The Influence of Perceived Risk and Perceived Value on Consumer Adoption of Cryptocurrency

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อิทธิพลของการรับรู้ความเสี่ยงและการรับรู้คุณค่าต่อการยอมรับสกุลเงินคริปโตของผู้บริโภค

นายอาทิตย์ รอดพังเทียม

สารนิพนธ์นี้เป็นส่วนหนึ่งของการศึกษาตามหลักสูตรปริญญานิเทศศาสตรมหาบัณฑิต
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การวิจัยครั้งนี้มีวัตถุประสงค์เพื่อศึกษาการรับรู้ถึงความเสี่ยงและคุณค่าของผู้ใช้งานสกุลเงินค
ริปโตจากแพลตฟอร์มโซเชียลมีเดียเรดดิทโดยประเมินอิทธิพลของการรับรู้ความเสี่ยง (PR) และ การรับรู้
คุณค่า (PV) ที่มีต่อการตัดสินใจยอมรับสกุลเงินคริปโต งานวิจัยนี้ได้นำการวิเคราะข้อมูลทางประชากรของ
(เพศ, อายุ, ระดับการศึกษา, รายได้, ประสบการณ์การลงทุน) เป็นตัวแปรควบคุม งานวิจัยนี้ได้ดำเนินการ
ด้วยวิธีการเชิงปริมาณโดยใช้เทคนิคการสำรวจแบบสอบถาม ข้อมูลถูกรวบรวมด้วยการสุ่มตัวอย่างแบบ
เจาะจง และผู้ตอบแบบสอบถาม 200 คนจาก Cryptocurrency News & Discussion
subreddit ได้รับการวิเคราะในกลุ่มตัวอย่างของผู้ตอบแบบสอบถาม 1,444 คน งานวิจัยนี้ได้ตรวจสอบ
ข้อมูลของผู้ตอบแบบสอบถามโดยใช้ SPSS และ SmartPLS 4 Structural Equation
Modeling (SEM-PLS) จากผลการวิจัยพบว่าการรับรู้คุณค่า (PV) มีอิทธิพลอย่างมากต่อการ
ยอมรับสกุลเงินคริบโต ในขณะที่การรับรู้ความเสี่ยง (PR)ไม่มีอิทธิพลต่อการยอมรับสกุลเงินคริบโตในหมู่
สมาชิกเรดดิท ในบรรดาข้อมูลประชากรทั้ง5หมวด ได้แก่ (เพศ, อายุ, ระดับการศึกษา, รายได้,
ประสบการณ์การลงทุน) มีเพียงระดับการศึกษาเท่านั้นที่มีอิทธิพลอย่างมากต่อการยอมรับสกุลเงินคริบโต

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สาขาวิชา	การจัดการการสื่อสารเชิงกลยุทธ์	ลายมือชื่อนิสิต
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Athit Rodpangtiam : The Influence of Perceived Risk and Perceived Value on Consumer Adoption of Cryptocurrency. Advisor: Assoc. Prof. Smith Boonchutima, Ph.D.

The purpose of this research is to study the perceptions of risk and value of cryptocurrency adopters from the social media platform Reddit by assessing the influence of Perceived Risk (PR) and Perceived Value (PV) on their intention to adopt cryptocurrency. Demographic factors of (Gender, Age, Education Level, Income, Investment Experience) were analyzed as control variables. The study within this paper was conducted with a quantitative approach through the utilization of a survey technique. Data was gathered through purposive sampling, and 200 respondents from the Cryptocurrency News & Discussion subreddit were studied among a sample of 1444 respondents. The data of these respondents was examined by using SPSS and SmartPLS 4 Structural Equation Modelling (SEM-PLS). Based on the findings, Perceived Value (PV) was found to have a significant influence on cryptocurrency adoption, while Perceived Risk (PR) had no influence on the adoption of cryptocurrency among Reddit members. Among the five demographic factors (Gender, Age, Education Level, Income, Investment Experience), only Education Level was found to have a significant influence on cryptocurrency adoption.

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CHAPTER 1

Introduction

1.1 Significance of the study

The perception of risk has been widely studied in different fields, including the adoption of new technologies. Risk perceptions, which are the opinions or estimates of the dangers posed by a specific conduct, can influence how people feel and behave (Sukumaran et al., 2022). By studying perceived risk, communication practitioners can gain a greater understanding on the layperson's perception of risk. From this, communicators will be able to achieve greater success in resolving risk conflicts by improving the communication between experts and laypersons by increasing the mutual respect and understanding between the two parties (Gough, 1990). Consumers who perceived less risk in an action were likely to have a more favorable attitude towards the conduct, according to previous studies (Weber, Milliman, as cited Sukumaran et al., 2022). Since risk influences an investor's investment decisions, it is important to study the perceptions of risk in order to gain more insight into consumer's purchase decision. Risk perception also plays a role in predicting technological adoption; with studies analyzing the influence perceived risk has on financial technologies (Featherman and Pavlou, 2003, as cited Arias-Oliva et al., 2019). Therefore, understanding perceived risk can help communicators gain insight into the facets within technological adoption.

In order to promote and enhance long-term success, marketers are urged to handle methods connected to the value that the consumer desires, which is a major notion in marketing (Flint et al., 1997; Woodruff, 1997, as cited in Demirgüneş, 2015). One of the most significant determinants of consumer repurchase intentions, according to

some research, is perceived value (Parasuraman and Grewal, 2000; Morar, 2013, as stated in Demirgüneş, 2015). Therefore, it is important for marketers and communicators to study consumer's perception of value in order to gain insight into their purchase decisions concerning goods and services. The basis of all trade activities is the perceived value of the consumer, which plays a crucial role in determining whether or not consumers will repurchase products and services (Chiu et al. 2014, as cited in Fang et al., 2016). By studying consumer perception of value, marketers can gain insight on what consumers perceive to be valuable. It is important to keep consumers satisfied in order to retain them (Morar, 2013, as cited in Demirgüneş, 2015). Usefulness, in technological adoption, is a motivator for an individual to adopt the technology. The use of blockchain technology can be attributed to the perception of its value and enjoyment (Yang et al. 2016, as cited in Sukumaran et al., 2022). It is important to engage in academic studies with technologies in their early adoption phases in order to provide new findings within their field of study.

Social media bestows a path to view discussions which surrounds various topics that provide valuable insights into the behaviors and attitude of the members of these communities. Reddit, the world's largest forum site, has been chosen as the platform for acquiring consumer data for this study. With over 5.8 million members, the Cryptocurrency News & Discussion subreddit is the largest active Cryptocurrency forum with daily posts on the latest news related to cryptocurrency, cryptocurrency trading and blockchain technology. It is important to choose the appropriate population for this study due to how fast technology advances along with the shifts in market trends, therefore consumer perception is also changing at a rapid pace. The

members of the Cryptocurrency News & Discussion subreddit interact with the forum on a daily basis; hence, the data acquired will be up-to-date with the trend of the markets. By studying the perceptions of risk and value along with demographic factors (gender, age, monthly income, education level, and investment experience) of Reddit members, we can gain more understanding to the consumer perceptions of retail investors towards cryptocurrency investments. The study can then be applied to other large social media platforms such as Twitter, Discord and Facebook in order to further the findings and gain a better understanding of the perceptions of risk and value of cryptocurrency investors.

