



## Investigating Factors Affecting the Investors' Intention to Accept Cryptocurrency Investment in Malaysia

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### ABSTRACT

Cryptocurrency, a dynamic of digital investment powered by blockchain technology, is gaining widespread popularity. Despite its global ascent, investor apprehension persists, posing challenges to its broader acceptance. Recognizing the urgency of addressing this issue, the study delves into the determinants influencing investors' willingness to embrace cryptocurrency investments within the Malaysian context. This research offers a novel contribution by integrating the TPB and TAM into a single, comprehensive model. This model incorporates critical external variables such as social influence, perceived trust, perceived usefulness, technology awareness, and financial literacy. The primary data was collected from individual investors in Malaysia through an online structured questionnaire by applying the Partial Least Squares analysis. A distinctive finding of the study is the identification of technology awareness as a mediator between investors' intention to accept cryptocurrency investments and social influence. This underscores the urgent need to enhance technological literacy to bridge the gap between potential investors and the cryptocurrency market. The study highlighted the significant roles of technology awareness, social influence, and financial literacy while revealing that perceived trust and perceived usefulness may not be as impactful in this context. This reevaluation is critical for crafting targeted strategies that address the unique concerns of Malaysian investors.

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## INTRODUCTION

Financial investments have undergone a significant change throughout time. Beginning with bond investments or basic stock in the early 1900s, financial derivative instruments became more complex over time, including collateralized debt obligations, securities options, credit default swaps, as well as futures. This change marked a new era in the financial markets, enticing investors to pursue higher returns through riskier investments (Ayedh et al., 2021). The newest development in cryptocurrency is blockchain technology. It is virtual money that makes use of encryption and may be used for online purchasing and selling of products and services. Furthermore, according to a study by Trimborn et al. (2020), it has gained popularity as an asset for hedging and speculating activities.

Malaysia is one of the first countries in Asia to embrace cryptocurrencies and their use is growing. The acceptance of cryptocurrencies is still in its early stages and is hampered by their high volatility, as values can change suddenly. The volatility of cryptocurrency value can significantly impact people's trust in using it for transactions. Nevertheless, the advantages of blockchain technology are unmistakable. With blockchain, any data transmitted is immutable, providing a higher level of security and transparency for all parties involved. Controlling more than half of all computers involved in blockchain verification is the only method to change the verification process. Additionally, blockchain technologies give companies the capability to prevent data leaks as well as ensure secure transfers concerning sensitive data. Transactional data can potentially furnish proof of irregularities, aiding businesses in their efforts to avert financial reporting fraud (Dai et al., 2017).

Initial responses from the Malaysian government toward cryptocurrencies were largely unfavorable. Bank Negara Malaysia (BNM) implemented regulations that became effective on 15 January 2019 to track the development and trading of Bitcoins in Malaysia. Despite the challenges posed by price volatility, lack of liquidity, and absence of government support, investing in cryptocurrencies gained popularity among Malaysian investors (Lavere, 2019). Preceding government regulations, Malaysian investors had already delved into cryptocurrency investments. The shift in government stance is evident in the expression of support for legalizing digital currencies, such as Bitcoin, by the Ministry of Communications and Multimedia in March 2022. This move aimed to boost enthusiasm, particularly among the younger generation, with a specific focus on non-fungible token (NFT) trading platforms (Bernama, 2022). The BNM's regulation of cryptocurrencies signifies the government's recognition of this technology as a means to accumulate wealth rapidly (Alaeddin and Altounjy, 2018). Furthermore, the acceptability of cryptocurrencies in Malaysia is influenced by their conformity to Shariah principles (Yussof and Al-Harthy, 2020). Malaysia stands as a prominent early adopter of cryptocurrencies in Asia, with the recognition and passion for these digital assets on the rise (Ramaiya, 2019; Bernama, 2019; Aziz, 2020). In this context, understanding the variables influencing Malaysians' decisions to invest in cryptocurrencies becomes crucial, particularly in the context of emerging countries.

In an era where digital investments redefine financial landscapes, understanding the dynamics of cryptocurrency adoption is not merely academic but urgent. Cryptocurrencies, characterized by their potential for transformative wealth accumulation, have faced regulatory uncertainties, particularly in Malaysia. This study addresses the evolving landscape and changing government attitudes towards cryptocurrencies, highlighting the need for timely insights. The integration of cryptocurrency into the traditional fintech realm has had a significant impact on institutional interest in this emerging market. Luno, a platform boasting over 12 million users worldwide, has observed substantial growth in Malaysia with more than 840,000 Malaysians currently registered. According to Izwan (2023), the average age of Luno Malaysia customers is 34, with the largest group of investors falling within the 30-39 age range. As one of the fastest-growing markets, Luno is eagerly anticipating the next ten years of development. However, given the nascent nature of this industry, stakeholders must remain agile in responding to new global developments while also accounting for local Malaysian factors. Ultimately, fostering the growth of the local industry will require a joint effort between industry players and policymakers.

Regulatory clarity is essential to build investor confidence. Potential investors are often deterred by uncertainties, so clear regulations will provide consumers with stronger assurances and security guarantees.

Collaborations between regulators, policymakers, and industry stakeholders will empower Malaysians to have a comprehensive understanding of the technology behind digital assets (Izwan, 2023).

Despite the global interest, the unique challenges faced by Malaysian investors, also including high volatility and evolving government regulations, necessitate a focused investigation. By addressing these challenges, this study contributes to a nuanced understanding of cryptocurrency adoption dynamics specific to Malaysia.

Malaysia has shown interest in promoting financial technology (fintech) for financial inclusion. Cryptocurrency, with its potential to provide financial services to the unbanked and underbanked, may align with Malaysia's financial inclusion goals (Schaupp et al., 2022). This aligns with the TAM construct of perceived usefulness, where users perceive cryptocurrency as valuable for financial transactions. Studies by Islam et al. (2018) and Yusoff et al. (2019) highlight the discussions within the Islamic finance community about the permissibility of cryptocurrency transactions, contributing to the positive perception among Malaysian Muslims. Malaysia has seen a rise in technology adoption. Investigating general trends in the adoption of financial technology and understanding the level of technology awareness among the population provides context for the study (Ku-Mahamud et al., 2019). According to Izwan (2023), the world of cryptocurrencies is still relatively new and unfamiliar to many potential investors, causing some hesitation. To overcome this, educational and awareness campaigns are crucial in unlocking the full potential of crypto investments. This particular study focuses on individual investors in Malaysia, a country where cryptocurrency interest is on the rise, especially among the predominantly Muslim population.

