CRYPTO CRAZE: UNVEILING THE MINDS OF MALAYSIAN MILLENNIALS TOWARDS CRYPTOCURRENCY

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Abstract. Cryptocurrency has seen tremendous growth and has gone through its periods of ups and downs. Using cryptocurrency, users can perform secure transactions thanks to the power of blockchain technology. Additionally, cryptocurrency has also seen increasing growth as a choice for investment, securing high level of return. Usually, the cryptocurrencies which are used as investments are the ones with better reputations and larger market capitalizations such as Bitcoin and Ethereum. Even so, cryptocurrency still faces challenges in mass adoption in its usage and investment. This study looks to determine whether the factors of risk, regulation, social influence, effort expectancy and financial literacy have a significant impact in the behavioural intention of a Malaysian young adult's consideration to invest in cryptocurrency. A sample of 253 Malaysian respondents has been gathered. Risk, effort expectancy, social influence and financial literacy are found to have a significant relationship with a Malaysian young adult's intention to invest in cryptocurrency. Regulation on the other hand, is the sole factor that has no impact on a Malaysian young adult's consideration to invest in cryptocurrency. The certainty of regulatory stability may be one explanation for the lack of influence of regulatory factors on young adults' consideration of investing in cryptocurrency.
Keywords: *cryptocurrency, risk, effort expectancy, social influence, financial literacy Malaysian millennials, investment decisions*

Introduction

In the current era which has been largely digitalized, cryptocurrencies have emerged and has seen a strong growth in interest as it seeks to revolutionize the financial industry. Some large names in the game are Bitcoin, Ethereum and BNB that have gained traction to act as an alternative investment or payment option among people of various age groups. With this, generation Z who are individuals in the age group of 8-25 have growing interests in the investment world. Additionally, research shows that individuals of this age group have had the largest increase in number of investors in the years of 2018 to 2022 (Tamtomo et al., 2023). As such, this shows that young adults in general have shown significant interest in investment opportunities which would include alternative investments such as cryptocurrencies. A research claims that the US government's decision to legalise cryptocurrencies and the launch of cryptocurrency exchange-traded funds (ETFs) have given millennials a feeling of market security and regulatory legitimacy. As so, this research will focus on investigating the behavioral intention of young adults in Malaysia to invest in cryptocurrencies.

What exactly is cryptocurrency? With various names such as digital or virtual currencies, tokens, coins, cryptocurrencies are defined as a digital currency that is decentralized in nature and utilizes cryptographic technology in order to secure transactions. With cryptocurrencies, acceptance of its usage is growing over the years as more and more countries have started to accept and regulate it (Library of Congress, 2018). As such, Malaysia is also a country that has placed its own regulatory rules on

cryptocurrencies. In 2019, the Anti-Money Laundering and Counter Financing of Terrorism (AML/CFT) Digital Currency (Sector 6) policy was introduced by Bank Negara Malaysia, BNM which seeks to regulate businesses that were involved in cryptocurrencies to abide these regulations that were set out (BNM, 2019). Furthermore, in 2020, the Securities Commission of Malaysia, SC had introduced a guideline which they had developed alongside BNM called Guidelines on Digital Assets that seeks to provide guidance on the usage of cryptocurrency in Malaysia (SCM, 2020). As such, it can be seen that framework and ground rules on the usage of cryptocurrencies had to be put in place with the growing interests by Malaysians in this field. Other than that, even though cryptocurrencies are not considered legal tender in Malaysia, BNM states that they will not ban the usage of these digital assets as it would be impeding innovation and creativity within the country.

The objective of this study is to examine the behavioral intention of young adults in Malaysia to invest in cryptocurrency. More specifically, we examine the impact of the behavioral factors of risk, regulation, effort expectancy, social influence and financial literacy of young adults in Malaysia to invest in cryptocurrency. In addition, control variables of this study will include age group, gender, residential area, ethnicity and knowledge in crypto.

Problem statement

In the research by Bhushan (2014), it was found that there has been the emergence of many new investment products and young individuals have more interest in these new investment options that are risky. With this, the emergence of cryptocurrency has definitely played a role in the behavior intention of young adults to invest in them. Even though cryptocurrency has seen continuous growth and popularity, there is still a gap in the understanding of the behavioral intentions to invest in cryptocurrency in a developing country (Ter Ji-Xi et al., 2021) or in this context, Malaysia. While there has been studies of behavioral intention of usage in cryptocurrency in different countries such as by (Alomari and Abdullah, 2023; Pham et al., 2021; Khasanovich et al., 2020; Arias-Oliva et al., 2019; Shahzad et al., 2018), there is still much to be understood within Malaysia. While there are studies that directly investigate the behavioral intentions in Malaysia, specific factors such as risk, regulation, social influence, etc. are yet to be studied in-depth in Malaysia. Through this study, the investigation of this gap shall take place to better understand the factors of risk, regulation, social influence, effort expectancy and financial literacy on whether or not they influence the intention to invest in cryptocurrency specifically in Malaysia. By having a better understanding on this area, it is beneficial not only academic wise as it can also serve as a benefit to policymakers, financial institutions or even industry leaders who want to know more about the situation of this digital finance industry in Malaysia. For instance, financial institutions in Malaysia such as banks could determine whether or not factors such as risk and regulation would largely affect their consumers intention to accept cryptocurrency. Using these information, they could implement changes or policies to integrate cryptocurrency into their system to better suit to their consumers needs. It is also hoped that regulators in Malaysia can make use of this study to further develop the cryptocurrency industry in the country.

