

Evaluating the social elements influencing the intention to adopt cryptocurrencies: An extension of the technology acceptance model



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ABSTRACT

This study examines the social factors that influence people's intention to adopt cryptocurrencies in the Jouf region of Saudi Arabia. The research extends the Technology Acceptance Model by including awareness, trust, and financial literacy to develop a more comprehensive framework. The study investigates how perceived usefulness, perceived ease of use, awareness, trust, and financial literacy affect individuals' intention to use cryptocurrencies. Data were collected through an online survey, and 219 responses were analyzed using SmartPLS 4 software. The results show that perceived usefulness, awareness, trust, and financial literacy significantly influence the intention to use cryptocurrencies. However, perceived ease of use does not have a significant effect on intention. These findings provide useful insights for cryptocurrency users, developers, policymakers, and regulators in Saudi Arabia by highlighting the role of social and cognitive factors in shaping cryptocurrency adoption behavior.

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1. Introduction

The growth of the Internet, technological advancements, and digital accessibility have significantly contributed to the shift from traditional cash payments to online transactions, thereby transforming the global monetary system (Hidegföldi et al., 2025). The original blockchain and cryptocurrencies date back to 2008, when Satoshi Nakamoto posted a paper on a cryptography forum entitled "Bitcoin: A peer-to-peer electronic cash system" (Arias-Oliva et al., 2019). Cryptocurrency is a digital alternative to traditional currency with a high level of security, high transaction speed, independence from financial institutions, and complete anonymity (Alomari and Abdullah, 2023). Historically, people have consistently sought better ways to manage their financial affairs. Although innovations, including credit cards and online banking, have gradually improved payment convenience, the most significant leap was marked

by the arrival of the Internet (Recskó and Aranyossy, 2024). Cryptocurrencies are one of the most significant developments in modern technology. Simultaneously, it is the basis for cryptocurrencies. Consequently, cryptocurrencies have attracted attention worldwide, creating ways to have cheap, secure, and anonymous transactions (Gil-Cordero et al., 2024; Peng et al., 2024). Although many studies have investigated why people adopt cryptocurrencies in a variety of national settings (Böhme et al., 2015), published accounts of how social factors influence behavioral intention in Saudi Arabia remain limited. To this end, this study examines the determinants of cryptocurrency adoption within Saudi Arabia's national context by incorporating Financial Literacy, Trust, and Awareness into the Technology Acceptance Model (TAM) to enhance the understanding of how both social and cognitive forces influence a person's decision-making.

2. Literature review

Research on the intention to adopt cryptocurrencies is relatively new, and researchers in this field have used many theories, such as innovation diffusion theory (IDT) (Palanisamy et al., 2025); theory of reasoned action (TRA) (Alaklabi and Kang, 2022; Almajali et al., 2022); the unified

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theory of acceptance and use of technology (UTAUT) (Alomari and Abdullah, 2023; Gil-Cordero et al., 2024; Hidegföldi et al., 2025; Li et al., 2023; McMorrow and Seyed Esfahani, 2021; Recskó and Aranyossy, 2024); the unified theory of acceptance and use of technology 2 (UTAUT2) (Kumari et al., 2023); technology acceptance model (TAM) (Arias-Oliva et al., 2019; Gil-Cordero et al., 2024; Hidegföldi et al., 2025; Janteng et al., 2024; Mnif et al., 2024; Sagheer et al., 2022; Shahzad et al., 2024); and technology acceptance model 3 (TAM3) (Jariyapan et al., 2022). To develop a conceptual framework for this study, we used the technology acceptance model (TAM) originally theorized by Davis (1989). The model suggests that when users are presented with new technology, many factors influence their decisions about how and when they will use it. These factors include perceived usefulness (PU), which refers to the notion that individuals tend to select a technology based on the effort required to use it and the benefits it offers (Janteng et al., 2024), and perceived ease of use (PEOU), which refers to the degree to which one believes that using a particular technology would be free from effort (Shahzad et al., 2024). This study chose the TAM because it is one of the most widely used models in information systems research. In technology applications, TAM is a powerful model for understanding the motivation and success of a newly introduced technology, and it explains users' acceptance of technology innovations. Cryptocurrencies are based on an open-source, public, and decentralized network; as a result, the entire transaction history is stored in a series of chains, which refer to the "Blockchain," allowing for bypassing the established banking system (Cristofaro et al., 2023). Satoshi Nakamoto first envisioned blockchain as a peer-to-peer digital commodity (cryptocurrency) trading system. Blockchain-based financial transactions can be distinguished into three stages: the first is the initiation stage, where a customer buys and sells financial assets to access the blockchain networks; the second is the incorporation of stakeholders for the verification of financial assets; and the third is a blockchain ledger to maintain records of transactions. These stages focus on four aspects of financial transactions: asset verification, transaction record maintenance, data privacy, and transaction costs (Jariyapan et al., 2022). Cryptocurrency is a digital token that users exchange within a distributed, decentralized, peer-to-peer virtual network. Each cryptocurrency transaction is triggered by a private key that proves the ownership of cryptocurrencies and is validated using secure cryptographic algorithms (Alaklabi and Kang, 2022).