Despite the growing interest, the study of cryptocurrency trading is comparatively recent in comparison to more established financial investments. Malaysia, while emerging as a leading adopter of cryptocurrencies in Asia, has a relatively small number of cryptocurrency investors compared to the global user base in 2017. Investors face higher risks due to the absence of reputable best practices for investing in cryptocurrencies (Mokhtarian and Lindgren, 2018). As academic attention turns towards blockchain technology, research on cryptocurrencies has grown significantly (Holub and Johnson, 2018).

This study developed a framework, combining the Theory of Planned Behaviour (TPB) and the Technology Acceptance Model (TAM), aims to dissect the intricate relationships between social influence, perceived trust, perceived usefulness, financial literacy, technology awareness, and investors' intentions. This study contributes to the existing literature by providing a comprehensive understanding of cryptocurrency adoption within the Malaysian context. This study motivates itself by not only offering insights into investor behavior but also by providing policymakers, financial institutions, and academics with a robust framework to navigate and understand the dynamics of cryptocurrency adoption in Malaysia. The urgency lies in the timely nature of this research, offering immediate relevance to the evolving financial landscape in the country. The exploration of technology awareness as a mediating factor further enhances the study's significance, bridging a critical gap in existing knowledge.

The existing body of literature on this topic, including studies by Corbet et al. (2020), Hamakhan (2020), Kim and Deka (2020), and Liu et al. (2019), raises doubts about the viability of cryptocurrencies as new investment opportunities. Muslim investors, guided by Shariah principles, must navigate considerations such as unjustified gains (resembling *riba*), excessive ambiguity (*Gharar*), and trading in illegitimate goods and services (Echchabi et al., 2021). While previous studies have focused on factors influencing investment decisions in developed economies, there is a paucity of research specifically on Malaysia (Ayedh et al., 2020). The innovative and complex nature of cryptocurrencies has led to a sparse literature, necessitating a study to fill the gap. While numerous studies have explored cryptocurrency investments globally, research specific to Malaysia is limited. This study addresses these research gaps with a dual focus on the Theory of Planned Behaviour (TPB) and Technology Acceptance Model (TAM), emphasizing the importance of acceptance in an investor's intention to invest in cryptocurrencies in the Malaysian context. Additionally, it introduces technology awareness as a mediating factor, a dimension often overlooked in previous studies. The study aims to accomplish the following objectives:

- i. To determine the factors influencing investors' intention to accept cryptocurrency investment including social influence, perceived usefulness, perceived trust, financial literacy, and technology awareness.
- ii. To examine the technology awareness as a mediating effect between social influence and investors' intention to accept cryptocurrency investment.

## LITERATURE REVIEW

The Theory of Planned Behavior (TPB) is an underlying theory in this study that emphasizes the significance with regard to an awareness-acceptability framework in technology usage (Hung et al., 2006). TPB proposes that human behavior is guided by beliefs about behavior, norms, and control. However, this study adopted and evaluated the TAM, a relevant theoretical framework, to identify the most influential factors. Previous research suggests the concurrent application of TAM and TPB for more robust behavior predictions (Fu et al., 2006). In the suggested study model, the attitude construct from TPB was replaced with TAM's perceived usefulness. Furthermore, perceived behavioral control was replaced with the technology awareness construct, which seems more relevant to the context of cryptocurrency. This is because in order to accept cryptocurrency, end-users must have the necessary awareness of technology to perform related transactions with ease and confidence. Perceived trust is another new construct added to the model, which directly influences behavioral intention. There is also a financial literacy construct in order to accept cryptocurrency investment. Cryptocurrency must earn consumers' confidence in order to function as a digital currency. Therefore, users must trust the network, intermediaries, and technology to embrace cryptocurrency investment. In addition, this study also investigates the mediating role with regard to technology awareness that exists between investors' intention toward cryptocurrency investment as well as social influence. Hence, it is predicted that these variables will significantly influence the investors' intention towards cryptocurrency investment. These claims have been proven by previous research (Almajali et al., 2022; Alomari and Abdullah, 2023; Ayedh et al., 2021; Bharadwaj and Deka, 2021; Echchabi et al., 2021; Gillies et al., 2020; Gupta et al., 2021 and Jariyapan et al., 2022).

### Behavioral Intention

The term "intention" is related to a person's readiness to perform or conduct a specific activity because of two influential aspects, which are the subjective norm as well as attitude, as per the Theory of Reasoned Action (TRA) (Ajzen and Fishbein, 1975). As defined by Miles (2012), intention refers to the driving force behind a person's action. It also reveals the readiness an individual must have to engage in a specific behavior and how much effort they are likely to put into it. In the literature on technology acceptance, the phrase "intention to use" resembles a user's intended future usage of technology. As a trustworthy predictor of actual technological use, the desire to use technology was selected as the study's outcome variable (Ajzen, 1991; Turner et al., 2010). The study on cryptocurrency usage is intriguing but limited and presents conflicting results (Al-Amri et al., 2019; Arias-Oliva et al., 2021). It is worth noting that various studies (Albayati et al., 2020; Mazambani and Mutambara, 2019; Schaupp and Festa, 2018; Zamzami, 2020) have consistently demonstrated that people's willingness to utilise cryptocurrency is mainly influenced by their positive perception of it. Furthermore, this positive perception is discovered to be influenced by various factors. For example, Jankeepsad and Tewari (2018) established that trust is the most substantial factor in South Africa. Similarly, Chuen et al. (2018) reported a similar finding for Bitcoin usage in Korea, Shahzad et al. (2018) in China, and Sas and Khairuddin (2017) in Malaysia. Therefore, this research presumes the following hypothesis:

*H<sub>1</sub>: Investors' intention has a positive significant influence on the acceptance of cryptocurrency investment.*