According to Moorthy (2018), the market of cryptocurrency is constantly in an unstable state which further increases investors market speculations. Additionally, the author also mentioned cryptocurrency has a high level of anonymity and a decentralized

nature. These factors all then contribute to the need for regulation on cryptocurrency. In the journal by Tenk et al. (2019), it was mentioned that BNM has been closely monitoring cryptocurrency in the country regarding its mass adoption. Also highlighted in the same research of Tenk et al. (2019), BNM has implemented the AML/CFT for digital currencies in 2018.

Literature review and hypotheses development

Unified Theory of Acceptance and Use of Technology (UTAUT)

This study uses a theoretical framework that has been widely used in the technological field in regards to its adoption while its goal is to better understand the acceptance and usage behavior of the technology (Venkatesh et al., 2003). This unified model is known as the Unified Theory of Acceptance and Use of Technology, UTAUT and compromises of performance expectancy, effort expectancy, social influence and facilitating conditions as the factors (Venkatesh et al., 2003). For this study, a modified version of the UTAUT framework is adapted from the original and is used to better suit the relevant factors that are being studied to find out cryptocurrency adoption. These factors are risk, regulation, effort expectancy, social influence and financial literacy. In past studies, the UTAUT has been used to study the behavioral intention of users in adopting cryptocurrency such as Angeline et al. (2021) as well as Ter Ji-Xi et al. (2021).

Decision to invest in cryptocurrency

Investors choose to invest in different types of investment options as they seek to maximize capital growth and profits (Ramkumar, 2017). Cryptocurrency has became an investment that is available to retail investors but there is a high chance that one will lose their money (Zhao and Zhang, 2021). In recent times, many investors have decided to include cryptocurrencies in their investment portfolios (Zhao and Zhang, 2021). Based on the findings of Inci and Lagasse (2019), including cryptocurrencies in an investment portfolio provide benefits. As mentioned by Król and Zdonek (2022), young investors, or more specifically, Generation Z are more likely to invest in new investment alternatives that have more risks such as digital assets which include cryptocurrency. In the study by Zhao and Zhang (2021), it was found that investors would be more likely to decide to invest in cryptocurrencies when they have more financial literacy and investment experience. This is in line with the findings of Arli et al. (2021) where it was found that investors who have a better understanding of the know-how of cryptocurrency will develop a higher level of trust and invest in it. According to an analysis by Khasanovich et al. (2020), it was shown that investors are ready to invest in cryptocurrency if there is a certain level of innovation in their state economy. This means that the higher the level of innovation, the more likely investors would be in investing cryptocurrency. Moreover, it was concluded by Gazali et al. (2018), that the decision to invest in cryptocurrency is based on different factors such as attitude, subjective norms, financial risk tolerance and perceived benefits.

Risks

Unique risks in cryptocurrency

As crypto has now grown immensely where there is the existence of thousands of different cryptocurrencies with each being different from one another while having its

own set of unique characteristics and utilities, each may possess a different level of risk (Sun et al., 2020). In the words of Blachman and Steffen (2019), transaction, security and regulatory are some of the types of risks that cryptocurrencies possess. Additionally, they have also mentioned that if an investor intends to invest in cryptocurrencies as a part of his retirement plan, the risks that crypto has should be considered.

High-risk, high-reward nature of cryptocurrency investment

Furthermore, Nandal and Jora (2020) says that cryptocurrencies are a type of investment that is extremely high risk but can at the same time, can provide high rewards. If an individual chooses to hedge against cryptocurrencies, there will be a unique set of challenges that he has to face as cryptocurrencies possess idiosyncratic or unsystematic risks (Inci and Lagasse, 2019). Furthermore, Hasan et al. (2022), suggests that when there is an increase of involvement in cryptocurrencies by institutions, there will be an increase in risk of liquidity transmission across cryptocurrencies which means that the changes in liquidity of one cryptocurrency could bring about a cascading effect, which then impacts liquidity of other cryptocurrencies.

Online vulnerabilities and diversification challenges

With cryptocurrency living online, cryptocurrency users or investors are also exposed to the risk of being hacked as the usage of cryptocurrencies revolves around an online process that requires a user to enter a password as well (Aliu et al., 2020). Additionally, the research conducted also tells us that a crypto portfolio, the Crypto Index 20 which tracked the top 20 crypto in the market was exponentially risker than traditional indexes or equity portfolios such as the FTSE 100, FTSE MIB, IBEX 35 and different crypto portfolios (Aliu et al., 2020). While crypto is decentralized in nature, it is due to that reason that there is a disadvantage where there is the vulnerability towards different risks as they lack the protection that a centralized system may have (Smith, 2019). In addition, it was mentioned by Sharma et al. (2019) that Bitcoin being the largest and most popular cryptocurrency, it is often used to help diversify a portfolio in minimizing its risk effectively. Even so, other risks such as terroristic acts, money laundering, fraud, theft, etc. have become a problem due to the use of cryptocurrency (Sharma et al., 2019).

Risks in cryptocurrency usage and investment

Cumming et al. (2019) discussed about risks that come with the usage of cryptocurrencies which include cyber-security fraud which had brought about hacking issues in crypto exchanges. There were also other risks which were mentioned such as ransomware, crypto-jacking, etc. Adding on to this, there has still yet to be a proper risk assessment method for cryptocurrencies which is a cause for risk for an investor and the main culprit for this will be the high volatility and heterogeneity of cryptocurrencies (Magnusson and Stenberg, 2022). Moreover, the usage of cryptocurrencies that relies on the use of a password brings about the risk of attacks, errors or dishonest partners where as a result, insecurities become an issue for users and investors (Arli et al., 2021). Therefore, the following hypothesis has been developed:

Hypothesis 1 (H1): Risk has a significant relationship with the intention of a Malaysian young adults consideration to invest in crypto.