The massive adoption of cryptocurrency by Saudi Arabian users will help the country in its Vision 2030 of shifting from an economy based on oil to one based on knowledge before the year 2030. However, cryptocurrency use is low among users from developing nations, such as Saudi Arabia (Alomari and Abdullah, 2023). In the Kingdom of Saudi Arabia, there are limited studies on cryptocurrencies.

Alomari and Abdullah (2023) examined awareness and financial literacy as a moderator variable, and Alaklabi and Kang (2022) explored the extended TRA model for the assessment of factors driving individuals' behavioral intention to use cryptocurrency. Therefore, this study focuses on the social factors that affect the adoption of cryptocurrencies to enhance the behavioral intention to use them. According to previous studies, Arias-Oliva et al. (2019) analyzed the key factors for the successful development of a cryptocurrency from a consumer behavior perspective in Spain. They focused on college-educated adults with a basic grasp of the Internet. The proposed model was based on variables from the Technology Acceptance Model and added perceived risk and financial literacy. The results indicate that variable financial literacy has no significant influence. Sagheer et al. (2022) investigated the effect of technology awareness on the behavioral intention of cryptocurrency users through perceived factors (Usefulness and ease of use). The results revealed that perceived factors (usefulness and ease of use) mediated the relationship between technology awareness and behavioral intention. The study focuses on the Z generation, and the sample mainly consists of graduates and highly educated individuals whose behavior may differ from the general population.

Gil-Cordero et al. (2024) examined the behavioral intention to adopt crypto-wallets by Spanish users. This study applies a new predictive model based on the technology acceptance model 2, unified theory of acceptance and use of technology, theory of perceived risk, and commitment trust theory. The results showed that all the proposed variables (e-WOM, web/app quality, perceived risk, performance expectancy, and trust) had a direct and positive influence on the intention to use a crypto-wallet. Hidegföldi et al. (2025) examined the factors influencing cryptocurrency adoption using TAM, UTAUT, and IDT theories. A predictive model was developed and tested by incorporating social influences, facilitating conditions, trust, perceived risk, and awareness as external variables to the original TAM model. The findings reveal that social influence, facilitating conditions, perceived usefulness, and awareness are the most significant determinants of cryptocurrency adoption rates.

Nevertheless, previous studies have limitations because they focus on a very specific population segment (college-educated). In addition, few studies have been conducted in Saudi Arabia that integrate social factors (awareness, trust, and financial literacy) into a single model. Our study aims to address this gap by incorporating these variables into TAM and applying it in Saudi Arabia.

3. Hypothesis development and conceptual model

This study extended the Technology Acceptance Model by adding awareness, trust, and financial literacy to the traditional constructions of perceived

usefulness and perceived ease of use. Our proposed model (Fig. 1) posits that these five constructs exert a significant influence on individuals' behavioral intention (BI) to adopt cryptocurrency.

3.1. Perceived usefulness (PU)

As one of the most important concepts in technology-based marketing, "PU" has received considerable attention. PU refers to the degree to which users perceive that they can achieve their tasks with the software product in question, which need not always be measured by asking them directly. Over 30 studies have clarified and improved this understanding (Cheung and Vogel, 2013). In the cryptocurrency world, perceived usefulness refers to whether people perceive the use of digital money as efficient in terms of time and effort, practical for their current needs, and generally beneficial to them. In prior studies, perceived usefulness was identified as a strong predictor of adoption intention (Alomari and Abdullah, 2023; Jariyapan et al., 2022; Mnif et al., 2024). Hence, we propose the following hypothesis:

H1: Perceived Usefulness has a positive and significant impact on the behavioral intention to use cryptocurrency.