### **Technology Awareness**

Utilizing cryptocurrency facilitates smooth and secure transactions. However, the adoption of this technology can prove to be challenging if one lacks an understanding of it (Almajali et al., 2022). The extent to which individuals are inclined to adopt digital currency is impacted by their comprehension of it. (Treiblmaier and Sillaber, 2021). Customers' perceptions as well as willingness to adopt cryptocurrencies, will develop if they understand the fundamental elements of cryptocurrencies (Ayedh et al., 2020). As per Igbaria et al. (1994), behavioral intention and technology awareness are seen to be the most important elements influencing technology adoption. As per the research conducted by Ku-Mahamud et al. (2019), the adoption of technology awareness was initially suggested in an innovation diffusion theory. It has been observed that the level of familiarity with the technology, as well as its advantages, improves the perception of its benefits, which ultimately leads to the intention to use it. Due to their increasing popularity, cryptocurrencies are a highly broadly defined topic (Uematsu and Tanaka, 2019). The adoption and utilization of this currency, however, are much behind expectations (Hamilton, 2020). According to previous research, behavioral intention and technology awareness are positively connected and have a substantial correlation (Barbu et al., 2021). Individuals are likely to exhibit a more favorable attitude toward embracing new technology when they possess knowledge about it. Therefore, it is crucial to examine how awareness of technology influences one's inclination to invest in cryptocurrency. Hence, it is formulated as follows:

*Ha2: Technology awareness has a positive significant influence on investors' intention to accept cryptocurrency investment.*

### **Social Influence**

Ajzen (1991) defined "subjective norm as an individual's perceived social influence on whether or not to conduct a certain behavior". According to Gupta et al. (2021), social influence refers to any modification of an individual's behavior brought on by peer pressure, socialization, leadership, and other factors. According to Schaupp et al. (2022), the intention to utilize cryptocurrencies increases when subjective norms are valued more highly. According to Khan (2019), investors frequently base their financial decisions on those of friends, colleagues, and other people they trust. Previous studies' results (Albayati et al., 2020; Dabbous et al., 2022; Gupta et al., 2021; Kim, 2021; Schaupp et al., 2022) established that the social dimension deeply affects cryptocurrency adoption intention. In a recent research undertaken in Spain by Arias-Oliva et al. (2021), it was proposed that the subjective norm plays a supportive role in enhancing the inclination to adopt cryptocurrency. Since cryptocurrencies are a peer-to-peer network technology and the sample is skewed to social influence, that is, the social pressures to use a particular technology is expected to have an effect on behavioral intention. Therefore, this study posited that a greater degree of positive and robust social influence would correspond to an increased likelihood of an individual choosing to embrace cryptocurrency. Considering the above discussion, the hypothesis suggested is given below:

*Ha3: Social influence has a positive significant influence on investors' intention to accept cryptocurrency investment.*

### **Perceived Usefulness**

According to Davis (1989), perceived usefulness refers to an individual's belief that using a certain technology will improve their job performance or simplify tasks. When users find technology to be valuable, they are inclined to embrace it. When a specific system conveys to an individual that using it will inherently improve their performance, they are compelled to accept it. This notion in the user's mind is referred to as perceived value. Perceived value is the subjective assessment of cryptocurrency's effectiveness and performance within the TAM framework (Shahzad et al., 2018). Moreover, the positive impact with regard to perceived usefulness on behavioral intention was established in cryptocurrency research in various countries, including Spain (Arias-Oliva et al., 2019; Mendoza-Tello et al., 2018), China (Nadeem et al., 2021), Taiwan (Nuryyev et al.,

2018), and USA (Schaupp and Festa, 2018). Apart from that, Shahzad et al. (2018) and Walton and Johnston (2018) discovered the indirect impact with regard to perceived usefulness on intention to use. Therefore, based on the literature review above, the hypothesis is suggested as the following:

*Ha4: Perceived usefulness has a positive significant influence on investors' intention to accept cryptocurrency investment.*

### **Perceived Trust**

Generally, trust may be perceived as a social construct based on generalized relationships (Inglehart and Baker, 2000). Chen (2006) categorized perceived trust into two parts: faith in the credibility with regard to another party as well as behavioral intention involving vulnerability and uncertainty. Perceived trust plays a crucial role in situations with regard to interdependence, uncertainty, as well as risk (McKnight and Chervany, 2001). It is a fundamental element in almost all interactions between humans (Gambetta, 1988). Many studies have proven that trust is among the positive perceptual antecedents with regard to cryptocurrency adoption (Albayati et al., 2020; Gil-Cordero et al., 2020; Palos-Sanchez et al., 2021; Treiblmaier et al., 2021). Other studies (Arli et al., 2021; Fosso-Wamba et al., 2020; Ooi et al., 2021; Steinmetz et al., 2021) stated that lack of knowledge creates low trust in cryptocurrencies. The study revealed that consumers' trust and investment in cryptocurrency are positively impacted by their awareness of its usage. A study by Ayedh et al. (2021) discovered that Malaysian consumers possess very little trust in Bitcoin due to its decentralized nature and lack of a central issuing authority. Therefore, the hypothesis that is established based on the literature review is as follows:

*Ha5: Perceived trust has a positive significant influence on investors' intention to accept cryptocurrency investment.*

### **Financial Literacy**

Financial literacy pertains to an individual's understanding that empowers them to make financial choices that align with their best interests (Chan et al., 2022). Research has revealed that financial literacy plays a significant role in influencing various financial decisions (Saputro and Lestari, 2019). Understanding financial literacy is crucial for sound financial decisions. People who possess high financial literacy are expected to make informed and wise choices, resulting in favorable outcomes (Ahmad and Shah, 2022; Gerrans and Heaney, 2019; Goyal and Kumar, 2021). For this study's purpose, financial literacy is defined as the capability of an individual to comprehend and apply finance-related concepts, including savings, investments, debt, insurance, and various other financial instruments. Individuals possessing greater financial literacy might exhibit a greater propensity to engage with cryptocurrencies in comparison to individuals with lower financial literacy. This inclination arises from their enhanced capacity to swiftly grasp cryptocurrency-related information and, consequently, make more informed choices (Festa and Knotts, 2021; Panos et al., 2020; Saputro and Lestari, 2019; Zhao and Zhang, 2021). This is because individuals or investors possessing a strong grasp of financial literacy are likely to exhibit greater caution when allocating and utilizing their funds for investment purposes (Mitchell, 2020; Nguyen and Rozsa, 2019; Warmath and Zimmerman, 2019). In contrast to Arias- Oliva et al. (2019), their empirical analysis found that financial literacy did not significantly influence the intention to invest in cryptocurrencies. Likewise, previous research (Kadoya and Khan, 2020; Karakurum-Ozdemir et al., 2019) has discovered that there is a positive relationship that exists between financial literacy on decisions to invest as well as financial behavior. These results indicate that the higher the understanding of financial literacy, the better the behavior of investors in managing their finances. For this reason, the study formulates a hypothesis regarding financial literacy as follows:

*Ha6: Financial literacy has a positive significant influence on investors' intention to accept cryptocurrency investment.*

### Mediating Effect

The current investigation explores how one's attitude toward cryptocurrency acts as a mediator in the connection between perceived risk, perceived usefulness, perceived enjoyment, perceived ease of use, and the intention to use cryptocurrency. In a previous study, a researcher delved into the theoretical significance of perceived usefulness as a mediator in the context of behavioral intention (Robey, 1979). Due to technology awareness and the perceived usefulness, users' inclination to embrace an application is heightened. They have confidence that adopting new technology will enhance their skills and capabilities, altering their behavioral intention to adopt new technology. Perceived usefulness serves as a mediator in the adoption of cryptocurrency, bridging the gap between technology awareness and behavioral intention (Schaupp and Festa, 2018). Therefore, hence it is hypothesized as follows:

*Ha7: Technology awareness mediates the relationship between social influence and investors' intention to accept cryptocurrency investment.*

### Research Framework

The previous studies have implied the need to jointly apply TPB and TAM in gaining better-quality explanations or predictions of behaviour (Fu et al., 2006). Hence, in the proposed study model, the attitude construct from TPB was replaced with TAM's perceived usefulness and perceived ease of use. In the realm of cryptocurrency, the concept of technology awareness has been utilized instead of perceived behavioral control. This construct is particularly relevant to the adoption of cryptocurrency, as it requires the end-user to possess the necessary technology and technical assistance in order to engage in transactions with confidence and ease. Without this construct in place, individuals may struggle to utilize cryptocurrency technology, rendering its adoption difficult or impossible. The proposed model includes the essential element of perceived trust, which plays a critical role in determining behavioral intention. Cryptocurrency, being a digital currency, must earn the trust of its users. This involves trusting the technology, the network, and the intermediaries involved in its use.

Additionally, financial literacy is a key factor in making informed financial decisions, and therefore, has also been included in the model. Thus, the objective of this study is to pinpoint the key determinants impacting investors' intention to embrace cryptocurrency investments. After conducting a thorough review of existing literature, the factors discovered to have an impact on cryptocurrency investment choices include technology awareness, social influences, perceived usefulness, perceived trust, and financial literacy. Figure 1 illustrates the theoretical framework based on the literature review.

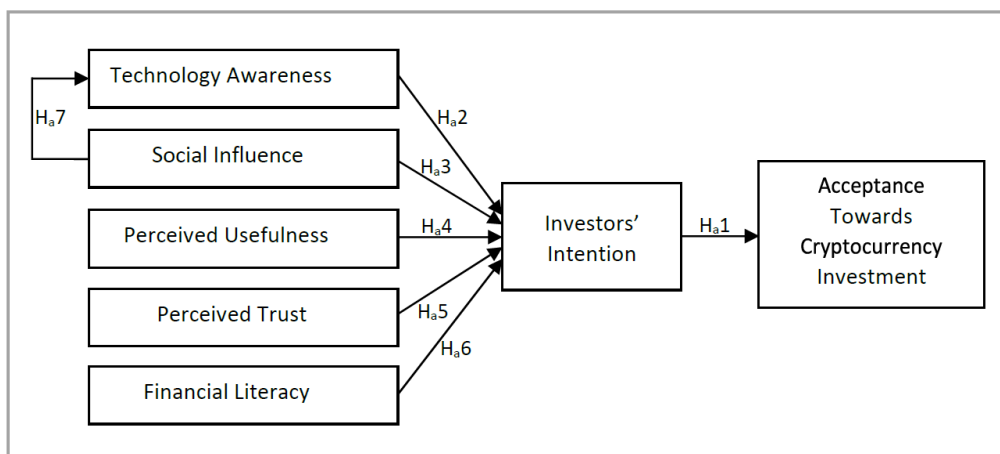


Figure 1 Theoretical Framework

## RESEARCH METHODOLOGY

### Data Collection Procedure

This study utilized a structured online questionnaire for quantitative data collection to ensure replicability (Saunders et al., 2009). Validated scales from previous research (Alaeddin and Altounjy, 2018; Albayati et al., 2020; Chen et al., 2022; Cordero et al., 2019; Gupta et al., 2020; Mohamed, 2017; Nadeem et al., 2021; Oliva et al., 2019; Schaupp and Festa, 2018; Sukumaran et al., 2022) were used to measure the variables of interest. These scales have been validated and high reliability reported for each. All of these items were modified from the previous study to suit the cryptocurrency environment in the context of Malaysian investors. The questionnaire was designed in the Google form to gather data about the respondents' acceptance towards cryptocurrency investment, including their intention to invest in it in the future.

The survey's link was distributed via Telegram in the Bitcoin investor groups registered on the Luno platform. Based on The Edge Malaysia (Arina, 2023) reported that Luno had 840,000 Malaysian customers and processed more than 73 million transactions in Bitcoin. The average age of its Malaysian customers is 34 years and they typically work in the construction sector. Many of them are engineers and take on the sales role in a company. For context, Luno is the first regulated DAX (a licensed digital asset exchange) under the Securities Commission Malaysia (SC) that provides easy access to 10 cryptocurrencies, namely Bitcoin, Cardano, Avalanche, Bitcoin Cash, Ethereum, Chainlink, Litecoin, Solana, Uniswap and Ripple. It is important to collaborate with regulators such as the SC to build trust and confidence (among investors) while ensuring that compliance measures do not inhibit innovation.