Regulations

Regulatory challenges in cryptocurrencies

In the words of Lee et al. (2018), it was said that cryptocurrencies still have unregulated identities where proper assessments still need to be performed before they can be globally accepted and confirmed to be secure and viable as an investment option. Furthermore, cryptocurrencies are still not largely controlled and regulated by the government which means that they are also exposed to risks of different levels (VanDenburgh and Daniels, 2021). Additionally, García-Corral et al. (2022) says that in comparison with traditional financial markets, cryptocurrencies are much less regulated which makes them decentralized. Furthermore, Rejeb et al. (2021) also adds on to this by saying that the regulation of crypto when compared to the traditional financial system is a lot more different whereas some countries do not even have regulation on cryptocurrencies at all including Austria, Belgium and Croatia.

Country-specific regulatory approaches

In each country, the regulatory approach towards cryptocurrencies may be different. In China, different sets of regulations have been put in stone by the Chinese government which has prevented the widespread and adoption of cryptocurrency in the country (Yan et al., 2022). Conversely in the United Kingdom, there is a regulatory system in place for cryptocurrencies but through research, it was found that the effectiveness of the regulatory system is poor and criticized for still lacking in many aspects where there is still room for improvements (Huang, 2021). In the context of Malaysia, the growth and innovation of cryptocurrencies are supported through a minimalist approach which is used to regulate the crypto sector (Sukumaran et al., 2022). In the opinion of Azgad-Tromer (2018), regulations should be put in place for cryptocurrencies similar to traditional financial securities. To regulate new technology such as cryptocurrency, user protection and utility preservation should be taken into account while still trying to develop innovation within the space (Hughes and Middlebrook, 2015). Regulating a new technology such as crypto is not an easy task as implementation that is too fast, too early, too much or even too slow can negatively impact its growth (Hughes and Middlebrook, 2015). In order to help make digital currencies such as cryptocurrencies to be more legitimate, regulations need to be enforced (Hou and Shen, 2022). Furthermore, Schaupp et al. (2022) believes that in the United States, having federal regulation imposed on blockchain and crypto would largely encourage investment.

Challenges and opportunities in crypto regulation

To develop and achieve trust in cryptocurrency technology, uncertainties should be avoided which is why having regulatory support is important (Wu et al., 2022). Schaupp et al. (2022) believes that in the United States, having federal regulation imposed on blockchain and crypto would largely encourage investment. On the other hand, Andrianto and Diputra (2017) argue that the lack of regulations that is put on cryptocurrencies has benefited and helped develop the crypto market as its users now have full control over transactions, driving adoption. Adding on to this, research

performed by Sun et al. (2020) found that individual investors have higher intentions to invest in cryptocurrencies due to this new technology still having loose regulations and not being restricted by these rules and regulations. On the flip side of the coin, Hou and Shen (2022) mentioned that with cryptocurrency's decentralized nature and lack thereof a centralized authority, crypto transactions are much slower than a centralized system which is a major disadvantage.

Regulation for cryptocurrencies in Malaysia

In Malaysia, cryptocurrencies is legal but not considered legal tender (Tenk et al., 2019). Furthermore, cryptocurrencies in Malaysia are regulated under several different regulation including the AML/CFT Digital Currencies (Sector 6), Capital Markets and Services, Prescription of Securities, Digital Currency and Digital Token Order 2019 and several others. Additionally, the author also mentioned BNM closely monitoring cryptocurrency in the country and proof is the introduction of the AML/CFT Digital Currencies (Sector 6) which is the official cryptocurrency regulation in Malaysia. With these regulations in place, it was still recommended by Angeline et al. (2021) that the Malaysian government should still put more effort into the regulations of cryptocurrency in Malaysia to attract investments from technology players. Moreover, Sukumaran et al. (2022) concluded that regulation of cryptocurrency in Malaysia is extremely important due to the lack of risk awareness and crypto knowledge among Malaysian investors. Therefore, the below hypotheses has been formulated:

Hypothesis 2 (H2): Regulation has a significant relationship with the intention of a Malaysian young adults consideration to invest in cryptocurrency.

Social influence

Social influence in cryptocurrency investment: Trust and group dynamics

Social influence is deemed as whenever there are changes in an individuals attitude or behavior through peer pressure, leadership, socialization, etc. (Gupta et al., 2021). In the words of Arias-Oliva et al. (2019), social influence is when it is encouraged by society to use a certain technology which in this case, is cryptocurrency. Through research by Tjondro et al. (2023), it was found that individuals who tend to act positively towards their group members resulted in poor decisions that had them make irrational investments. This is due to individuals putting too much trust in their group members which ultimately, affects their investment decisions (Tjondro et al., 2023). It was also mentioned that to be recognized within a social group, the investor or individual will have a biased behavior in investment decisions in order to fit in (Tjondro et al., 2023). According to Tjondro et al. (2023), people who invest in cryptocurrencies also tend to follow advice through the social environment that is closest to them. Regarding an investors attitude towards cryptocurrency, it is said to derive from the investors own social surroundings and becomes even more pronounced during market downturns let it be positively or negatively (Tjondro et al., 2023).

Peer influence in the cryptocurrency ecosystem

According to Krafft et al. (2018), influence by peers is a major element within the cryptocurrency ecosystem and the reason for that is due to cryptocurrencys nature of

being a speculative asset. As such, the behavioral intention of individuals to use or invest in cryptocurrency is largely dependent on social influence. Based on research by Ter Ji-Xi et al. (2021), cryptocurrencies when being largely recommended especially by those close to them such as family, friends, influencers, etc., they are highly likely to engage with cryptocurrecnies. Additionally, through research conducted by Nseke (2018) and the usage of the UTAUT model, it was concluded that social influence is a factor that favorably adds on to the adoption of cryptocurrency in African countries.