Investments in a particular instrument such as bonds or stocks have been popular since the early 1900s, with more options becoming available over this period. Options, futures, and other forms of leverage trading have become available with the potential for higher returns. All these investment opportunities come with their own level of risk. Cryptocurrency is one of the newest investment options available. Cryptocurrency is a digital currency created through cryptography with the use of blockchain technology. It is used for trading goods and services online without the need for a third party (Khan et al., 2021). It is also popular as an investment mainly through speculation, with investors treating it as a risk-on asset (Sukumaran et al., 2022). This research, therefore, seeks to acquire a better understanding of retail investor's perceptions of risk and the value of cryptocurrency investments and their aim to adopt cryptocurrency as an investment instrument. Parts of Consumer behavior theory have been used in order to gain insight into the perception of investors by researching the components of perceived risk and perceived value. It is crucial to gain insight on the perception of value of cryptocurrency adopters in order to evaluate

whether they have a positive perception of return on investment (ROI) from cryptocurrency investment. The perception of risk is used to assess any negative perception of investors (Sukumaran et al., 2022).

In 2021, the cryptocurrency market experienced explosive growth towards November, with the market capitalization of cryptocurrencies surpassing 3 trillion dollars. Due to this, investors perceived cryptocurrencies as being viable investment alternatives or hedges to traditional forms of investments such as bonds, stocks or real estate. Cryptocurrencies went mainstream, with celebrities and public figures sharing their favorite cryptocurrencies and NFTs on social media (Locke, 2021). Retail investors had easy access to cryptocurrency investments through mobile trading applications. However, November 2021 marked the peak of the market. Since then, the cryptocurrency market has experienced heavy sell-offs, plunging from over $3 trillion to around $1 trillion in June 2022. As a result of large-scale changes in market conditions, it is important to study the impact this has on the consumer perception of cryptocurrencies as an investment alternative.

According to (Sukumaran et al., 2022), their study on Cryptocurrency as an Investment: The Malaysian Context significantly adds to the field of consumer behavior by studying the perceptions of adopters by investigating perceived risk and perceived value to adoption of cryptocurrency investments. The research studied perceived risk and perceived value along with the control variables of demographic elements which include gender, age, income, education, and investment experience in relation to their influence on cryptocurrency adoption among Malaysian investors. According to their research results, perceived value had an influence on

cryptocurrency adoption. On the other hand, perceived risk was found to have no influence on cryptocurrency adoption. However, their data was gathered from September 2021 to November 2021 which was contemporary with the top of the cryptocurrency market being reached. Due to the shifts in market conditions along with the exponential sell-offs in 2022, consumer perceptions may well have changed. Their study also only focused on Malaysian consumers, which only gives insight into the perceptions of Malaysian retail investors; therefore, it may not be applied to this context of research. By conducting the study in an open online environment such as Reddit, we may be able to obtain the data of a broader audience; thus, we have conducted a new round of research.

1.2 Research Objective

To examine the influence of Perceived Risk and Perceived Value on cryptocurrency adoption.

To investigate how Gender, Age, Education, Income and Investment Experience affect the SEM-PLS Model.

1.3 Research Question

Do Perceived Risk and Perceived Value have influence on cryptocurrency adoption? If yes, how?

Do Gender, Age, Education, Income and Investment Experience have significant differences on the SEM-PLS Model? If yes, how?

1.4 Research Hypotheses

Hypothesis 1 (H1). Perceived risk has a negative influence on cryptocurrency adoption among members of the Cryptocurrency News & Discussion subreddit.

Hypothesis 2 (H2). Perceived value has a positive influence on cryptocurrency

adoption among members of the Cryptocurrency News & Discussion subreddit.

1.5 Scope of the study

This research paper utilized a survey technique, with the questionnaire questions

being focused on the consumer perception of cryptocurrencies through the influence

of perceived risk and perceived value on consumer adoption with five demographic

factors acting as control variables. The population comprised of active members of

the Cryptocurrency News & Discussion subreddit with a sample size of 200 users

aged 18 or above. On October 2022, the survey was distributed on the Cryptocurrency

News & Discussion subreddit.

1.6 Operational Definitions

Consumer perception is a process where a consumer collects information about a

product or service and interprets the information to make a meaningful understanding

or image about the specific product or service. The consumer develops an impression

about the product or service after seeing social media feedback, promotions,

advertisements or reviews relating to the specific product or service. According to the

context of this research, consumer perception refers to how Reddit users perceived the

risk and value of cryptocurrencies.

Perceived Risk is the estimation of the risks related to a specific behavior which

can affect how individuals think and act. In the financial context, risk perception

involves how investors observe the potential risk of assets according to their concerns

or personal experience. It is an important factor which influences the consumer's

investment decisions. According to the context of this research, perceived risk refers to consumer's perception of the risks associated with cryptocurrency investments.

Perceived Value is the evaluation of prospective profits or losses from the use of a product or service. Two areas of perceived value are examined which include perceptions of usefulness and gratification. According to the context of this research, perceived value refers to a consumer's perception of the value associated with cryptocurrency investments.

Adoption refers to the procedure of accepting, incorporating, and utilizing a new technology. There are a number of stages in this process which are categorized by the groups of people who use that technology. In this study, technological adoption terminology is applied since cryptocurrencies are created through digital technology.

Reddit is a social news website and forum. The website's contents are supplied by its users, with the popularity of content being determined by the number of votes from its membership. Reddit is made up of thousands of online communities called subreddits.

Cryptocurrency is a digital currency created through cryptography with the use of blockchain technology. It is used for trading goods and services online without the need for a third party. Immutability, transparency and decentralization is gained through blockchain technology.

1.7 Benefits of the study

1. Provide communicators greater insight into a layperson's perceptions of risks and value.

2. Help marketers understand the effects of perceived risk and perceived value on technological adoption.

3. Provide academic insight into the perceptions of the risk and value of cryptocurrency investment adopters through social media.

CHAPTER 2
Literature Review

The objective of this chapter is to elaborate the foundation theories that are relevant to this research. Reviews are compiled from scholarly journals, prior research, books and articles that are related to the study. This chapter contains six subjects: Context of Cryptocurrency, Independent Variables (Perceived Risk and Perceived Value), Control Variables (Gender, Age, Education, Income, Investment Experience), Reddit and Consumer Adoption.

2.1 Context of Cryptocurrency

Cryptocurrency is a digital currency based on cryptography that carries out financial transactions using cryptographic operations (Doran 2014, as cited in Fang et al., 2022). Through blockchain technology, cryptocurrencies are able to gain decentralization, transparency and immutability. Blockchain is a collection of immutable data records with timestamps. The data is managed by a cluster of machines which do not belong to a single identity (Fang et al., 2022). Cryptocurrencies are used for trading goods and services online without the need for a third party (Khan et al., 2021).

In 2021, the cryptocurrency market experienced rapid growth, with the capitalization of the market surpassing three trillion dollars in November. Bitcoin, the largest cryptocurrency by market cap, and Ethereum, the 2nd largest, both reached new all-time highs, propelling the whole cryptocurrency market upwards both in popularity and market capitalization. Due to this, investors perceived cryptocurrencies as being viable investment alternatives or hedges to traditional forms of investments,

such as bonds, stocks or real estate. The basis of all trade activities is the perceived value of the consumer, who plays a crucial role in determining whether or not consumers will repurchase products and services (Chiu et al. 2014, as cited in Fang et al., 2016). The growth of cryptocurrencies can be attributed to many factors, from the quantitative easing of the Federal Reserve in response to the COVID-19 pandemic to Tesla making public their addition of around $1.5 billion worth of Bitcoins to their balance sheet in January 2021. The cryptocurrency scene was filled with excitement towards the tail end of 2021, with news of celebrities and companies endorsing NFTs (non-fungible tokens), which are proof of ownership recorded on the blockchain which requires cryptocurrencies to purchase, to El Salvador adopting Bitcoin as legal tender (Locke, 2021).

Due to the enormous growth of the crypto-asset market, retail investors became attracted to cryptocurrency investments which are easily accessible through mobile trading applications. Consumers are able to transact using futures and options on these applications at whim, which can be seen as indicative of the higher perceived risk for consumers (Felton et al., 2003). The high volatility of these assets, combined with stories of regular people turning into millionaires was enough to lure in retail investors globally. However, since cryptocurrencies lack regulation, investors are at risk of market manipulation and scams which can leave them with heavy losses financially. Cryptocurrency trading platforms also offer leverage trading services which are extremely risky and are similar to gambling (Johnson et al., 2022).