3.2. Perceived ease of use (PEOU)

Perceived ease of use is the degree to which a person believes that using a particular system is effortless and clear (Davis, 1989). This usually means evaluating the usability of cryptocurrency platforms and applications that could inspire people to utilize them. The literature on TAM supports the notion that perceived ease of use is a determinant of adoption (Alomari and Abdullah, 2023; Sagheer et al., 2022). Some individuals contend that this may only represent a partial view when considered alongside perceived usefulness (PU). Therefore, we propose the following hypothesis:

H2: Perceived Ease of Use has a positive and significant impact on the behavioral intention to use cryptocurrency.

3.3. Awareness (AW)

Awareness refers to the extent to which individuals understand the existence, features, and implications of cryptocurrencies (Kumari et al., 2023). As awareness is a precursor to adoption in innovation diffusion theory, it plays a vital role in influencing acceptance of new technologies. Prior studies confirm that higher awareness enhances users' readiness to engage with cryptocurrencies (Alomari and Abdullah, 2023; Shahzad et al., 2024). Hence, we propose the following hypothesis:

H3: Awareness has a positive and significant impact on the behavioral intention to use cryptocurrency.

3.4. Trust (TR)

For transactions, trust means confidence in the reliability and integrity of a system or counterpart (Rahardja et al., 2023). With the decentralized nature of cryptocurrencies, trust in the platform's network and the basic technology underlying it is essential for their adoption. Studies have consistently emphasized trust as a foundation for reducing uncertainty and promoting adoption (García-Monleón et al., 2023; Gil-Cordero et al., 2024). Therefore, we propose the following hypothesis:

H4: Trust has a positive and significant impact on the behavioral intention to use cryptocurrencies.

3.5. Financial literacy (FL)

Financial literacy refers to the ability to manage money, make informed decisions, and evaluate risks with a reasonable degree of accuracy (Cristofaro et al., 2023; Kumari et al., 2023). In adopting cryptocurrency, financially literate individuals are better equipped to evaluate investment opportunities and associated risks. Some studies confirm this (García-Monleón et al., 2023), While others find no significant correlation (Saleh et al., 2020), and this construct should be investigated further. Therefore, we propose the following hypothesis:

H5: Financial Literacy has a positive and significant impact on the behavioral intention to use cryptocurrency.

3.6. Conceptual model

Based on the above discussion, the conceptual framework integrates traditional TAM constructs with additional social factors, including awareness, trust, and financial literacy. The model hypothesizes that these five variables jointly explain individuals' behavioral intentions to adopt cryptocurrencies.

4. Methodology

The Technology Acceptance Model (TAM) provides a well-established theoretical foundation for investigating technology adoption. To address the unique features of cryptocurrencies, this study extends the TAM by incorporating three additional constructs: awareness, trust, and financial literacy. The resulting model was employed to examine the social factors influencing the behavioral intention to adopt cryptocurrencies in the Jouf region of Saudi Arabia.

The target population consisted of all residents of the Jouf region, including students, government employees, private-sector workers, business owners, and other individuals. This region was selected because of its recent advancements in financial

technology infrastructure. Participants were required to be at least 18 years old. An online questionnaire was distributed via WhatsApp, Telegram, Messenger, Snapchat, and email until the desired sample size was reached, according to the Saudi Census. The total population of the Jouf region is approximately 595,822 people. A sample size of over 200 is considered adequate for structural

equation modelling (Civelek, 2018). Out of 387 distributed questionnaires, 219 valid responses were retained after removing incomplete or invalid entries, yielding a response rate of 56%. Thus, the final sample of 219 respondents satisfied the recommended minimum threshold for confirmatory factor analysis.