Subjective norm and bitcoin investment: Monetary aspects and social influence

Conversely, Ryu and Ko (2019) found that a positive subjective norm related to Bitcoin investments did not reinforce impulsive behavior but instead, actually weakened it. This was explained to be a result of Bitcoin investment being an action that involves monetary aspects which is different from solely adopting a new technology (Ryu and Ko, 2019). As so, investors may not be fully influenced by the subjective norm or their peers to invest in Bitcoin, the largest cryptocurrency is the world. Similarly, Arias-Oliva et al. (2019) also came to the conclusion that social influence is not a factor in which affects the intentions of an investor to use cryptocurrencies. As such, the following hypotheses has been suggested:

Hypothesis 3 (H3): Social influence has a significant relationship with the intention of a Malaysian young adults consideration to invest in cryptocurrency.

Effort expectancy

Effort expectancy and cryptocurrency learning

Effort expectancy, as defined by Gupta et al. (2021), is the amount of effort that is put in by an individual to learn a certain new technology. To properly use cryptocurrency as a financial tool, a certain level of knowledge is needed by the user as cryptocurrency is still a new technology which lacks stability (Alomari and Abdullah, 2023). By putting effort into learning about cryptocurrency, an investor can then protect himself from fraud (Alomari and Abdullah, 2023).

User-friendly technology and its impact on success

When a technology is user-friendly while being able to provide benefits such as flexibility, convenience and efficacy to a user, it has a higher chance of flourishing and succeeding (Catherine et al., 2017). With similar results from Hussain et al. (2019) and Kishore and Sequeira (2016), financial technology which is en route to being accepted is largely affected by the amount of effort that is required to learn it. This means that effort expectancy regarding cryptocurrency should have similar results. Looking at results of Shahzad et al. (2018), the study concluded that a factor that positively influenced the adoption of cryptocurrency is effort expectancy alongside the existence of ease of use.

Impact of effort expectancy on intention and ownership

According to Alomari and Abdullah (2023), it is said that public university students in Saudi Arabia would have their intention to use cryptocurrency increased when it was perceived that usage required little effort and was easy to use. From research by

Oksanen et al. (2022), crypto ownership has a positive relationship with a low level of effort which is expressed by psychological distress, perceived loneliness and stress. As such, it was determined that owners of crypto, meaning the investors will have a low level of behavioral trait effort, putting less effort into making financial decisions regarding crypto (Nemeczek and Weiss, 2023). Additionally, Yusof et al. (2018) found that effort expectancy has a weak effect on an individuals choice to use cryptocurrency. The following hypotheses has been proposed:

Hypothesis 4 (H4): Effort expectancy has a significant relationship with the intention of a Malaysian young adults consideration to invest in cryptocurrency.

Financial literacy

Financial literacy in the context of cryptocurrency

According to Chan et al. (2022), financial literacy is known as how an individual makes a financial decision to the best of his abilities using the knowledge that he already has. As such, financial literacy in this research study will be known as the knowledge an individual has regarding cryptocurrency financially. As mentioned in the study by Seraj et al. (2022), investors would be more likely to have the behavior to make investments when they have financial literacy regarding alternative investments. Based on Saputro and Lestari (2019), financial decisions are largely affected by financial literacy and cryptocurrency investments are also a part of financial transactions and decisions.

Impact of financial literacy on cryptocurrency behavior

Through the research by Syarkani and Tristanto (2022), a crypto investor should have a good understanding of cryptocurrency and financial literacy before making a decision to invest. By the study of Lusardi (2019), people who have a high financial literacy will be able to achieve a higher return on investment even with assets that possess more complexity such as cryptocurrency. Additionally, Grohmann et al. (2018) concluded a viewpoint where it is suggested that people with low financial literacy will be more avoidant with cryptocurrency investments. Based on the study by Syarkani and Tristanto (2022), individuals who have financial literacy and knowledge regarding cryptocurrencies would be more willing to take the risk and investment in this speculative asset as when compared to those who have a lower financial literacy, they will have the ability to understand and grasp the knowledge of cryptocurrency and its technology better which as a result, make better financial decisions. The following hypotheses has been proposed:

Hypothesis 5 (H5): Financial literacy has a significant relationship with the intention of a Malaysian young adults consideration to invest in cryptocurrency.

Materials and Methods

Target population and target location

In this study, Malaysian young adults will be the target population where according to Stroud et al. (2015), young adults are ages approximately 18 to 26. The reason for

choosing young adults as the target population is due to cryptocurrency being an emerging new type of asset that one can invest in. It was mentioned by Król and Zdonek (2022) that digital assets such as cryptocurrency has a high interest among young people. Furthermore, a study by Tjiptono et al. (2020) also found that young people or in this study, Gen Z individuals are tech-savvy which is certainly a plus when wanting to deal with cryptocurrency. Furthermore, the target location chosen Malaysia. In the past, Malaysia was a part of a group of countries which have experienced newly industrializing economies, NIE (Lai and Yap, 2004). By being tech-driven alongside high-tech development, Malaysia was able to boost their economic growth tremendously. This leads the researcher to believe that in our world that is being overtaken by technology such as artificial intelligence, AI and the Internet of Things, IoT, Malaysia has the potential to take advantage of these new technology in order to further grow its economy. In addition, Loh et al. (2021) also mentioned that in recent years, Malaysia has largely grown its digital economy but to be wary of the potential challenges it may bring. It was recommended that there should be balance between the good and bad of rapidly growing digitally due to the many challenges that adopting new technologies may bring. By the research of Yussof and Al-Harthy (2018), cryptocurrency is something that can be welcomed into our country to further develop our fintech industry but only if the financial regulatory guidelines around it are properly set in place first. With this, it proves that Malaysia is a country that condones technological advancement and is suitable to be studied for this research.