The cryptocurrency market experienced heavy sell-offs in January 2022, where the total capitalization crashed by 22% in a month (Johnson et al., 2022). Throughout

2022, the Cryptocurrency market experienced a downtrend, going from $3 trillion in market capitalization to around $1 trillion, with Bitcoin tanking from its all-time high of $68,000 in November 2021 to below $18,000 in June 2022 (Urquhart & Lucey, 2022). With large scale changes in market conditions in such a short period of time, it can be assumed that the consumer perception of cryptocurrencies may be affected, which requires further study to gain more insight on such perceptions of risk and value in relation to cryptocurrency adoption in the context of the current market and macro-economic conditions. In view of macro-economic factors such as high inflation, war in the Ukraine and food supply collapses, fear of recession has surged, causing investors to sell-off their risky assets, such as Cryptocurrencies and tech stocks (Magazine, 2022). Due to high inflation numbers, federal reserves have taken action to lower inflation by raising interest rates, going from quantitative easing to quantitative tightening, which means lower liquidity for financial markets (Curry, 2022). Due to the drastic change in market conditions, it is important to study the shifts in consumer perceptions in order to gain insight on how investors perceive cryptocurrencies during a bear market.

Given how cryptocurrencies have surged in popularity over the recent years, this study will use them as the context of the study in order to shed further light on findings in the digital ecommerce space. By conducting research on perceptions of risk and value, marketers and communication practitioners, operators will be able to adopt appropriate approaches in managing communication with consumers in a digital environment.

2.2 Independent Variables

2.2.1 Perceived Risk

The characteristics and likelihood of undesirable events and consequences must be taken into account while evaluating risk. The estimation of risk is based on "the expected value of the conditional probability of the event occurring times the expected consequence of the event given that has occurred" (Gratt, 1987). In behavioral research, perceived risk is defined as consumer's perception of the degree of uncertainty and possible negative effects of purchasing or using a product (Faqih, 2016, as cited in Sukumaran et al., 2022). Every choice circumstance has two distinct forms of risk involved in the decision, according to previous studies on the theory of consumer behavior. The two types of risks include uncertainty about the outcome of the decision and uncertainty about the consequences of making a mistake. These two types of risks are the composition of perceived risk (Taylor, 1974).

The study of risk perception has been linked to many studies on consumer perception for over three decades. For example, food and eating has been viewed as low-risk, with the perception of risk surrounding hygiene or lack of food (Knox, 2000). Consumer perception of risk and uncertainty have also been studied in the case of internet banking. When it comes to consumer perception of innovative offerings, focus is usually on the products as opposed to services. According to (Littler & Melanthiou, 2006), a qualitative study on the early stages of the market development of internet banking sampled adopters and non-adopters. The research was able to pinpoint several major risks and uncertainties which were identified from a list of pre-identified risks and uncertainties. Therefore, it is important to conduct research on the

perceptions of risk in order to provide significant findings in the field of consumer perception.

The perception of risk has been widely studied in different fields, including the adoption of new technologies. Risk perception is the estimation of the risks related to a specific behavior which can have an effect on how individuals think and act (Sukumaran et al., 2022). Past studies have shown that consumers who perceived less risk in a particular behavior were likely to have a more positive attitude towards the behavior (Weber, Milliman, as cited in Sukumaran et al., 2022). The following hypothesis will be used based on the understanding of cryptocurrency as a new investment option with possible risks.

Hypothesis 1 (H1). Perceived risk has a negative influence on cryptocurrency adoption among members of the Cryptocurrency News & Discussion subreddit.

2.2.2 Perceived Value

The measurement of the possible gains or losses from using a good or service is called perceived value (Zeithaml, 1988). Two areas of perceived value are examined which includes perceived usefulness and the enjoyment of an individual (Hsu and Lin 2015; Shao et al. 2014, as cited in Sukumaran et al., 2022). When it comes to the perceived value of cryptocurrencies, we can look at studies on technological adoption. Usefulness is a driving force behind a person's acceptance of a certain technology. Therefore, the intention to use blockchain technology is expected to be impacted by the perception of its use and enjoyment (Yang et al. 2016, as cited in Sukumaran et al., 2022). However, studies show that many consumers adopt cryptocurrencies not to use them for payments, but instead to speculate on the high volatility in price

fluctuations of the asset in order to profit from them. Due to this, it has been debated widely whether cryptocurrencies should be treated as digital currencies or an investment tool (Glaser et al. 2014; Hur et al. 2015, as cited in Sukumaran et al., 2022).

The perception of value has been widely studied in different fields, including consumer perception. According to (Bojanic, 2008), there was a significant positive correlation between perceived value and the surrogates for perceived quality (staff and conditions) in the consumer perception of price, value and satisfaction in the hotel industry. According to (Dastane et al., 2020), Customer Perceived Value (CPV) is a well-established concept in marketing literature, however there is a need to provide more findings with respect to the concept of Perceived Value (PV). Their findings on consumer's perception of value from mobile-commerce have suggested that marketers should adopt a holistic approach in creating value for customers by presenting a wider mix of value-creation elements. Then, marketers will be able to integrate these vital aspects into a mobile platform. Since there is a need to provide more findings for the concept of perceived value, it is important to conduct research on the perceptions of value in order to generate significant insights into the field of consumer perception.

Investors are incentivized to purchase cryptocurrencies because of several attractive qualities which include high market volatility, high average return and full market uptime, which makes it a hedge against the traditional markets. The following hypothesis is formed based on the high growth rate of cryptocurrency adoption which can be used to evaluate the perceived value of cryptocurrencies.

Hypothesis 2 (H2). Perceived value has a positive influence on cryptocurrency adoption among members of the Cryptocurrency News & Discussion subreddit.

The structuring of the hypotheses and framework used in this research are adapted from (Sukumaran et al., 2022). This framework illustrated the independent variables of perceived risk and perceived value along with the dependent variable adoption. Five control variables of gender, age, education, income and investment experience are also included.
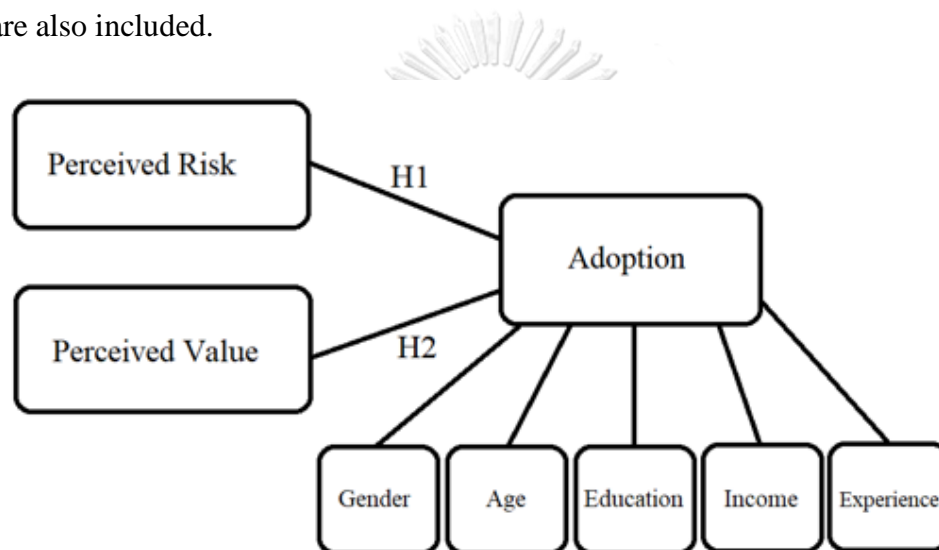
Figure 1 *Conceptual Framework for the current research adapted from (Sukumaran et al., 2022).*

2.3 Control Variables

In this research, the control variables are used to study the possible differences in the respondent's gender, age, income, education level, and investment experience that might influence their intention to adopt cryptocurrency investments.