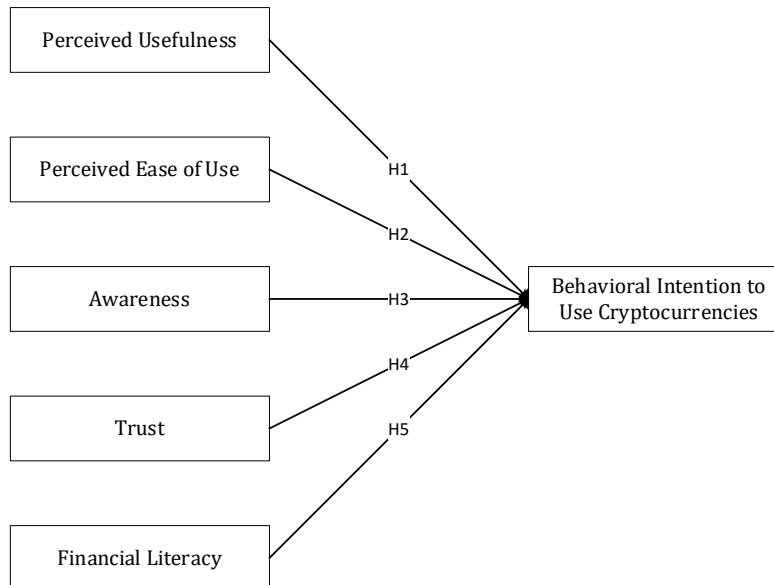


Fig. 1: Conceptual model framework

The survey instrument was developed using validated scales from prior studies, with items adapted to the context of cryptocurrency. All items were measured using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The data were analyzed using Partial Least Squares Structural Equation Modelling (PLS-SEM) with SmartPLS 4 software. PLS-SEM was chosen because it is suitable for complex models, small to medium sizes, and situations in which variables may act as both predictors and outcomes. The analysis followed a two-step approach (Hair et al., 2019).

1. Measurement Model Assessment: This was used to evaluate the reliability and validity of constructions.
2. Structural Model Assessment: to test hypotheses, assess predictive power, and examine the relationships between constructions.

Bootstrapping with 5,000 resamples was used to assess the significance of the path coefficients. Additionally, the variance inflation factor (VIF) was examined to check for multicollinearity.

5. Data analysis and findings

Partial least squares structural equation modelling, utilizing SmartPLS 4 software, was employed to evaluate the research hypotheses. This analytical approach was selected over covariance-based structural equation modelling due to its superior reliability in examining complex models

(Alomari and Abdullah, 2023). Two measurement approaches were used in the PLS-SEM analysis:

5.1. Measurement model assessment

The reliability and validity of the constructs were assessed using factor loadings, average variance extracted (AVE), Cronbach’s alpha, and composite reliability (CR) (Table 1). Fig. 2 and Table 1 show the following:

- All the factor loadings exceeded the threshold of 0.70.
- The AVE values were greater than the recommended minimum of 0.50, indicating convergent validity.
- Cronbach’s alpha and CR values were above 0.70, demonstrating internal consistency reliability (Sarstedt et al., 2021).

These results confirm that the measurement model is reliable and valid (Hair et al., 2019).

5.2. Structural model assessment

Prior to examining the hypothesized relationships, this study evaluated multicollinearity. Multicollinearity was assessed by analyzing the variance-inflation factor. As presented in Table 2, all inner values were below the established threshold of 5 (Hair et al., 2019). Thus, there is no evidence of multicollinearity.