Sample size

According to Andrade (2020), researchers normally avoid samples sizes that are too large due to monetary issues and the increased difficulty to conduct the research properly. Hence, a sample size calculator shall be used in order to determine a good sample size. As such, which have been inputted into the calculator to find the ideal sample size. Confidence level is set to 95%, margin of error is set to 8% which means a set significance of 0.08, population proportion of 50% and population size of Malaysia which is approximately 34 million in 2023. With this, it resulted in a sample size of 151 respondents. The sampling technique used is convenience sampling which is under the category of nonprobability sampling, the respondents will personally be gathered by the researcher mainly through online methods such as social media and online forums. Respondents of the survey should have prior knowledge regarding cryptocurrency.

Research instrument and questionnaire design

Survey questionnaires were created through Google Forms will take advantage of this and shall be distributed online through various online social media platforms such as Meta, WhatsApp, Instagram, Microsoft Teams, etc. This study employed primary data and a quantitative research method to investigate the variable relationships. Closed-ended questions are selected as to design the questionnaire. There is a fixed set of answers that the respondents will have to answer to (Roopa and Rani, 2012). The questionnaire is comprised of 7 main sections starting off with the demographics, perceived risks in crypto, regulations in crypto, effort expectancy in crypto, social influence in crypto, financial literacy in crypto and finally, investing in crypto. Not including the introduction and demographic, the other sections of the questionnaires each contain 3 to 5 questions which seeks to find out more on whether or not these

factors affect a young adults decision to invest in crypto. A 5-point Likert Scale has been used which is an ordinal scale that helps the respondents in rating how much they agree or disagree with the statement. Measurement instruments are shown in *Table 1*.

Table 1. *Measurement instrument.*

Factors	Questions		Source
Risks in Crypto	Investing in crypto is risky	RKQ1	Sukumaran et al. (2022)
	There are too many uncertainty associated with investing in cryptocurrencies	RKQ2	Sukumaran et al. (2022)
	Investing in cryptocurrencies are much riskier than other types of currencies/investments	RKQ3	Sukumaran et al. (2022)
Regulations in Crypto	It is essential for any crypto trading platforms operating in Malaysia to be legal and regulated	RGQ1	Yan et al. (2022)
	Crypto trading platforms that are legal and regulated will be more trusted by potential investors	RGQ2	Yan et al. (2022)
	The regulatory challenges that crypto faces influences my decision to invest in cryptocurrencies	RGQ3	Ter Ji-Xi et al. (2021)
Effort Expectancy in Crypto	Learning how to invest in cryptocurrencies is easy	EEQ1	Arias-Oliva et al. (2019)
	Becoming an expert in cryptocurrency investment is easy	EEQ3	Arias-Oliva et al. (2019)
	The process involved in investing in cryptocurrencies is clear and understandable	EEQ4	Arias-Oliva et al. (2019)
	Becoming adept in investing in cryptocurrency only takes a short amount of time	EEQ5	Arias-Oliva et al. (2019)
Social Influence in Crypto	There are people around me who have recommended me to invest in cryptocurrencies	SIQ1	Arias-Oliva et al. (2019)
	In general, crypto communities have supported the idea to invest in cryptocurrencies	SIQ2	Chan et al. (2022)
	My friends influence my decision to invest in crypto because it will give me prestige	SIQ3	Chan et al. (2022)
	Social media influencers have already or can affect my decision to invest in cryptocurrencies	SIQ4	Arias-Oliva et al. (2019)
	I talk about cryptocurrencies with those around me as it has great utility	SIQ5	Gupta et al. (2021)
Financial Literacy in Crypto	Having good financial literary will help me in making better decisions when investing in cryptocurrencies	FLQ3	Gupta et al. (2021)
	Investing in cryptocurrencies requires me to have a certain level of financial knowledge in investing	FLQ4	Zhao and Zhang (2021)
	Having financial literacy crypto is more important than investment experience when investing in crypto.	FLQ5	Sukumaran et al. (2022)
Investing in Crypto	Investing in cryptocurrencies with its high risk-high reward will help increase my chances of achieving my financial goals	BIQ1	Pham et al. (2021)
	Cryptocurrencies are a preferred investment choice for me when compared to other investment options	BIQ2	Alomari and Abdullah (2023)
	I intend to invest in cryptocurrencies in the future	BIQ3	Pham et al. (2021)
	I will invest in cryptocurrencies on a regular basis	BIQ4	Pham et al. (2021)
	I am willing to make an effort in invest in cryptocurrency	BIQ5	Nandal and Jora (2020)

Results and Discussion

Descriptive analysis

Table 2 contains the demographic data of 253 respondents. There has been 123 male responses which takes up 48.6% of the total, and there are 127 females, which took up 50.2% of the total percentage. There were only 3 respondents who chose the prefer not to say answer which is only 1.2% out of 100%. Next, the youngest age group, it consists of the most respondents, contains of 186 respondents of 18 to 22 years old, which takes up a whopping 73.5%. Next, the second most answered age group is the 23 to 26 age group, took up 23.7% of the total respondents with a number of 60. Finally, the oldest age group of 27-30 old had 7 respondents which is a miniscule 2.8%. As this study focuses on young adults which starts from age of 18 to 26, the 7 respondents who are

aged 27 to 30 are over-age for this study and thus, their data will be unusable. Following on, the question of have heard or have knowledge on crypto was included in the survey questionnaire, to ensure that the respondents have at least some knowledge regarding crypto in order for them to be able to answer the questions of the survey. With this, 237 out of 253 respondents, which is 93.7% answered yes which means that they have heard of or have knowledge on crypto. On the other hand, 16 respondents, which is 6.3% answered with no. As such, the data of these 16 respondents would not be used in the data analysis of this study.