2.3.1 Gender

Different investors prefer different amount of risks in their investment portfolios. In psychology, a large number of studies suggest that females are usually more risk-

averse than males (Byrnes, Miller & Schafer, 1999, as cited in Felton et al., 2003). In biology, it is understood that the adaptive mating advantage is the reason why males have evolved, making them more inclined to take risks in acquiring more mates. Due to their higher biological investment in their progeny, females have evolved to have a lower appetite for risk (Wilson & Daly, 1985; Buss, 1999, as cited in Felton et al., 2003). In socio-cultural studies, socialization is said to play a significant part in the gender variances. Studies suggest that children adopt appropriate sex roles throughout their childhood through the pressures of socialization, which can lead to greater caution and less confidence in women, and more risk-seeking tendencies in men (Beyer & Bowden, 1997; Deaux & Emswiller, 1974; Slovic, 1966, as cited in Felton et al., 2003). Studies reveal that males value efficiency more than women do, making them more outcome-focused (Matilla et al., 2003, as cited in Fang et al., 2016). Additionally, men have greater utilitarian ideals and a more functional mindset while making purchases (Dittmar et al., 2004, as cited Fang et al., 2016). In terms of financial risk tolerance, it is found that the relationship between income uncertainty and having some risk tolerance is different for men and women, with income uncertainty having a greater negative effect on risk tolerance for women. Studies show that there is a positive association of income uncertainty with high risk tolerance for men (Fisher & Yao, 2017).

2.3.2 Age

Studies show that mature consumers are portrayed as being more risk-averse in their finances in comparison to their younger counterparts. Older consumers are more careful with their money, with studies showing how an investor's life cycle depicts risk aversion to increase consistently with age (Morin, Suarez, 1983, as cited in

Simcock et al., 2006). In consumer behavior, age-related differences are the result of cognitive and physical aging processes in addition to accumulated life experiences. Studies show that age may have a moderating effect on a consumer's quality perceptions and perceived value (Sharma et al., 2012 as cited in Fang et al., 2016). According to information processing theory, elder consumers tend to rely more on heuristic or schema-based forms of processing when making judgments or coming up with solutions to problems. On the other hand, younger consumers are likely to seek and research for more information in order to make buying decisions (Ganesan-Lim et al. 2008; Yoon et al. 2005, as cited in Fang et al., 2016). On the contrary, Wang and Hanna (1997, as cited in Xi et al., 2020) studied U.S. Household's risk tolerance and found that as people aged, the number of risky assets they hold increases which indicates that people's risk tolerance goes up as they age. However, this may also be because of the limited financial income of youths, therefore they have less capacity to endure short-term investment losses (Wang & Hanna, 1997, as cited Xi et al., 2020).

2.3.3 Income

According to previous research, total savings and investments should rise as income levels increase. Studies show that people from higher income families had lower credit card debt (Borden et al., 2008, as cited Wang, 2011). From this, we may assume that people with higher income would also have more disposable income to invest with. People with higher income are associated with lower initial perceived risk (Burns et al., 2012). According to (Senkardes & Akadur, 2021), due to their lesser income and general lack of awareness about cryptocurrency, women favor alternative investment methods.

2.3.4 Education & Investment Experience

Education is important in developing human resources. With higher education

comes higher understanding and awareness of the importance of health, tolerance and

a harmonious life (Suryadi, 2012, as cited in Rizaldy Insan Baihaqqy et al., 2020).

Financial education may enhance financial behavior, according to research

(Bernheim, Garrett, Maki, 2001, as cited in Wang, 2011). According to studies,

investors' levels of education and their financial literacy are significantly correlated,

with a higher level of education being associated with a stronger grasp of financial

literacy. The study also came to the conclusion that there is a substantial relationship

between financial literacy levels and investment decision-making, with higher levels

of financial literacy being associated with better investment decision-making (Rizaldy

Insan Baihaqqy et al., 2020).

According to research, a consumer's financial behavior may be significantly

influenced by their financial experience, which has been shown to have a beneficial

impact on financial behavior (Lyons et al., 2006; Volpe, 1998, as cited in Wang,

2011). Education is perceived to have an impact on consumer's investment decisions

since it is tied up with financial literacy. Since there is evidence of an investor's

education level being linked to their understanding of financial literacy, this study will

assume that the investment knowledge of an investor has an effect on their perceived

risk and value of cryptocurrencies.

2.4 Reddit

Alexis Ohanian and Steve Huffman established Reddit.com in 2005. It was then

purchased by Advance Publications in 2006 (Anders 2012, as cited in Anderson,

2015). Reddit, a social news website and forum, calls itself "the front page of the

internet" and describes its website (reddit.com) as "a source for what's new and popular on the web". The website's contents are supplied by its users, with the popularity of contents being determined by the number of votes from its membership. In March of 2008, users of the platform were allowed to create their own subreddits (Anderson, 2015). There are thousands of content-specific online communities called subreddits on Reddit (Johnson et al., 2022).

Social media provides an avenue to observe discussions surrounding various topics which provide valuable insights into the behaviors and attitude of the members of these communities. The Cryptocurrency News & Discussion subreddit has over 5.8 million members as of November 2022, making it the largest English cryptocurrency forum. Members share news, analysis, and personal experiences related to cryptocurrency, cryptocurrency trading and blockchain technology on the subreddit (Johnson et al., 2022). Since members of the Cryptocurrency News & Discussion subreddit interact with the forum through posts on a routine basis, we will be able to acquire data which is up-to-date with trends within the markets, which will prove to be useful in reflecting the sentiments of the population. Due to the market downturn which started at the tail end of 2021, the sentiments of cryptocurrency investors have shifted dramatically, therefore it is important to conduct this research to study the changes in consumer perception of risk and the value of cryptocurrency investment through targeting Reddit users.

By studying the perceptions of risk and value along with the demographic factors of Reddit members, we can gain insight into the consumer perceptions of retail investors towards cryptocurrency investment adoption. It is important to study consumer behavior to understand retail investors in the context of cryptocurrency

adoption, and since the Cryptocurrency News & Discussion subreddit boasts over 5.8 million members, of which most are retail, it can prove to be an effective base for the population of this study. Research involving cryptocurrency investors has been conducted on the Cryptocurrency News & Discussion subreddit, with an example being a scientific research study on cognitive biases in cryptocurrency investors, shown below in **Figure 2**.
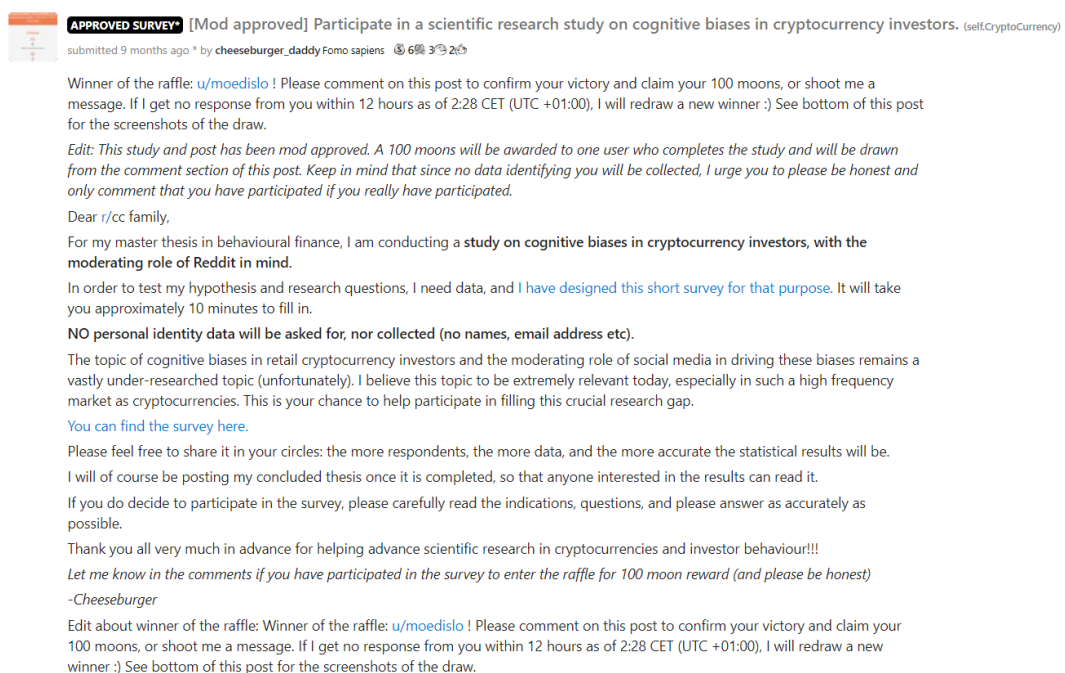
Figure 2 *Scientific research study on cognitive biases in cryptocurrency investors conducted in the Cryptocurrency News & Discussion subreddit.*