The research utilized primary data gathered from individuals, specifically Malaysian investors, who presented a potential interest in investing in cryptocurrency. The primary emphasis was on individuals with previous investment experience and those with limited awareness of investments. The analysis unit encompassed individuals from various job groups and categories. The data used in this study is based on an online survey (Google form) conducted from May 8 to June 11, 2023 via Telegram in the Bitcoin investor groups registered on the Luno platform. The research utilised a simple random sampling technique to select the sample from the groups because the researchers had no access to the sampling frame. Simple random sampling is a procedure in which each element in the population has an equal chance to be selected as a sample (Sekaran and Bougie, 2011). Out of more than 300 investors, 272 responses were obtained, yielding an impressive response rate of 90.7%.

### Variables and Measurement

The questionnaire had two sections: the respondents' demographic profile as well as the perception of respondents towards investment decisions in cryptocurrency. The first section described the information about respondents' profiles, which included the highest education level, age, gender, occupation, and monthly income level. Descriptive analysis was used to characterize the response's characteristics by applying SPSS 25.0 (Statistical Package for Social Science). The second section included eight constructs, which had 34 items adapted from past related research, as shown in Table 1 Source of Questionnaire Formation. A five-point Likert scale was employed to assess the respondent's degree of agreement, spanning from 1 (strongly disagree) to 5 (strongly agree). Correspondingly, the data gathered in this segment was examined by utilising Partial Least Squares (PLS) to achieve the objectives. (Refer Appendix: The items for each construct).

Table 1 Source of Questionnaire Formation

Construct	Number of Items	Adapted from
Investors' Intention	6	Cordero et al. (2019), Mohamed (2017), Nadeem et al. (2021)
Acceptance towards Cryptocurrency	4	Chen et al. (2022), Sukumaran et al. (2022)
Investment Technology Awareness	4	Alaeddin and Altounjy (2018)
Social Influence	4	Gupta et al. (2020), Albayati et al. (2020), Schaupp and Festa (2018)
Perceived Usefulness	6	Gupta et al. (2020), Albayati et al. (2020), Nadeem et al., (2021)
Perceived Trust	6	Gupta et al. (2020), Cordero et al. (2019), Mohamed (2017)
Financial Literacy	4	Gupta et al. (2020), Oliva et al. (2019)



## RESULTS AND DISCUSSION

### Demographic Profiles of Respondents

Based on an analysis of the respondents' demographic profiles, the respondents are predominantly male (52.6%). Most of the respondents were between 31-40 years (43.4%), followed by below 30 years (39.3%), while the rest were between 41-50 years (17.3%). In terms of higher education level, most of them come from bachelor's degree qualification with a percentage of 36.0, followed by 19.5% from master's degree and 18.8% from diploma holders. Meanwhile, the respondents having a DBA/Ph.D. degree and an SPM/STPM qualification reported 13.2% and 12.5%, correspondingly. The results also presented that most of the respondents were self-employed (34.6%), while the rest were government and private staff (32.7%). Concerning monthly income level, 32.4% of the respondents earned between RM4,001-RM6,000, followed by the respondents who made between RM2,001 and RM4,000 (30.9%). Of the respondents who earned income below RM2,000, 34%, 30% of the respondents received income between RM6,001-RM8,000, as well as RM8,001-RM10,000 while a small number of respondents (2.2%) earned RM10,001 above. Regarding work experience, 34.9% of the participants possess fewer than 5 years of experience, while 28.3% fall within the range of 11 to 15 years of working experience, and 19.9% have accumulated between 5 and 10 years of professional experience. Subsequently, 13.6% of the respondents claim between 16 and 20 years of experience. A minority, comprising 3.3% of the participants, boasts more than 21 years of working experience.

### Measurement Model

This study employs a three-step process to evaluate the measurement model by applying the Partial Least Square-Structural Equation Model (PLS-SEM) for data analysis. It involves assessing convergent and discriminant validity. According to the recommendations of Hair et al. (2017) and Ringle et al. (2012), indicator loadings (outer loadings) should be higher than 0.70. In line with these recommendations, this study has set a threshold of 0.70 for the loadings. Table 2 displays the factor loadings for all constructs, which range from 0.788 (Intention) to 0.966 (Trust) all exceeding .70. These significant outer loadings indicate that the items used in this research demonstrate convergent validity. To further evaluate convergent validity, the study also examined the variance extracted (AVE) and composite reliability (CR). As per guidelines provided by Hair et al. (2017) an AVE value above 0.5 and a CR of 0.7 (Sarstedt et al., 2014) are considered satisfactory indicators of convergent validity. All constructs in this study have AVE values than 0.5 meeting the established standards, for convergence.

Table 2 Validity and Reliability Analysis

Construct	No. item	Outer Loading	AVE	CR
Intention (INT)	6	0.788-0.917	0.754	0.924
Acceptance (IA)	4	0.832-0.910	0.788	0.937
Technology Awareness (TA)	4	0.831-0.933	0.788	0.937
Social Influence (SI)	4	0.877-0.933	0.834	0.938
Perceived Usefulness (PU)	6	0.903-0.950	0.847	0.971
Perceived Trust (PT)	6	0.913-0.966	0.900	0.982
Financial Literacy (FL)	4	0.859-0.954	0.815	0.946

The result of the discriminant validity test as proposed by Fornell and Larcker (1981) is shown in Table 3. The Heterotrait-Monotrait (HTMT) ratio test (Hair et al., 2017; Henseler et al., 2014), was carried out using the PLS Algorithm technique to evaluate the discriminant validity. In order to confirm that items inside one variable are distinct from those in other variables, the HTMT test was developed (Hair et al., 2017). Typically, less than 0.85 (Clark and Watson, 1995; Kline, 2015) or less than 0.90 (Teo et al., 2008) are the suggested threshold values for HTMT. Each variable's HTMT value in this study is less than or equal to 0.90. This shows that every study variable complied with the requirements for discriminant validity.