***Table 2**. Demographic profile of respondents.*

Category	Frequency (N)	Percentage (%)
Gender		
Male	127	50.2
Female	123	48.6
Prefer not to say	3	1.2
Age Group		
18-22	186	73.5
23-26	60	23.7
27-30	7	2.8
Have heard or have knowledge on crypto		
Yes	237	93.7
No	16	6.3
Nationality		
Malaysian	253	100
Non-Malaysian	0	0
Ethnicity		
Chinese	224	88.5
Malay	11	4.3
Indian	14	5.5
Others	4	1.6

Moreover, the nationality of the respondents was also considered for this study. One of the criteria to participate in this research study is to be a Malaysian. As such, all 253 respondents who took part in the survey are Malaysian. Next, the respondents were also asked to provide their ethnicity. With this, most respondents turned out to be Chinese as 224 out of 253 respondents which is 88.5% of the total answered Chinese. Next, there were 11 Malays and 14 Indians who also took part in this survey. This brings their percentage total to 4.3% and 5.5% respectively. Finally, 4 respondents answered Others. These 4 respondents only contributed 1.6% of the total percentage.

Measurement model evaluation-Construct reliability and convergent validity

Reliability tests such as Outer loading, Cronbachs alpha, and composite reliability, as well as validity tests including convergent and discriminant validity, are conducted and shown in *Table 3* (Hair et al., 2011).

***Table 3**. Results of testing construct reliability.*

Constructs	Items	Outer loadings	Reliability test		Discriminant validity
			Cronbach alpha	Composite reliability	AVE
Effort Expectancy (EE)	EEQ2	0.748	0.872	0.907	0.662
	EEQ3	0.843			
	EEQ4	0.798			
	EEQ5	0.846			
Financial Literacy (FL)	FLQ3	0.784	0.733	0.834	0.626
	FLQ4	0.762			
	FLQ5	0.826			
Regulation (RG)	RGQ1	0.794	0.847	0.901	0.753

	RGQ2	0.943			
	RGQ3	0.86			
Risk (RK)	RKQ1	0.837	0.736	0.85	0.657
	RKQ2	0.900			
	RKQ3	0.679			
Social Influence (SI)	SIQ1	0.786	0.829	0.88	0.597
	SIQ2	0.597			
	SIQ3	0.799			
	SIQ4	0.836			
	SIQ5	0.822			
Intention To Invest (BI)	BIQ1	0.695	0.886	0.917	0.691
	BIQ2	0.823			
	BIQ3	0.877			
	BIQ4	0.891			
	BIQ5	0.855			

Factor/outer loading

The measurement model evaluation is to have the observed variables consistency and validity to be evaluated (Memon and Rahman, 2014). With this, the standardized outer loading or may also known as standardized factor loadings of the observed variables are calculated according to its corresponding latent factor. According to Cheung et al. (2024) as well as Fornell and Larcker (1981), the convergent validity may be examined through the values of the standardized factor loadings. As mentioned previously, a value of 0.7 and above is ideal and considered extremely satisfactory, 0.5 is acceptable and any lower than that should be eliminated. Looking at *Table 3*, the factor loadings of each items have a value above 0.5. The highest factor loading value sits at 0.943 from RGQ2 while the lowest is 0.597 from SIQ2. Additionally, only one item which is SIQ2 fell below the threshold of 0.7. While it is not an ideal value, it is still aceptable. With the other factor loadings having a value of above 0.7 except RKQ3 with 0.679, this means that the observed variables have a strong and reliable relationship with its corresponding latent factors.

Average Variance Extracted (AVE)

Moreover, the Average Variance Extracted, AVE test is also used on variables in order to determine convergent validity (Memon and Rahman, 2014). According to Hair et al. (2011), the AVE should be higher than 0.5 in order for it to be considered having an enough level of convergent validity. Based on *Table 3*, the AVE have been calculated out to be 0.662, 0.626, 0.691, 0.753, 0.657 and 0.597 respectively. As such, each AVE value being over 0.5 proves a sufficient degree of convergent validity and also means that each latent variable is able to explain over half of the variance of its indicator (Fornell and Larcker, 1981).

Cronbach's alpha

Moving on, the Cronbachs alpha value will be looked at. According to Cho (2016), Tavakol and Dennick (2011) as well as Cronbach (1951), the Cronbachs alpha, CA is actually reliability coefficient which has been the most commonly-reported in research studies using SEM. Based on the famous study by Tavakol and Dennick (2011), various studies suggest acceptable value ranges from 0.7 to 0.95. By Taber (2018), Memon and Rahman (2014) as well as Cortina (1993), a Cronbachs alpha value higher than 0.7 is suggested for a study to be considered reliable. With this, *Table 3* shows that the CA values are 0.872, 0.733, 0.886, 0.847, 0.736 and 0.829 respectively. With all the values

being above 0.7, the constructs or independent and dependent variables can be said to be consistent and reliable.

Composite reliability

Composite reliability (CR) is another method to assess the reliability of the observed variables. According to aber (2018) as well as Memon and Rahman (2014), composite reliability is an even better way to assess internal consistency when compared to the Cronbachs alpha. When the composite reliability in a research study is higher than 0.7, it is then considered acceptable (Hair et al., 2011). Based on *Table 3*, the CR values are 0.917, 0.849, 0.935, 0.899 and 0.864 and 0.902 respectively. As such, all values are higher than 0.7.

Discriminant validity

A discriminant validity assessment is performed for a study to help ensure that the construct are distinguishable to one another (Murugan et al., 2019; Fornell and Larcker, 1981). Based on research by Henseler et al. (2015), the Heterotrait-monotrait ratio, HTMT criteria should be used for a discriminant validity assessment instead of the FornellLarcker criterion and cross-loading assessment. Their research shows that using these as the discriminant validity assessment proves to be a failure as it has an extremely low sensitivity. Different studies suggest different thresholds such as not exceeding 1, 0.9 or even 0.85 (Ab Hamid et al., 2017; Henseler et al., 2015). Looking at *Table 4*, each value is between the range of -1 and 1 with the highest being 0.864. This means that the discriminant validity criterion has been satisfied.

