Ji-Xi, J. T., Salamzadeh, Y., & Teoh, A. P. (2021). Behavioral intention to use cryptocurrency in Malaysia: An empirical study. *The Bottom Line*, *34*(2), 170–197. https://doi.org/10.1108/BL-08-2020-0053

Jones, M., Luu, T. (Jack), & Samuel, B. (2024). The interdependence of financial literacy and crypto

literacy. *Economics Letters*, *239*, 111737. https://doi.org/10.1016/j.econlet.2024.111737

Katte, S. (2024). *Crypto adoption still stunted by lack of technical literacy*. Cointelegraph. https://cointelegraph.com/news/crypto-adoption-lack-technical-literacy

Kayani, U., & Hasan, F. (2024). Unveiling Cryptocurrency Impact on Financial Markets and Traditional Banking Systems: Lessons for Sustainable Blockchain and Interdisciplinary Collaborations. *Journal of Risk and Financial Management*, *17*(2), Article 2. https://doi.org/10.3390/jrfm17020058

Khan, M. A., Zubair, S. S., & Malik, M. (2019). An assessment of e-service quality, e-satisfaction and e-loyalty: Case of online shopping in Pakistan. *South Asian Journal of Business Studies*, *8*(3), 283–302. https://doi.org/10.1108/SAJBS-01-2019-0016

Kim, M. (2021). A psychological approach to Bitcoin usage behavior in the era of COVID-19: Focusing on the role of attitudes toward money. *Journal of Retailing and Consumer Services*, *62*, 102606. https://doi.org/10.1016/j.jretconser.2021.102606

Kotamena, F., Sinaga, P., Sudibjo, N., & Hidayat, D. (2024). Student use behavior in determining majors: Is it determined by self-congruity, social influence, information usefulness, through mediating information adoption, and behavioral intention. *Computers in Human Behavior Reports*, *14*, 100383. https://doi.org/10.1016/j.chbr.2024.100383

Kulviwat, S., Bruner, G. C., & Al-Shuridah, O. (2009). The role of social influence on adoption of high tech innovations: The moderating effect of public/private consumption. *Journal of Business Research*, *62*(7), 706–712. https://doi.org/10.1016/j.jbusres.2007.04.014

Li, C., Khaliq, N., Chinove, L., Khaliq, U., Popp, J., & Oláh, J. (2023). Cryptocurrency Acceptance Model to Analyze Consumers' Usage Intention: Evidence From Pakistan. *SAGE Open*, *13*(1), 21582440231156360. https://doi.org/10.1177/21582440231156360

Liang, H., Wu, Z., & Du, S. (2024). Study on the impact of environmental awareness, health consciousness, and individual basic conditions on the consumption intention of green furniture. *Sustainable Futures*, *8*, 100245. https://doi.org/10.1016/j.sftr.2024.100245

Lopez, S. (2023, July 31). Analyzing the Social Impact of Cryptocurrencies. *Coinmonks*. https://medium.com/coinmonks/analyzing-the-social-impact-of-cryptocurrencies-c373b6105989

Lusardi, A., & Messy, F.-A. (2023). The importance of financial literacy and its impact on financial wellbeing. *Journal of Financial Literacy and Wellbeing*, *1*(1), 1–11. https://doi.org/10.1017/flw.2023.8

Mbatha, B. (2024). Diffusion of Innovations: How Adoption of New Technology Spreads in Society. In D. Ocholla, O. B. Onyancha, & A. O. Adesina (Eds.), *Information, Knowledge, and Technology for Teaching and Research in Africa: Human Machine Interaction and User Interfaces* (pp. 1–18). Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-60267-2_1

Mustafa, F., Mordi, C., & Elamer, A. A. (2024). Green gold or carbon beast? Assessing the environmental implications of cryptocurrency trading on clean water management and carbon emission SDGs. *Journal of Environmental Management*, *367*, 122059. https://doi.org/10.1016/j.jenvman.2024.122059

Nazir, M. A., Roomi, M. A., & Khan, M. R. (2025). Entrepreneurial firms in the crypto era: Adoption trajectories and innovation dynamics. *Journal of Small Business and Enterprise Development*, *32*(8), 18–53. https://doi.org/10.1108/JSBED-11-2024-0580

Nseke, P. (2018). How Crypto-Currency Can Decrypt the Global Digital Divide: Bitcoins a Means for African Emergence. *International Journal of Innovation and Economic Development*, *3*(6), 61–70.