Table3 Discriminant Validity

	FL	IA	INT	PT	PU	SI	TA
Financial Literacy							
Acceptance	0.734						
Intention	0.738	0.877					
Perceived Trust	0.226	0.275	0.307				
Perceived Usefulness	0.273	0.346	0.371	0.631			
Social Influence	0.665	0.762	0.757	0.187	0.195		
Technology Awareness	0.538	0.838	0.706	0.245	0.247	0.647	

### Structural Model

Table 4 presents the results of the hypothesis testing. For Hypothesis H1, Intention was found to have a positive and significant impact on Acceptance ( $\beta = 0.794$ ;  $t = 24.699$ ;  $p < 0.05$ ). Therefore, Investors' intention has a positive significant influence on the acceptance of cryptocurrency investment. Additionally, the study observed that Social Influence ( $\beta = 0.304$ ;  $t = 3.038$ ;  $p < 0.01$ ) and Financial Literacy ( $\beta = 0.311$ ;  $t = 4.323$ ;  $p < 0.01$ ) both have positive and significant impacts on Intention. Thus, the study also accepted these two hypotheses, H3 and H6. Therefore, social influence has a positive significant influence on investors' intention to accept cryptocurrency investment. Then, financial literacy has a positive significant influence on investors' intention to accept cryptocurrency investment. Thus, Table 4 approved that Hypotheses H1, H3, and H6 have been supported and accepted in this study. Nevertheless, perceived usefulness and perceived trust did not prove to be significant predictors of the investors' intention to accept cryptocurrency investment as indicated by the path model (H4:  $\beta = 0.128$ ;  $t = 1.614$ ;  $p > 0.01$  and H5:  $\beta = 0.038$ ;  $t = 0.553$ ;  $p > 0.01$ ).

Table 4 Hypothesis Testing Results

Hypothesis	Path Hypothesis	Path Coefficient	T-Value	P-Values	Decision
Ha1	INT -> IA	0.794	24.699	*0.000	Accepted
Ha3	SI -> INT	0.304	3.038	*0.003	Accepted
Ha4	PU -> INT	0.128	1.614	0.107	Rejected
Ha5	PT -> INT	0.038	0.553	0.580	Rejected
Ha6	FL -> INT	0.311	4.323	*0.000	Accepted

Note: \*significant at  $p < 0.05$

Table 5 below indicates that there is a strong positive and statistically significant relationship between Technology Awareness and Intention ( $\beta = 0.266$ ;  $t = 3.727$ ;  $p < 0.01$ ). Since the result accepts H2, this study concludes that technology awareness has a positive significant influence on investors' intention to accept cryptocurrency investments. Furthermore, it was found that there is a positive and significant impact ( $\beta = 0.600$ ;  $t = 8.899$ ;  $p < 0.01$ ) between Social Influence and Technology Awareness. The results also show that Technology Awareness ( $\beta = 0.160$ ;  $t = 3.288$ ;  $p < 0.001$ ) as a mediator has a positive and significant impact on this study and thus, these findings support hypothesis H7. In this method of mediation, there are two paths to the dependent variable. The independent variable (Social Influence) must predict the dependent variable (Intention), and the independent variable must predict the mediator (Technology Awareness). Therefore, this study can conclude that technology awareness mediates the relationship between social influence and investors' intention to accept cryptocurrency investments.

Table 5 Test of Mediation

Hypothesis	Path Hypothesis	Path Coefficient	T-Value	P-Values	Decision
Ha2	TA -> INT	0.266	3.727	0.000	Accepted
Ha7	SI -> TA	0.600	8.899	0.000	Accepted
Ha7	SI -> TA -> INT	0.160	3.288	0.001	Accepted

Note: Significantly at  $p < 0.001$ .

The variance accounted for (VAF) can be applied to calculate the mediator effect, following Hayes and Preacher's (2014) suggestion. The VAF value is a useful tool to determine the level of mediating effects. When the VAF value is less than 20%, it means that there is no mediating effect. On the other hand, if the

VAF value is over 80%, the variable is considered to have fully mediated in the relationship being studied. However, if the VAF value falls between 20% and 80%, it is categorized as having a partial mediating effect.

$$VAF = \frac{\text{Indirect effect}}{\text{Total effect}} \tag{1}$$

Table 6 displays the mediating effect derived from the VAF formulae above. It is found that the VAF value for the indirect effect is 0.160 and the total effect is 0.464 respectively. The VAF values of 0.53 (53%) fall from 20% to 80% or are categorized as partially mediated. This means that Social Influences have 53% of the impact on Intentions through Technology Awareness. Hence, the study accepted the hypotheses of H7, technology awareness mediates the relationship between social influence and investors' intention to accept cryptocurrency investment.

Table 6 Mediator Effect of Technology Awareness

VAF	Path	Path Coefficient	T-Value	P-Values
Indirect Effect	SI -> INT	0.160	3.288	0.001
Total Effect	SI -> INT	0.464	5.327	0.00

In conclusion, the results of these hypotheses in this study were concluded in Figure 2.