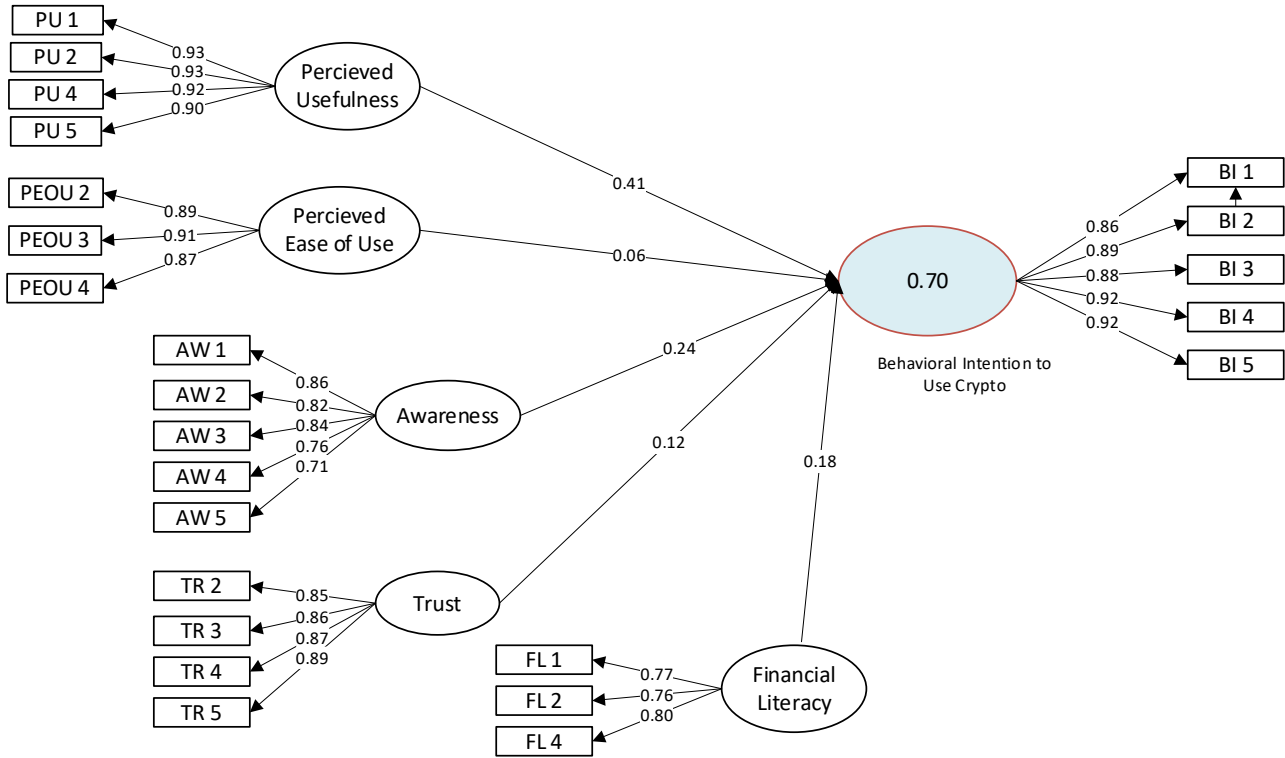


Fig. 2: Results of discriminant validity

Table 1: Shows measurement model assessment

Variable	Item	Convergent validity		Internal consistency reliability				
		Loading	AVE	Cronbach's α	CR			
Behavioral intention to use cryptocurrencies (BI)	BI1	0.86	0.80	0.94	0.95			
	BI2	0.89						
	BI3	0.88						
	BI4	0.92						
	BI5	0.92						
Perceived usefulness (PU)	PU1	0.93	0.84	0.94	0.96			
	PU2	0.93						
	PU4	0.92						
	PU5	0.90						
	PEOU2	0.89						
Perceived ease of use (PEOU)	PEOU3	0.91	0.79	0.87	0.92			
	PEOU4	0.87						
	AW1	0.86				0.64	0.86	0.90
	AW2	0.82						
AW3	0.84							
AW4	0.76							
AW5	0.71							
Trust (TR)	TR2	0.85	0.75	0.89	0.92			
	TR3	0.86						
	TR4	0.87						
	TR5	0.89						
	FL1	0.77				0.60	0.70	0.82
FL2	0.76							
FL4	0.80							
FL4	0.80							

BI: Behavioral intention to use cryptocurrencies; PU: Perceived usefulness; PEOU: Perceived ease of use; AW: Awareness; TR: Trust; FL: Financial literacy

To examine the hypothesized relationships, 5000 resamples were used in the bootstrap procedure with a one-tailed t-test (Hair et al., 2019). The findings presented in Table 2 demonstrate the outcomes of hypothesis testing. The coefficient of determination for behavioral intention to use cryptocurrencies was 0.69, indicating moderate explanatory power for the research model used in this study. Furthermore, the effect size was computed and evaluated (Alomari and Abdullah, 2023). As shown in Table 2, a blindfolding approach was used to evaluate the predictive validity of the research model. The Q2 value for business

intelligence was 0.70, indicating a moderate level of predictive relevance (Hair et al., 2019).

Fig. 3 and Table 2 indicates that the constructions examined, PU (H1, $\beta = 0.41$, $t = 5.19$); AW (H3, $\beta = 0.24$, $t = 3.02$); TR (H4, $\beta = 0.12$, $t = 2.00$); and FL (H5, $\beta = 0.18$, $t = 2.54$), were found to positively and significantly impact the behavioral intention to use cryptocurrencies. Consequently, H1, H3, H4, and H5 are supported in this study. whereas PEOU (H2, $\beta = 0.06$, $t = 0.80$) was not significant. Therefore, H2 is rejected. Please refer to Table 2, which presents additional information.