Quan, W., Moon, H., Kim, S. (Sam), & Han, H. (2023). Mobile, traditional, and cryptocurrency payments influence consumer trust, attitude, and destination choice: Chinese versus Koreans. *International Journal of Hospitality Management*, *108*, 103363. https://doi.org/10.1016/j.ijhm.2022.103363

Qureshi, M. (2025, January 9). *Asia Leads Global Crypto Adoption with 60% of Global Users*.

TheStreet Crypto: Bitcoin and Cryptocurrency News, Advice, Analysis and More. https://www.thestreet.com/crypto/markets/asia-leads-global-crypto-adoption-with-60-of-global-users

Rana, S. (2025, April 27). *Pakistan inches closer to entering crypto world*. The Express Tribune. https://tribune.com.pk/story/2542523/pakistan-inches-closer-to-entering-crypto-world

Sagheer, N., Khan, K. I., Fahd, S., Mahmood, S., Rashid, T., & Jamil, H. (2022). Factors Affecting Adaptability of Cryptocurrency: An Application of Technology Acceptance Model. *Frontiers in Psychology*, *13*. https://doi.org/10.3389/fpsyg.2022.903473

Shariff, J. A. (2025). *Turning Crypto Ambitions Into Realities*. Aurora Magazine. https://aurora.dawn.com/news/1145493

Shin, D., & Rice, J. (2022). Cryptocurrency: A panacea for economic growth and sustainability? A critical review of crypto innovation. *Telematics and Informatics, 71*, 101830. https://doi.org/10.1016/j.tele.2022.101830

Steinmetz, F., von Meduna, M., Ante, L., & Fiedler, I. (2021a). Ownership, uses and perceptions of cryptocurrency: Results from a population survey. *Technological Forecasting and Social Change*, *173*, 121073. https://doi.org/10.1016/j.techfore.2021.121073

Steinmetz, F., von Meduna, M., Ante, L., & Fiedler, I. (2021b). Ownership, uses and perceptions of cryptocurrency: Results from a population survey. *Technological Forecasting and Social Change*, *173*, 121073. https://doi.org/10.1016/j.techfore.2021.121073

Suhrab, M., Chen, P., & Ullah, A. (2024). Digital financial inclusion and income inequality nexus: Can technology innovation and infrastructure development help in achieving sustainable development goals? *Technology in Society*, *76*, 102411. https://doi.org/10.1016/j.techsoc.2023.102411

Sukumaran, S., Bee, T. S., & Wasiuzzaman, S. (2022). Cryptocurrency as an Investment: The Malaysian Context. *Risks*, *10*(4), Article 4. https://doi.org/10.3390/risks10040086

Tadpatrikar, A., Sharma, M. K., & Viswanath, S. S. (2021). Influence of technology usage on family communication patterns and functioning: A systematic review. *Asian Journal of Psychiatry*, *58*, 102595. https://doi.org/10.1016/j.ajp.2021.102595

Tamilmani, K., Rana, N. P., Wamba, S. F., & Dwivedi, R. (2021). The extended Unified Theory of Acceptance and Use of Technology (UTAUT2): A systematic literature review and theory evaluation. *International Journal of Information Management*, *57*, 102269. https://doi.org/10.1016/j.ijinfomgt.2020.102269

Teo, T., & Noyes, J. (2011). An assessment of the influence of perceived enjoyment and attitude on the intention to use technology among pre-service teachers: A structural equation modeling approach. *Computers & Education*, *57*(2), 1645–1653. https://doi.org/10.1016/j.compedu.2011.03.002

Tomova, L., Andrews, J. L., & Blakemore, S.-J. (2021). The importance of belonging and the avoidance of social risk taking in adolescence. *Developmental Review, 61*, 100981. https://doi.org/10.1016/j.dr.2021.100981

Xue, L., Rashid, A. M., & Ouyang, S. (2024). The Unified Theory of Acceptance and Use of Technology (UTAUT) in Higher Education: A Systematic Review. *SAGE Open*, *14*(1), 21582440241229570. https://doi.org/10.1177/21582440241229570

Yue, Y., Li, X., Zhang, D., & Wang, S. (2021). How cryptocurrency affects economy? A network analysis using bibliometric methods. *International Review of Financial Analysis*, *77*, 101869. https://doi.org/10.1016/j.irfa.2021.101869

Zafar, T. (2024, December 17). *Pakistan Sees Significant Growth in Mobile Internet and Social Media Usage, PTA Reports*. TechJuice. https://www.techjuice.pk/pakistan-sees-significant-growth-in-mobile-internet-and-social-media-usage-pta-reports/