Reddit was chosen as the sole platform for the population of this study since it is closely monitored by the administrators and moderators of the corresponding subreddit. It is free of advertisements and cryptocurrency scams which are commonplace on other social media platforms without moderators. Since posts on the Crytocurrency News & Discussion subreddit do not include paid promotions and scams, the population of this particular subreddit are cryptocurrency enthusiasts who

are not only interested in get-rich-quick schemes but also the technology behind the digital assets by following the news and engaging in discussions about cryptocurrency.

2.5 Consumer Adoption

Researchers have traditionally analyzed consumer's adoption of innovations by utilizing Roger's (Rogers, 2003) five categories of adopters which include:
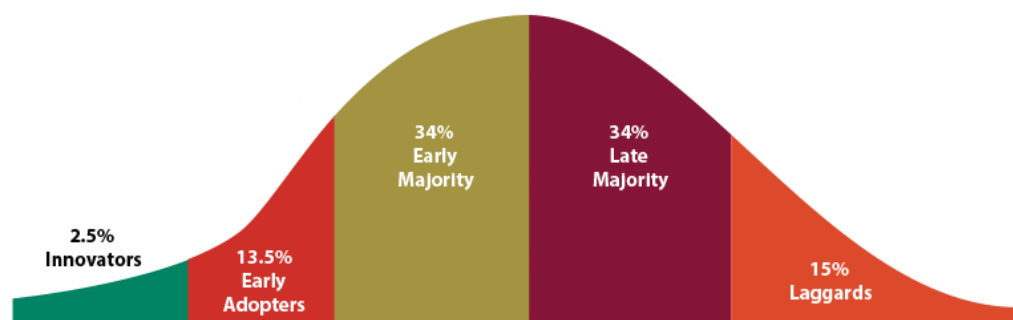
Figure 3 *Roger's (Rogers, 2003) five categories of adopters*

Innovators: These are heavy risk takers who are interested in new ideas. They do not take much convincing before they try something new.

Early Adopters: These people are the ones with leadership qualities; they embrace opportunities to create change, which makes them comfortable in adopting new things.

Early Majority: These people usually do not possess leadership qualities; however, they are willing to try new things before the masses.

Late Majority: People in this category are skeptics, they are not comfortable with change unless the proposed change has already been made and accepted by the majority.

Laggards: People in this category are very skeptical since they themselves are very conservative to change, usually due to tradition.

According to Saaksjarvi (Saaksjarvi, 2003), the lifecycles of technological products and services are usually short, with technological innovation being more complex compared to other innovations. Therefore, a large amount of dedication to consumer learning is required in order to adopt the technology. Since new technological products or services quickly become outdated and replaced by newer ones, risk plays a significant role in customer adoption decisions.

This study will therefore attempt to contribute significant findings to the field of literature on consumer adoption. By studying consumer perceptions of technologies in their early adoption phases, such as cryptocurrencies; new findings can be obtained. With how digital communication has evolved during the last decade, marketers and communication practitioners will need to frequently engage in studies on new technology in order to learn of what is required and how to manage communications with adopters of such technologies.

CHAPTER 3
Methodology

This research adopted an online quantitative format in order to collect data samples. This chapter consists of population, sampling size and method, research instruments, validity & reliability, variable measurement, data collection, data analysis and presentation.

3.1 Population

The population size is based on the number of Reddit users who actively engage on the Cryptocurrency News & Discussion subreddit. There are over 5.8 million members on the Cryptocurrency News & Discussion subreddit. They will also have to be at the minimum 18 years old.

3.2 Sampling size and method

Since they were taken into account in the sampling frame, this study used purposive sampling to gather respondents with prior investment knowledge of cryptocurrencies. Purposive sampling is one of the most productive sampling methods available in saving cost and time. Purposive sampling was chosen as the sampling approach for this study because it may be the sole method suitable if there are only a few primary data sources that can contribute to the study (Methodology, 2022). As a basis for sampling, respondents needed to have some level of knowledge regarding cryptocurrencies. Two questions were used in order to identify respondents who fulfilled the sampling criteria. Each question was constructed with a five-point Likert scale response option. The first question asked for the length of time respondents have been involved in cryptocurrency investment with the response options ranging from 1 (I have never invested in Cryptocurrency) to 5 (Over 3 years). The second question

asked respondents for their level of knowledge regarding Cryptocurrencies with response options ranging from 1 (No knowledge) to 5 (Expert).

According to (Hair et al., 2009), the number of samples suitable for the use of multivariate analysis statistics should be at least 5-10 times the index. This study's questionnaire consists of 21 items; therefore, the sample size should be in the range of 105-210. This study will therefore utilize data from 200 respondents.

3.3 Research Instrument

This research utilized an online questionnaire in English through SurveyMonkey. All the survey questions were based on a previous study from (Sukumaran et al., 2022). The variables in this research were measured by using an ordinal scale. The questions are segmented into six sections.

1. Screening questions: Two questions for evaluating respondent's qualifications.

2. Respondents Profile: Five demographic-related questions categorizing respondents based on their age, gender, income, education level and investment experience.