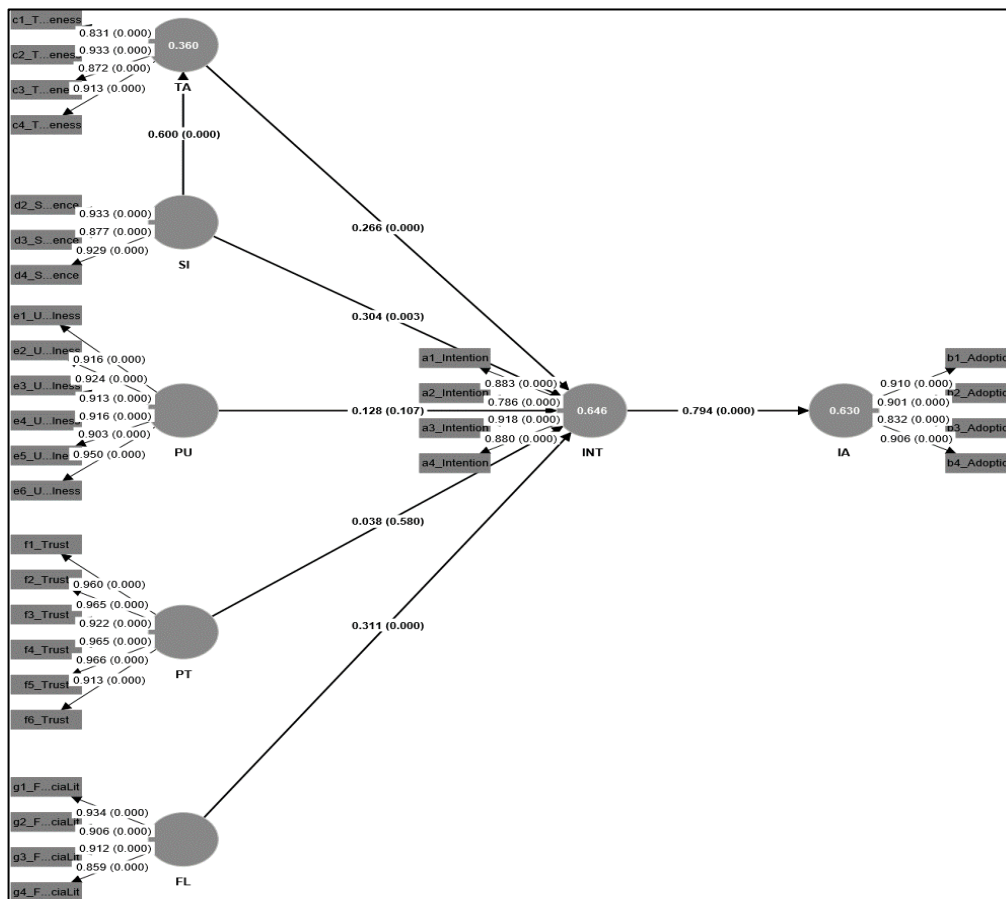


Figure 2 Measurement and Structural Model

### Discussion

This study's findings shed light on the critical determinants influencing investors' intentions to accept cryptocurrency investments. They highlight the significant roles of technology awareness, social influence,

and financial literacy while revealing that perceived trust and perceived usefulness may not be as impactful in this context. The results confirmed that financial literacy is the primary driver influencing investors' intention to accept cryptocurrency investments. People lacking financial comprehension show less inclination towards investing in equities. This aligns with established research that demonstrates the positive influence of financial literacy on investment choices (Jariyapan et al., 2022; Karakurum-Ozdemir et al., 2019; Kadoya and Khan, 2020; Strombock et al., 2017). Technology awareness also holds importance, suggesting that individuals with a good grasp of the technology behind cryptocurrencies are more likely to be open to these investments. Technology awareness is crucial in the context of cryptocurrencies because these assets are built on blockchain technology. Investors who understand the underlying technology may have greater confidence in their ability to navigate the cryptocurrency market. A report by the Global Blockchain Business Council (GBBC) in 2018 emphasized the importance of technology literacy in the adoption of blockchain and cryptocurrencies.

This finding resonates with the idea that understanding the technical underpinnings of an asset class can boost investor confidence. It indicates that Malaysian investors' inclination towards cryptocurrencies is primarily attributed to their understanding and familiarity with the underlying technologies. The study suggests that a greater awareness of technology could increase the chances of accepting new developments. This idea has been supported by previous studies (Alaeddin and Altounjy, 2018; Barbu et al., 2021; Irfan et al., 2022; Yi et al., 2021). Social influence, including recommendations and peer behavior, has been widely recognized as a significant factor in various investment decisions. The influence of peers, family, and social networks on investment decisions has long been acknowledged in the literature. People often seek advice and reassurance from those around them when considering financial investments, including cryptocurrencies. This discovery is corroborated by prior investigations (Albayati et al., 2020; Arias-Oliva et al., 2021; Dabbous et al., 2022; Gupta et al., 2021; Kim, 2021; Schaupp et al., 2022; Shahzad et al., 2018), which have lent support to the idea that the social dimension significantly shapes the intention to adopt cryptocurrency. Conversely, earlier studies (Arias-Oliva et al., 2019; Ayedh et al., 2021; Hasan et al., 2022; Ji-Xi et al., 2021; Ullah et al., 2021; Zamzami, 2020; Mazambani and Mutambara, 2020) have presented a limited impact of social influence with regard to cryptocurrency adoption.

A noteworthy finding is that perceived trust and perceived usefulness did not show a significant influence on investors' intentions to accept cryptocurrency investments. This finding may be surprising, as trust and utility are generally considered crucial factors in technology adoption and investment decisions. The lack of a significant influence of perceived trust on investors' intentions is surprising and may run counter to what many would expect. Trust is often considered a fundamental factor in financial decision-making, especially when it comes to investments. However, it's important to note that trust in cryptocurrencies can be highly subjective and influenced by various factors, including individual experiences and market conditions. Conversely, this result contradicts numerous studies that have affirmed trust as among the favorable perceptual factors leading to cryptocurrency adoption (Albayati et al., 2020; Gil-Cordero et al., 2020; Ooi et al., 2021; Palos-Sanchez et al., 2021; Treiblmaier et al., 2021). The non-significant influence of perceived usefulness suggests that investors may not perceive cryptocurrencies as particularly useful for their financial goals or needs. This finding is in agreement with prior research findings (Shahzad et al., 2018; Walton and Johnston, 2018). This finding could imply that, at the time of the study, investors might view cryptocurrencies as speculative assets rather than practical tools for financial transactions or investment.

However, it contradicts the positive influence with regard to perceived usefulness on behavioral intention stated in cryptocurrency research conducted in several countries, which includes Spain (Arias-Oliva et al., 2019; Mendoza-Tello et al., 2018), China (Nadeem et al., 2021), Taiwan (Nuryyev et al., 2018), and the USA (Schaupp and Festa, 2018). Furthermore, the mediation analysis indicates that technology awareness partially mediates the relationship that exists between social influence as well as investors' intentions. This suggests that part of the impact of social influence on investors' intentions can be explained by the fact that social influence affects technology awareness, which, in turn, affects investors' intentions. In practical terms, this suggests that in order to understand and influence investors' intentions, it is important to consider both social influence and technology awareness as factors.

Investment strategies and communication efforts targeting potential investors should consider not only the social context but also the technological environment in which these decisions are made.