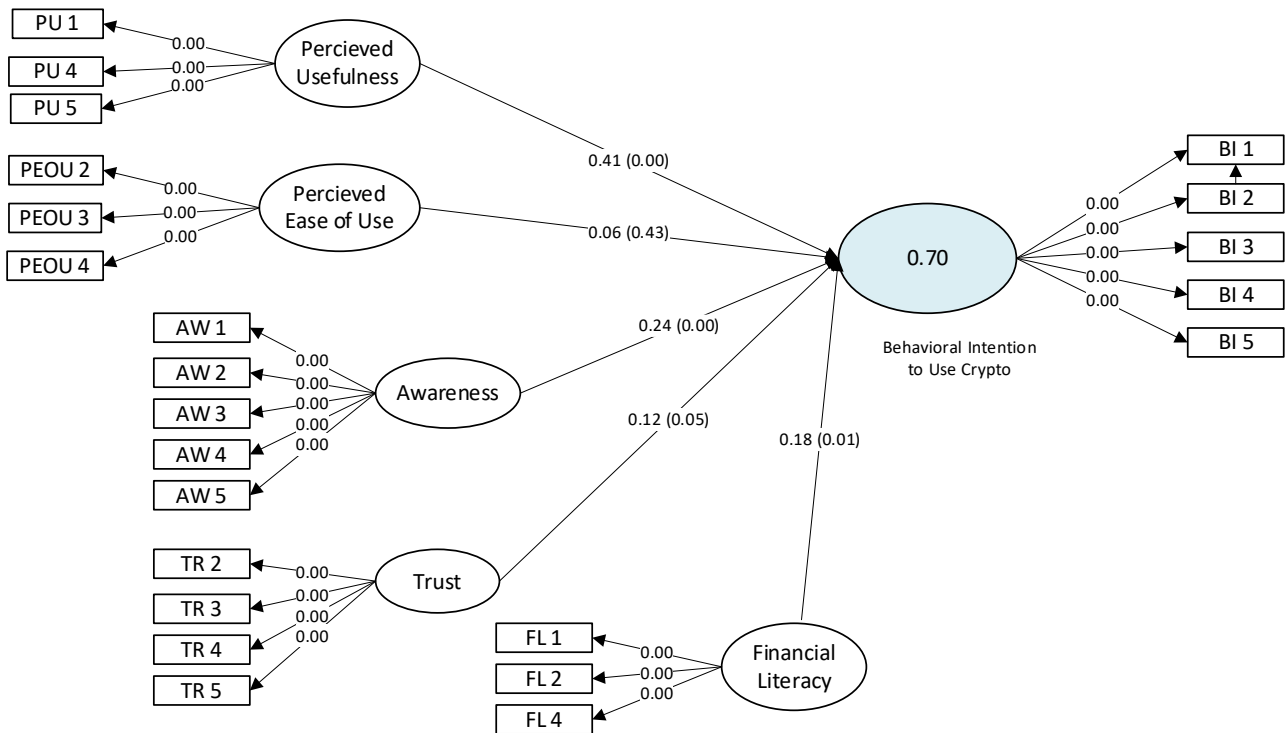


Fig. 3: Bootstrapping results of the proposed research model for hypothesis-testing validation

Table 2: The results of the path coefficient of the research hypotheses

Hypothesis	Relation	β -Value	T-Value	P-Value	Decision	F ²	VIF	R ²	Q ²
H1	PU BI	0.41	5.19	0.00	Accepted	0.18	3.03		
H2	PEOU BI	0.06	0.80	0.43	Rejected	0.00	2.23		
H3	AW BI	0.24	3.02	0.00	Accepted	0.08	2.20	0.69	0.70
H4	TR BI	0.12	2.00	0.05	Accepted	0.02	2.13		
H5	FL BI	0.18	2.54	0.01	Accepted	0.06	1.73		

6. Discussion

The main purpose of this study is to examine the social factors (awareness, trust, and financial literacy) on behavioral intention to use cryptocurrencies in the Jouf region (Saudi Arabia) using an enhanced Technology Acceptance Model. Five variables are used to predict the intention to use cryptocurrencies in the Kingdom of Saudi Arabia (KSA): Perceived usefulness (PU), perceived ease of use (PEOU), Awareness (AW), Trust (TR), and Financial Literacy (FL). The methodology is built on the PLS-SEM estimation model to check the model's validity and reliability. The analysis showed that PU, AW, TR, and FL have positive impacts on behavioral intention to use cryptocurrencies, whereas PEOU has negative impacts on behavioral intention to use cryptocurrencies.