3. Respondents Investment Profile: Two questions related to knowledge and experience of investing.

4. Adoption variable: Four questions

5. Perceived Risk variable: Three questions

6. Perceived Value variable: Five questions

The original research questions of Mahomed (2017), Faqih (2016), Shim et al. (2001), Gupta et al. (2020), as cited in (Sukumaran et al., 2022) have been presented along with the adapted questions for this study.
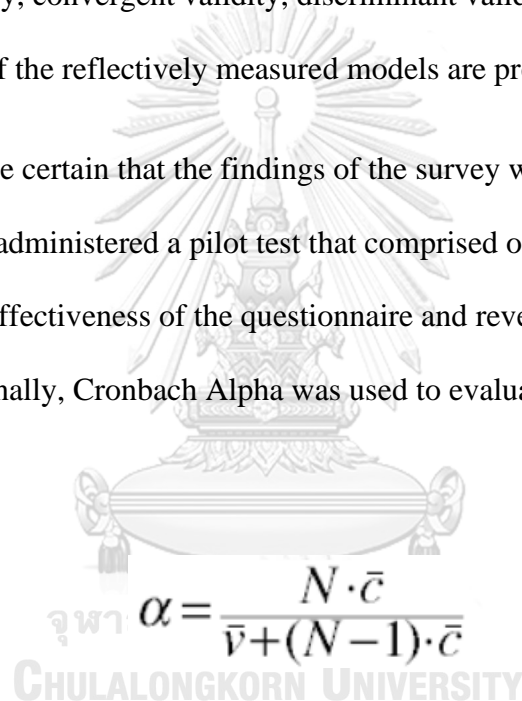
N.O.	Original Questions	Adapted Questions
ADOP 1	How likely are you to invest in cryptocurrency this year?	How likely are you to invest in cryptocurrency this year?
ADOP 2	I have plans to invest in cryptocurrencies in the future	I have plans to invest in cryptocurrencies in the future
ADOP 3	There is a high probability I will invest in cryptocurrency next time	**I am very likely to invest in cryptocurrencies next time**
ADOP 4	I will encourage others to invest in cryptocurrencies	I will encourage others to invest in cryptocurrencies
PR 1	Investing in cryptocurrencies is risky	Investing in cryptocurrencies is risky
PR 2	There is too much uncertainty associated with investing in cryptocurrencies	There is too much uncertainty associated with investing in cryptocurrencies
PR 3	Compared with other currencies/investments, cryptocurrencies are riskier	Compared with other **investments**, cryptocurrencies are riskier
PV 1	Using cryptocurrency in trading helps me improve the effectiveness, profitability, and investment of my money	Using cryptocurrency in trading helps me improve the effectiveness, profitability, and investment of my money
PV 2	I find that trading in cryptocurrencies can save money as it allows me to invest it quickly and inexpensively with lower transaction costs	I find that trading in cryptocurrencies can save money as it allows me to invest it **efficiently** with lower transaction costs
PV 3	Using cryptocurrency helps me improve my financial performance because I have total control over my money	Using cryptocurrency helps me improve my financial performance because I have total control over my money
PV 4	I feel satisfied with my cryptocurrency investment decisions	I feel satisfied with my cryptocurrency investment decisions
PV 5	Investing in cryptocurrencies will increase opportunities to achieve important goals for me	Investing in cryptocurrencies will increase opportunities to achieve important goals for me

Note. Underlined bolded words include changes made from the original questions in order to fit with the study.

3.3.1 Validity & Reliability

To ensure the validity and reliability of the research instrument, the research utilized reflective measurement models through the measurement model evaluation via SEM-PLS. The measurement results of the indicators which include reliability, internal consistency, convergent validity, discriminant validity, and VIF (Variance Inflation Factor) of the reflectively measured models are presented.

In order to make certain that the findings of the survey were internally consistent, the study initially administered a pilot test that comprised of 30 respondents as a means to test the effectiveness of the questionnaire and reverence to the research objective. Additionally, Cronbach Alpha was used to evaluate the internal consistency of the results.

$$\alpha = \frac{N \cdot \bar{c}}{\bar{v} + (N-1) \cdot \bar{c}}$$

N = the number of items.

$\bar{c}$ = average covariance between item-pairs.

$\bar{v}$ = average variance.

Table 1 *Cronbach's Alpha of Measurement Scales*

Variables	Number of items	Cronbach's Alpha
Adoption	4	0.772
Perceived Risk	3	0.797
Perceived Value	5	0.911

3.4 Variable Measurement

A quantitative research method is used where an online questionnaire was utilized

for data collection. The ordinal scale is used to measure the variables in this research,

with the dependent variable being adoption, while the independent variables were

perceived risk and perceived value. Five demographic factors which include gender,

age, education level, income and investment experience were used as the control

variables for the research framework. For the survey, a five-point Likert scale was

used with a range from (1) Strongly Disagree to (5) Strongly Agree. The higher scores

will indicate a positive correlation towards the research hypothesis.

The scale ranges are shown as follows:

1. Strongly disagree

2. Disagree

3. Neutral

4. Agree

5. Strongly agree

3.5 Data collection

The questionnaire was distributed to members of the Cryptocurrency News & Discussion subreddit with the authorization of moderators on the platform. The post starts off with an invitational section which states "Hello members of r/cc, I am a Masters student who is conducting an independent study on The Influence of Perceived Risk and Perceived Value on Consumer Adoption of Cryptocurrency. In order to test my hypothesis and research questions, I will need to gather sufficient data by conducting an online questionnaire. You can take part in this study by filling out a short survey. It will only take you 3-5 minutes to complete. No personal information is required in doing so." A poster was shown in order to help in acquiring more respondents.


Figure 4 *Cryptocurrency Survey Poster*

After respondents completed the questionnaire, they were able to be entered into a sweepstakes with a chance to win one of five $10 gift cards. They were able to do this by providing their email which was optional. Only the first 230 respondents were counted towards the sweepstakes. Rewards were only distributed to respondents from countries which legally allow sweepstakes. All the respondent data obtained was treated unidentifiably to any individual and kept confidential and destroyed after the research was complete.

3.6 Data Analysis and Presentation

The research utilized SPSS and SmartPLS 4 via SEM-PLS to analyze the relationship between the two independent variables (perceived risk and perceived value) and the dependent variable (adoption). The control variables (gender, age, education, income, investment experience) were measured with single-item constructs. The figure below represents the measurement model of the data collected.

Figure 5 *SEM-PLS Measurement Model*
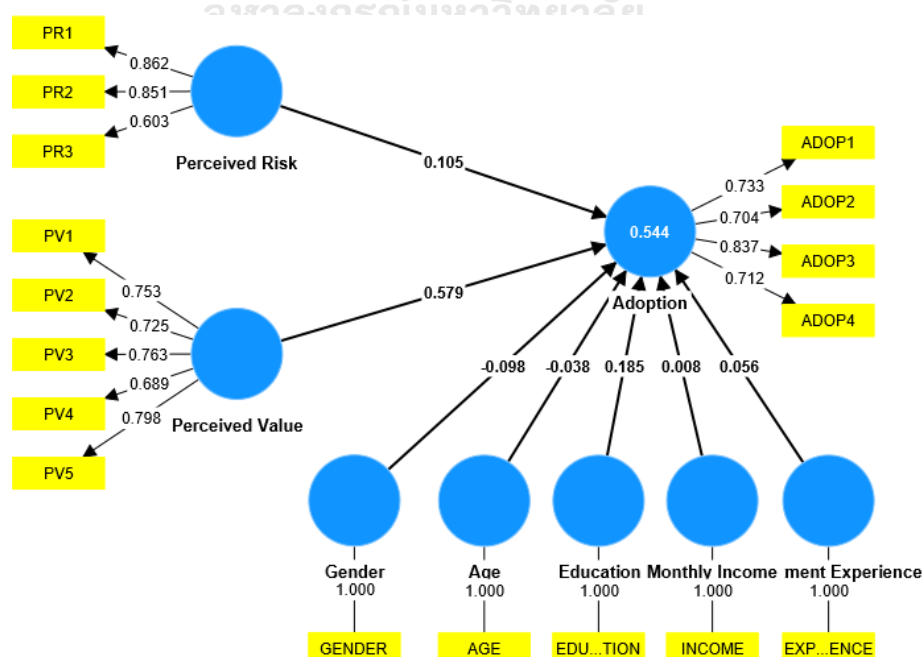
CHAPTER 4

Findings

This chapter consists of revealing the results of the analysis of adopter's

investment profile, structural equation modelling, and validity and reliability test.

Data from 200 respondents was studied among a sample size of 1444.

4.1 Results of Analysis on Adopter's Investment Profile

The findings of the analysis done on the data gathered are reported in this section.

The findings of the frequency analysis conducted on the demographic information of

the respondents are shown in **Table 2**. SPSS was used for the calculation of data

presented in **Table 2**. The total number of respondents is 200.