## CONCLUSION

Cryptocurrencies have gained significant popularity in Malaysia over the past few years. This popularity has been driven by factors such as increased awareness, the potential for high returns, and the emergence of cryptocurrency exchanges in the country. Cryptocurrency regulations in Malaysia have been changing over time. Malaysia had introduced licensing requirements for cryptocurrency exchanges to combat money laundering and illicit activities. However, regulations can change, and it's important to consider the latest updates and their impact on investor sentiment. Investigating factors affecting investors' intentions regarding cryptocurrency investments is crucial. Factors such as risk perception, financial literacy, access to information, and trust in cryptocurrency platforms can significantly influence whether individuals are willing to accept cryptocurrency investments. The economic and financial climate in Malaysia, as well as global economic conditions, can impact investors' intentions regarding cryptocurrencies. Economic instability, inflation concerns, and currency devaluation can drive interest in cryptocurrencies as an alternative asset class. Cryptocurrency markets are known for their volatility. Periods of extreme price fluctuations can affect investor confidence and intentions. Research should consider how market volatility influences investment decisions.

Cryptocurrencies are inherently technology-driven. The level of technological awareness among potential investors can affect their willingness to engage with digital assets. Factors such as blockchain technology literacy can be influential. Cryptocurrency investments are often associated with concerns about security and trust. High-profile hacks and scams can erode confidence in the cryptocurrency ecosystem. Research should explore how these concerns impact investor intentions. Social influence can play a significant role in cryptocurrency adoption. Positive or negative narratives in social and traditional media can sway investor sentiment. Cryptocurrency markets are global, and international developments, such as regulatory changes and adoption trends in other countries, can influence Malaysian investors' decisions. Investigating factors affecting investors' intention to accept cryptocurrency investments in Malaysia is a timely and important research area. To draw meaningful conclusions, it is crucial to conduct up-to-date research that considers the evolving regulatory landscape, investor behavior, market conditions, and the broader economic environment. Given the dynamic nature of the cryptocurrency space, research findings can provide valuable insights for policymakers, financial institutions, and individuals seeking to understand and navigate the cryptocurrency market in Malaysia. Additionally, research in this area can help identify strategies to promote responsible cryptocurrency investment and protect investors from potential risks.

In a nutshell, this study suggests further directions of research on Cryptocurrency investment is conducting a longitudinal study to analyze how changing economic conditions, both in Malaysia and globally, influence investors' cryptocurrency intentions. Explore the impact of economic instability, inflation, and currency devaluation on the attractiveness of cryptocurrencies as an alternative asset class. Examine investor behavior during periods of economic uncertainty. Then, encourage collaboration between researchers, policymakers, economists, and technologists. Integrate insights from diverse fields to create a comprehensive understanding of cryptocurrency investments in Malaysia. Foster a multidisciplinary approach to address the complex dynamics associated with the cryptocurrency ecosystem. Additionally, explore the role of technological awareness, particularly blockchain literacy, in shaping investors' intentions. Assess how knowledge about blockchain technology influences perceptions of security and trust. Investigate the impact of high-profile hacks and scams on investor confidence and examine potential strategies to enhance security measures. By exploring these avenues, researchers can contribute valuable insights to the evolving field of cryptocurrency investments in Malaysia, facilitating informed decision-making among stakeholders and promoting responsible engagement with digital assets.

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## APPENDIX

### The Items for Each Construct.

#### (a) Investors’ Intention

1. I intend to invest in Cryptocurrencies in the future.
2. I intend to use Cryptocurrency as an alternative source of currency to buy or sell products in the future.
3. I believe using Cryptocurrency is very helpful in timely fulfilling my obligations.
4. I intend to invest in Cryptocurrency on a regular basis.
5. I will encourage others to invest in Cryptocurrency as a mode of exchange.
6. I prefer to invest in Cryptocurrency for cross-border usage.

#### (b) Acceptance

1. I invest in the Cryptocurrency platform.
2. I use Cryptocurrency for efficient monetary transactions.
3. I trade in Cryptocurrency to obtain better prices from the digital market.
4. I will encourage others to invest in Cryptocurrencies

**(c) Technology Awareness**

1. I follow the news about the Cryptocurrency technology
2. I follow the developments of the Cryptocurrency technology
3. I discuss with friends and people around me issues of Cryptocurrency usage.
4. I read about the problems of Cryptocurrency usage.

**(d) Social Influences**

1. The people who are close to me will think that I should invest in Cryptocurrencies.
2. I will invest in the Cryptocurrency platform if the service is widely used by people in my community.
3. People (peers and experts) important to me would support my investment in Cryptocurrency.
4. People who influence my behavior would support me in investing in Cryptocurrency instead of alternative means.

**(e) Perceived Usefulness**

1. I find that using cryptocurrency in electronic payments helps me to improve effectiveness, profitability and investment of my money.
2. I find that using cryptocurrency in electronic payments helps me to improve my transaction quality.
3. I find that using cryptocurrency in electronic payments helps me to decrease the transaction fee.
4. I am likely to use valuable Cryptocurrency technology as an alternative source of currency.
5. Using Cryptocurrency (Bitcoin) is more desirable than money because of the anonymity of its users.
6. Using Cryptocurrency (Bitcoin) for payments is time-saving and helps me to complete tasks more quickly.

**(f) Perceived Trust**

1. I believe that electronic payments made with cryptocurrency are trustworthy because they have the privacy of data collected.
2. I believe that electronic payments made with cryptocurrency are reliable because they avoid fraud and reduce the risk of transactions.
3. Even if they were not regulated, I would still trust cryptocurrencies.
4. I believe that Cryptocurrencies is trustworthy.
5. I feel assured that the technological structures adequately protect me from problems with Cryptocurrencies.
6. Cryptocurrencies have the ability to fulfill their task.

**(g) Financial Literacy**

1. I want to invest in cryptocurrencies because I have a good level of financial knowledge.
2. I want to invest in cryptocurrencies because I have a high capacity to deal with financial matters.
3. I want to invest in Cryptocurrency because I have a good level of financial capabilities.
4. I have a high capacity for dealing with any financial risk that occurred from Cryptocurrency investment.