***Table 4**. Heterotrait-monotrait ratio, HTMT.*

Category	Effort expectancy	Financial literacy	Intention to invest	Regulation	Risk	Social influence
Effort Expectancy (EE)						
Financial Literacy (FL)	0.245					
Intention To Invest (BI)	0.571	0.332				
Regulation (RG)	0.265	0.06	0.16			
Risk (RK)	0.183	0.059	0.255	0.192		
Social Influence (SI)	0.608	0.338	0.849	0.195	0.145	

Variance Inflation Factor (VIF)

The variance inflation factor (VIF) is used to help detect multicollinearity (Hair et al., 2019). VIF values above the value of 10, indicates potential issues with multicollinearity (Midi et al., 2010; Belsley et al., 2005). The values in *Table 5* depict that there are no issues with multicollinearity.

***Table 5**. Variance Inflation Factor, VIF.*

Category	VIF
EE -> BI	1.46
FL -> BI	1.093
RG -> BI	1.092
RK -> BI	1.043
SI -> BI	1.448

Structural equation modelling

Structural equation modelling (SEM) illustrated the relationships between the constructs and their corresponding constructs, while the latent variable relationship was

depicted by the structural model (Hair et al., 2019). A structural model examines whether the hypothesised research model is a good fit to the observed data. The relationships among the variables specified in the theoretical model are evaluated via the path coefficient (β), effect size (f2), predictive relevance (Q2), and coefficient of determination (R2). The path coefficient (β) measures the hypothesised relationship between the constructs, the p-value assesses the significance level (Hair et al., 2019), and the nonparametric measure, the Q-squared coefficient (Stone-Geisser Q-squared coefficients, Q2), is used to evaluate the models predictivity (Kock, 2015). According to Heir et al. (2019), predictive relevance (Q2) of larger than 0 indicates the exogenous have predictive relevance for endogenous. The effect size (f2) of 0.35 (substantial effect), 0.15 (moderate effect) and 0.02 (small effect) is referred (Cohen, 2013).

The bootstrapping function of the SmartPLS software has been used to provide the researcher with the t-values. For this study, the default setting of 5000 samples has been used to calculate the t-values. According to Hair et al. (2011), values of coefficient of determination (R2) statistic of 0.75, 0.5 and 0.25 is leveled as substantial, moderate and weak respectively. The R2 value is sitting at 0.586 (*Table 6*) which means that it is at a moderate level and approximately 58.6% of the dependent variables variability can be explained by this studys independent variables. According to Hair et al. (2011), the critical value of a two-tailed test with a significance level of 0.05 is 1.96 in hypothesis testing (Critical-value Approach). The structural model parameters, an indication of the test results for the hypotheses, were depicted in Table 6. The path coefficient (β) between (EE) and (BI), is positive and significant (β=0.138, t=2.543, p<0.05), with a small to moderate effect size (f2=0.032). The positive influence of (EF) on investors' BI, as stated in H1, has been supported. This indicates that effort expectancy has a significant relationship in a Malaysian young adult's consideration to invest in cryptocurrency.

***Table 6**. Bootstrapping results.*

Hypothesis	Path	Path coefficient (β)	t value	p value	Decision	R^2	f^2	Q^2
H1	EE>BI	0.138	2.543	0.011	Supported	0.586	0.032	0.056
H2	FL>BI	0.097	1.981	0.048	Supported		0.021	
H3	RG>BI	0.002	0.054	0.957	Not Supported		0.000	
H4	RK>BI	-0.131	3.366	0.001	Supported		0.040	
H5	SI>BI	0.624	12.356	0.000	Supported		0.651	

The path coefficient (β) between (FL) and (BI) was positive and significant (β=0.097, t=1.981, p<0.05), with a small to moderate effect size (f2=0.021). H2 is supported, this determines that financial literacy has a significant relationship in a Malaysian young adult's consideration to invest in cryptocurrency. Next, the path coefficient (β) between (RK) and (BI) was negative and significant (β=-0.131, t=3.366, p<0.01), with a small to moderate effect size (f2=0.040). H4 is supported, hence, risk has been determined to have a significant relationship in a Malaysian young adult's consideration to invest in cryptocurrency. The path coefficient (β) between (FL) and (BI) indicates that the relationship is positive and significant (β=0.624, t=12.356, p<0.01), with a substantial effect size (f2=0.651). The results affirmed H5, indicating that the financial literacy of investors has a significant impact on investors' intention to invest. In contrast, the path coefficient (β) between (RG) and (BI) indicates that the relationship is insignificant (β=0.002, t=0.054, p>0.10). H3 is not supported which

means is that regulation is not a factor that influences a Malaysian young adults consideration to invest in cryptocurrency (*Figure 1*).