Table 2 *Adopter's demographic profile*

Characteristics	Respondent's Profile	Frequency	Percentage (%)
Gender	Male	97	48.5
	Female	103	51.5
Age	18-24	45	22.5
	25-34	70	35
	35-44	75	37.5
	45-54	10	5
	55+	0	0
Education Level	Highschool	22	11
	Diploma	18	9
	Professional degree	36	18
	Bachelor's degree	78	39
	Master's degree	43	21.5
	Doctoral degree	3	1.5
Monthly Income	Below $500	2	1
	$501-$1,500	5	2.5
	$1,501-$2,500	28	14
	$2501-$3,500	36	18
	$3,501-$4,500	96	48
	Above $4,501	33	16.5
Investment Experience	Less than 1 year	28	14
	1-3 years	122	61
	More than 3 years	50	25

200 responses were analyzed to acquire data on the demographic variables. There are more female respondents than males, with 103 respondents (51.5%) being female while 97 respondents (48.5%) were male. Even though there are more female respondents, the number of respondents from both genders are almost equal. The majority of respondents were 35-44 years old, with 75 (37.5%) coming from this group, closely followed by the 25-34 age group with 70 (35%) respondents. Only 10 respondents (5%) were from the age group of 45-54, with no respondents over the age of 54. When it comes to education level, most of the respondents were Bachelor degree holders, with 78 (39%) coming from this group. This is followed by Master degree holders, with 43 respondents (21.5%). Only three respondents (1.5%) have a Doctoral degree.

In terms of income, the majority earned $3,501-$4,500, with 96 respondents (48%) belonging to this income group. This was followed by respondents from the $2501-$3,500 income group, with 36 respondents (18%), closely followed by the highest income group of Above $4,501, with 33 respondents (16.5%). Only two respondents (1%) reported being from the Below $500 income group. In terms of investment experience, 122 respondents (61%) reported having 1-3 years of investment experience, followed by 50 respondents (25%) having more than three years of investment experience and 28 respondents (14%) having less than one year of investment experience.

The respondent's investment profile will be analyzed in the following section. **Table 3** presents the results of the frequency analysis on the respondent's investment profile. SPSS was used for the calculation of data presented in **Table 3**.

Table 3 *Adopter's investment profile*

Adopter's Investment Portfolio	No. of Respondents	Percentage (%)
Years of Investment Experience (Cryptocurrencies)		
Less than a year	31	15.5
From 1-2 years	60	30
From 2-3 years	64	32
Over 3 years	45	22.5
Portfolio Allocation		
0-20%	65	32.5
21-40%	67	33.5
41-60%	51	25.5
61-80%	15	7.5
81-100%	2	1
Depth in Knowledge of Cryptocurrency		
A little	74	37
A moderate amount	71	35.5
A lot	50	25
Expert	5	2.5
Cryptocurrency Investment		
Bitcoin	140	70
Ethereum	63	31.5
Litecoin	46	23
Tether	48	24
XRP	46	23
Uniswap	26	13
Binance	21	10.5
Polkadot	19	9.5
Dogecoin	21	10.5
Other	5	2.5

64 respondents (32%) reported having 2-3 years of investment experience in cryptocurrencies, followed by 60 respondents (30%) stated having 1-2 years of investment experience. 45 respondents (22.5%) had the most cryptocurrency investment experience with over three years of experience. The smallest sample of respondents belong to the less than a year of investment experience in the cryptocurrencies group, with 31 respondents (15.5%) belonging to this group. When it comes to portfolio allocation, most of the respondents, i.e., 67 respondents (33.5%),

reported having 21-40% of their investments in cryptocurrencies. This was followed

by 65 respondents (32.5%) who allocated between 0-20%, 51 respondents (25.5%)

allocating 41-60%, 15 respondents (7.5%) stating between 61-80%, and two

respondents (1%) identifying 81-100% in their investment portfolio. When asked

about their knowledge of cryptocurrency, 74 respondents (37%) reported having a

little amount of knowledge in cryptocurrency, closely followed by 71 respondents

(35.5%) having a moderate amount of knowledge in cryptocurrency. On the other

hand, only five respondents (2.5%) claimed to be experts in cryptocurrency.

4.2 Structural Equation Modelling

The relationship between the two independent variables (perceived risk and

perceived value) and the dependent variable (adoption) was analyzed using SmartPLS

4 via SEM-PLS. All the items formulated a reflective measurement model. The

control variables (gender, age, education, income, and investment experience) were

measured using single-item constructs. **Figure 6** represents the measurement model of
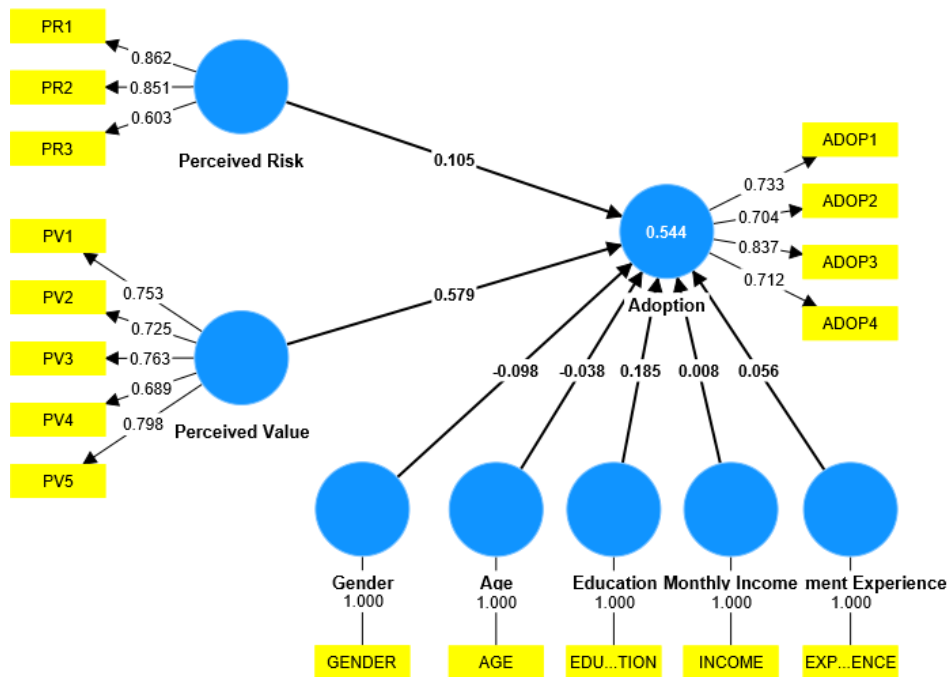
the data collected.

Figure 6 Measurement model assessment

The endogenous latent variable in this model was adoption while the exogenous latent variables were perceived risk and perceived value. The control variables were gender, age, education, monthly income, and investment experience. The latent variable for perceived risk contained three items (PR1, PR2, and PR3) while perceived value consisted of five items (PV1, PV2, PV3, PV4, and PV5).

4.3 Validity and Reliability Test

The reflective measurement models were evaluated using measurement model evaluation. **Table 4** presents the results of the indicator reliability, internal consistency, convergent validity, discriminant validity, and VIF of the reflectively measured models.

Table 4 *Results of the validity and reliability test*

Construct	Items	Outer Loading	Composite Reliability (CR)	Average Variance Extracted (AVE)	Discriminant Validity	VIF
Adoption	ADOP1	0.733				
	ADOP2	0.704				
	ADOP3	0.837	0.835	0.560	Established	N/A
	ADOP4	0.712				
Perceived Risk	PR1	0.862				
	PR2	0.851	0.821	0.610	Established	1.548
	PR3	0.603				
Perceived Value	PV1	0.753				
	PV2	0.725	0.863	0.557	Established	1.339
	PV3	0.763				
	PV4	0.689				
	PV5	0.798				
Gender	GENDER	1	1	1	Established	1.070
Age	AGE	1	1	1	Established	1.438
Education	EDUCATION	1	1	1	Established	1.614
Monthly Income	INCOME	1	1	1	Established	1.301
Investment Experience	EXPERIENCE	1	1	1	Established	1.618

The indicator's reliability, internal consistency, convergent validity, discriminant validity, and the VIF of the reflectively measured models were examined. The value of the outer loadings was used to calculate the indicator's reliability. Most of the values obtained were above 0.700, which implies strong correlation. Items PR3 and PV4 have outer loading readings at 0.603 and 0.689 respectively, which imply moderate correlation.