This study hypothesized that Perceived Usefulness has a positive and significant impact on the behavioral intention to use cryptocurrency (H1), and the result is consistent with the hypothesis as well as other studies (Hidegföldi et al., 2025; Janteng et al., 2024; Mnif et al., 2024; Sagheer et al., 2022; Shahzad et al., 2024). It was hypothesized that awareness has a positive and significant impact on the behavioral intention to use cryptocurrency (H3), and the analysis result was significant; this finding aligns with those of Sagheer et al. (2022) and Hidegföldi et al. (2025). The influence of trust is significant in influencing the behavioral intention to

use cryptocurrency, which aligns with the results of Gil-Cordero et al. (2024), Hidegföldi et al. (2025), and Kumari et al. (2023). The results indicated that financial Literacy has a positive and significant impact on the behavioral Intention to use cryptocurrency, which is consistent with the results of Arias-Oliva et al. (2019) and Jariyapan et al. (2022).

However, the results of this study found that the perceived ease of use does not have a significant impact on the behavioral intention to use cryptocurrencies, which is consistent with the study of Saleh et al. (2020), but it is not consistent with many other studies (Hidegföldi et al., 2025; Janteng et al., 2024; Mnif et al., 2024; Sagheer et al., 2022; Shahzad et al., 2024).

FL significantly influenced the behavioral intention. Individuals with a solid understanding of finance can assess the risks and potential of cryptocurrencies. This finding aligns with Cristofaro et al. (2023) and García-Monleón et al. (2023), but differs from Saleh et al. (2020), who found no significant association between the two. This incongruence could be due to regional differences, where, although uncertain, people with comparatively less exposure to cryptocurrencies tend to rely more on their financial literacy levels to make adoption decisions.

In summary, the results suggest that TAM continues to play a significant role as a robust model for adoption, but that social-related factors, such as

awareness, trust, and financial knowledge, provide complementary explanatory power to TAM variables. In Saudi Arabia, stringent social norms continue to apply; however, this may change as financial innovation accelerates under Vision 2030 and is implemented on a large scale in the future. Consequently, social determinants are critical for understanding adoption behaviors.

This literature on technology adoption and studies on cryptocurrency make several important contributions. By incorporating awareness, trust, and financial literacy into the Technology Acceptance Model, this study expands its explanatory scope. The expanded framework provides a more holistic account of how social and cognitive aspects influence behavioral intention in emerging financial technologies.

While the adoption of cryptocurrencies has been explored in parts of the globe, research on Saudi Arabia has few precedents. This study provides original insights by focusing on the Jouf District as a research object and its emerging economy, characterized by rapid digital transformation under Vision 2030.

Prior research has shown inconsistent views on the effect of financial literacy on cryptocurrency adoption. Its significant impact in Saudi Arabia is supported by this study, which argues that financial knowledge is a key prop to narrow down regions that are still unfamiliar with cryptocurrency provisionally.

The results show that cryptocurrency platforms must be built in a manner that prioritizes usability, reliability, and security. By enhancing the functioning of systems and thus encouraging user trust, they become more widely accepted.

Arabia aims to leverage better public opinion-building research and regulatory measures to help build trust in the Jouf cryptocurrency system. These moves are part of a broader national economic agenda.

Before acquiring cryptocurrencies, people must boost their financial literacy and awareness. These individuals are now better equipped to make sound financial decisions and mitigate risks.

Perceived usefulness was the most critical determinant of adoption in this study. Improving transaction efficiency, cutting costs, and introducing innovative financial products will significantly increase user acceptance if purchasers perceive value in them. Furthermore, by enforcing transparency within the system, integrity will be maintained throughout, helping to secure lasting trust from potential users.

Policymakers in Saudi Arabia could:

- Campaigns focus on the utility and security features of cryptocurrencies, given the significance of PU and Trust.
- Genuine financial literacy programs should be incorporated into schools, halls of learning, and society projects so that people have a foundation

of understanding upon which they may base their financial choices.