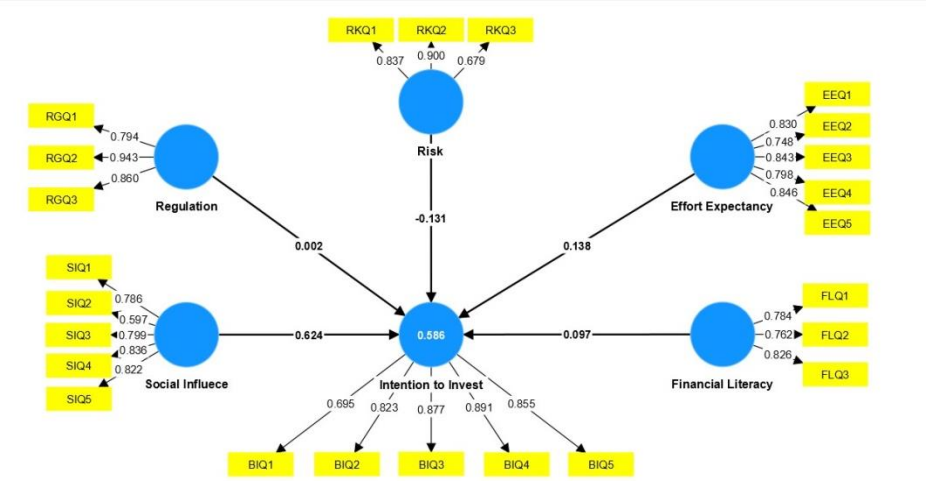

Figure 1. *Structural model.*

Conclusion

Based on results from this study, effort expectancy has a positive and significant relationship with the intention of a Malaysian young adults consideration to invest in crypto with the successful rejection of the null hypothesis. In line with, researches such as Alomari and Abdullah (2023), Gupta et al. (2021), Ter Ji-Xi et al. (2021) as well as Arias-Oliva et al. (2019), their results say that effort expectancy does indeed influence crypto usage or investment decisions. From this, it can be argued that the level of difficulty to learn about cryptocurrencies such as its regulations, hot wallet, cold wallet, exchanges, etc. plays a large role in an investors decision to engage and invest in cryptocurrencies. In Gupta et al. (2021), blockchain technology which is the tech that is used by cryptocurrencies, may be confusing and difficult to be comprehended by some which prevents its mass adoption. As such, the chances of an investor to start investing in crypto will definitely go up if the process to use and invest in it are simple and straightforward.

Furthermore, financial literacy is also to have a positive and significant relationship with a Malaysian young adults intention to invest in crypto. The null hypothesis for this factor is also successfully rejected. Similarly, there are studies which have identical findings noting that financial literacy does impact intention to invest in cryptocurrency. Syarkani and Tristanto (2022) noted that financial literacy positively impacts crypto investors intention and attitude to invest. This is because financial literacy is said to be one of the basic components when making investment decisions. In the study of Kumari et al. (2023), investors who have a higher level of financial literacy proved to have the ability to achieve higher gains in the crypto market than those with a lower level of financial literacy. This is due to the fact that these people may have better technological awareness which is very suited to the nature of cryptocurrencies. On the other side of the spectrum, there are studies which have findings opposite to this studys result (Pham et al., 2021; Arias-Oliva et al., 2019) where financial literacy proved to be a factor that has no significant relationship in the adoption or acceptance of cryptocurrency. What

this determines is that no matter what level of financial knowledge an investor possesses, it does not impact their intention to invest or use cryptocurrency. What this could mean to these people is that they believe cryptocurrencies may not be a worthy investment choice even if one has knowledge of cryptocurrencies. Essentially, they do not have trust on cryptocurrencies.

Moving along, risk which is another factors that has been studied in this study is also concluded to have a significant relationship with a Malaysian young adults intention to invest in crypto as the null hypothesis is rejected but its correlation is negative with a negative path coefficient value. In Miraz et al. (2022) it was said that volatility, which is a risk of cryptocurrencies has a significant role in a consumers intention to use cryptocurrency in Malaysia. Other than that, Sun et al. (2020) found out that perceived risk is a factor that influences investors in switching over to cryptocurrency investments from traditional investments. In contrast from results of Sukumaran et al. (2022), it was deemed that perceived risk played no influence in the intention to invest in cryptocurrency. Additionally, Ter Ji-Xi et al. (2021) also came up with results that were surprising as they have also found risk to be nonsignificant as a factor in intention to use cryptocurrency among Malaysians.

Furthermore, social influence has been concluded to be a factor that influences a Malaysian young adults consideration to invest in crypto as the null hypothesis may be rejected after performing the t-test. With this, this hypothesis follows the footsteps of researches that found social influence to be a factor that influences investment decision in crypto. For instance, Gillies et al. (2020), mentions that social influences the intention to use Bitcoin in Malaysia. Additionally, Bhuvana and Aithal (2022) suggested that due to online investor sentiment and social media culture, it largely impacts the intention to use cryptocurrency, especially in the younger audience. In addition, Tjondro et al. (2023) concluded that the social environment, or specifically the people close to them such as their family and friends, actually influences their investment decisions in crypto. With this, social impacts definitely play a role in the behavioral intention of young adults these days which could have been derived from these generation of individuals being exposed to social media since a young age. However, in Ter Ji-Xi et al. (2021), social influences has been determined to not be a significant factor that influences Malaysians intention to use cryptocurrencies. The author suggested that his results came out as so due to Malaysians being hesitant with the lack of knowledge regarding cryptocurrency.

Finally, regulation is the only factor in this study to not have a relationship with a Malaysian young adults consideration to invest in crypto with the failure to reject the null hypothesis. According to Moon and Hwang (2018), the study found that facilitating conditions proved to be an insignificant factor in behavioral intention to use fintech. In this context, the facilitating conditions are infrastructure or organization in place to facilitate the use of cryptocurrency such as the regulations in Malaysia which facilitates the legal use of cryptocurrency in the country. Makanyeza and Mutambayashata (2018) suggested that regulation did not have a role in the intention to use plastic money. In the context of this study, cryptocurrencies are similar to plastic money by acting as a replacement for physical money. Perhaps, the regulatory stability may also be the effect for the lack of influence of regulatory factors on young adults' consideration of investing in cryptocurrency.

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Conflict of interest

The authors confirm that there is no conflict of interest involved with any parties in this research study.

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