- Instituting regulatory frameworks that encourage innovation while still protecting the consumer, thus reinforcing confidence in cryptocurrency markets.

With a better grasp of personal financial literacy, potential investors will be able to make more informed decisions regarding risk (and opportunities), avoid being misled, and receive sound financial advice. Reasoned adoption will probably not eliminate the risks associated with frenzied markets. However, it may help rein in their vagaries while maximizing a participant's benefits from participating in digital financial ecosystems.

Although this study provides valuable information about how social factors play into the adoption of cryptocurrencies in Saudi Arabia, we must recognize that there are many restrictions.

First, the data used in this study were obtained only from Jouf. Even if investment in technology has made its way into this region, the results may not truly reflect how people living in other areas of Saudi Arabia feel. In future research, it is necessary to include more provinces to capture differences in awareness, trust levels, or financial expertise across regions.

This study also examined intentional behavior rather than actual usage behavior. Moreover, despite the links between them, not all intentions necessarily lead to long-term use. Future research should analyze post-adoption behavior to discover factors influencing continued usage, satisfaction levels, and loyalty among users.

This study utilized a quantitative method of investigation, gathering data through surveys and analyzing it using PLS-SEM analysis. Although this method permits findings to be generalized, it fails to paint the kind of picture that would make people believe it. Subsequent research may design ways that incorporate qualitative or mixed methods, providing more comprehensive accounts from which readers can truly experience and understand what it is like to be a user today, navigating social media sites or the Internet in general.

The proposed model combines traditional TAM constructs with three new factors: awareness, trust, and financial literacy. However, additional determinants, such as perceived risk, regulatory support, cultural influences, and technological readiness, may further enhance our explanatory capability. In future research, these variables should be considered for the adoption of new technologies.

7. Conclusion

This study was conducted in the Jouf region of Saudi Arabia and aimed to investigate the social factors affecting individuals' intention to adopt cryptocurrencies using the Technology Acceptance Model (TAM), thereby extending it.

With such an extended view of TAM, awareness, trust, and financial literacy are all integrated into the conventional theoretical framework to provide a deeper understanding of how people make choices regarding near-currency adoption.

Their findings indicate that perceived usefulness, awareness, trust, and financial literacy significantly shape the behavioral intentions. Perceived ease of use, on the other hand, does not seem to affect it in any fundamental way. These findings suggest that in the Saudi environment, perceived value, knowledge, and trust in cryptocurrency systems will not be replaced by concerns about ease of usability.

To ensure that their conclusions will apply to practical purposes and contribute new theoretical knowledge, one guest demanded more beer, and another required wine for his headache. Developers should focus on improving functionality and building trust. For policymakers, promoting awareness of value and financial literacy will play an irreplaceable role in stimulating adoption in line with Saudi Arabia's Vision 2030. However, both individual and collective enterprises must enhance their financial expertise to make informed decisions in this rapidly changing financial landscape.

Despite its limitations, this study lays the foundation for future research on how developing countries can effectively utilize and adopt currencies. By extending the scope to include larger areas, additional variables, and user behavior after adoption, future studies can further enrich our understanding of digital financial technology. Elements are needed that will contribute more.

In conclusion, this study demonstrated the far-reaching importance of social and cognitive factors in determining whether Saudi Arabia will adopt digital currencies in the future, both domestically and internationally.

List of abbreviations

AVE	Average variance extracted
AW	Awareness
BI	Behavioral intention to use cryptocurrencies
CR	Composite reliability
FL	Financial literacy
IDT	Innovation diffusion theory
KSA	Kingdom of Saudi Arabia
PEOU	Perceived ease of use
PLS	Partial least squares
PLS-SEM	Partial least squares structural equation modelling
PU	Perceived usefulness
Q ²	Predictive relevance (Stone–Geisser Q-square)
SEM	Structural equation modelling
TAM	Technology acceptance model
TR	Trust
TRA	Theory of reasoned action
UTAUT	Unified theory of acceptance and use of technology
VIF	Variance inflation factor
p	P-value
t	T-statistic
β	Path coefficient (beta value)

Compliance with ethical standards

Ethical considerations

This study followed standard ethical guidelines for research involving human participants. Participation in the survey was voluntary, and informed consent was obtained from all respondents prior to data collection. Participants were assured of anonymity and confidentiality, and no personally identifiable information was collected. The data were used exclusively for academic research purposes.

Conflict of interest

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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