The measurement of internal consistency was then performed using composite reliability (CR). Higher CR values indicate higher reliability levels. All of the items in this model had CR values larger than 0.7, indicating that there was a common variance of at least 50% among the measurement items. When it comes to convergent validity, all the values for average variance extracted (AVE) were greater than 0.5, indicating that at least 50% of the variation of its items are explained by the constructs.

Next, discriminant validity was analyzed utilizing Fornell and Larcker (1981, as cited in Sukumaran et al., 2022) criterion where the correlation of the constructs with all of the other constructs were found to not be larger than their square root of AVE. The cross loadings or the indicator loadings on the constructs were found to be higher than all the cross loadings with other constructs, therefore, discriminant validity was established. Since all of the VIF values were below two, hence it can be concluded that no collinearity issues were present in this model.

The structural model assessment was conducted as part of the analysis, and the results are shown in **Figure 7.**
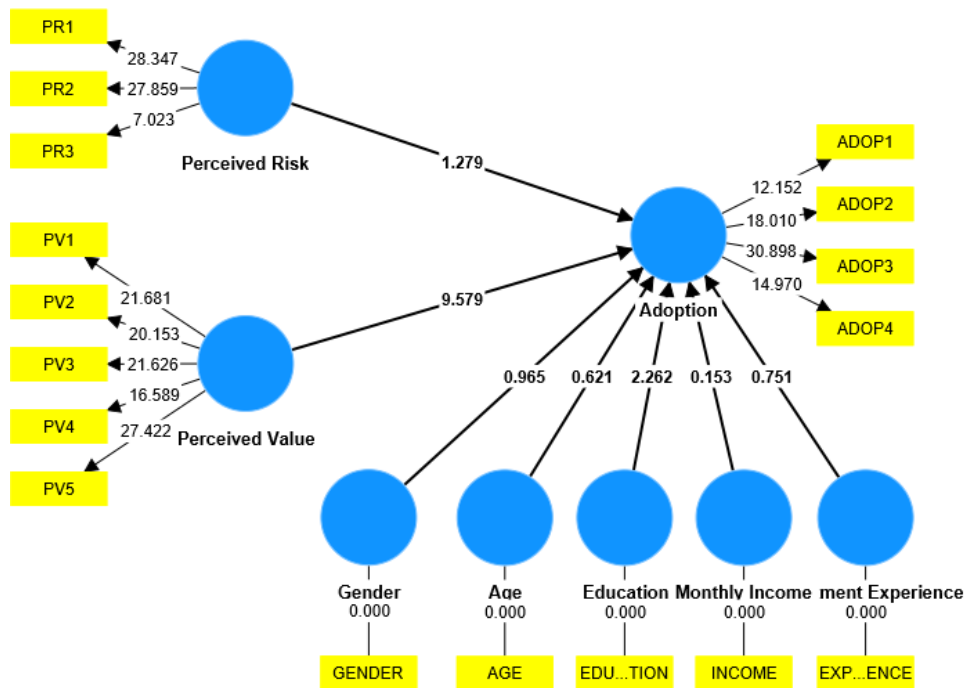
Figure 7 Structural model assessment

Structural model analysis was performed after conducting the validity, reliability, and collinearity tests (VIF). A structural model coefficient for the relationships between the constructs was then determined. **Table 5** displays the t-value and p-value for the two hypotheses in this study.

Table 5 Results of path coefficients

Hypotheses	Relationships	*t*-Value	*p*-Value	Decision
H1	PERCEIVED RISK -> ADOPTION	1.279	0.201	Not supported
H2	PERCEIVED VALUE -> ADOPTION	9.579	0.000	Supported
Control Variables				
GENDER		0.965	0.335	Not Significant
AGE		0.621	0.535	Not Significant
EDUCATION		2.262	0.024	Significant
MONTHLY INCOME		0.153	0.879	Not Significant
INVESTMENT EXPERIENCE		0.751	0.453	Not Significant

The p-value obtained was below 0.5, with the t-value above 1.96, which indicates

that there is significant relationship between the variables. According to the analysis,

it was concluded that perceived value had a significant influence on adoption while

perceived risk was found to have no influence on adoption. The assessment of the

control variables (gender, age, education, monthly income, investment experience) are

all presented in **Table 5**. Based on the results of the analysis, education was found to

have a significant difference in the adoption of cryptocurrencies while gender, age,

monthly income and investment experience were found to not have a significant

difference.

Table 6 presents the F^2, R^2, Q^2, and SRMR results of the structural model assessment.

Table 6 *F^2, R^2, Q^2, and SRMR results of the structural model assessment*

RELATIONSHIP	F^2	R^2	Q^2	SRMR
PERCEIVED RISK -> ADOPTION	0.016			
PERCEIVED VALUE -> ADOPTION	0.550			
GENDER -> ADOPTION	0.005			
AGE -> ADOPTION	0.002	0.544	0.477	0.075
EDUCATION -> ADOPTION	0.046			
MONTHLY INCOME -> ADOPTION	0.000			
INVESTMENT EXPERIENCE -> ADOPTION	0.004			

F^2 was calculated to examine the effect and the size of the path coefficient.

Perceived value (0.550) was found to have a large effect size. Education (0.046),

perceived risk (0.016), gender (0.005), investment experience (0.004), and age (0.002)

were found to have a small effect size. Monthly income (0) was found to have no

effect size on path coefficient at all. The R^2 was 0.544 which indicates that the

independent variables can explain the dependent variable by 54.4%. The Q^2 value was

0.477 which is greater than 0.35, indicating that the model has substantial predictive

relevance and higher predictive precision. The resultant SRMR value was 0.075.

CHAPTER 5

Summary and Discussion

This chapter contains a summary, discussion of the survey results, implications of the study, limitations of this study and recommendations for future studies.

5.1 Summary

This section illustrates the summarized results of the data collection and findings. The data collection started in October and concluded in early November 2022. Data was collected from a total of 1444 respondents during that time. The first 200 qualified responses were chosen as a sample, where repeat IP addresses and emails were unqualified and therefore omitted from the selected samples. Consequently, every response from the 200 selected samples were of a unique IP address. The study then analyzed the questionnaire results from the first 200 qualified respondents. The findings showed that perceived value had a significant influence on adoption, while perceived risk had no influence on adoption. Out of the five demographic factors (gender, age, education level, monthly income, investment experience), only education level was found to have a significant influence among cryptocurrency adopters. Gender, age, monthly income and investment experience were found to be insignificant in relation to influencing cryptocurrency adoption.

The objectives of this research are to examine the influence of perceived risk and perceived value on cryptocurrency adoption and to investigate how gender, age, education, income and investment experience affect the SEM-PLS Model. Both research questions have been answered with the results of the data analysis. The first question asked whether perceived risk and perceived value have an influence on cryptocurrency adoption. If yes, how? Firstly, perceived risk, perceived value and the

adoption variables all passed the validity and reliability tests with moderate to strong

correlations. In terms of relationship, according to the results of the path coefficient,

perceived risk to adoption had a t-value of 1.279 and p-value of 0.201. Since the t-

value was below 1.96 and the p-value above 0.05, it was concluded that perceived risk

had no influence on adoption. Perceived risk also had a F^2 value of 0.016 which

represents a small effect size on the path coefficient. On the other hand, perceived

value to adoption had a t-value of 9.579 and a p-value of 0.000. Since the t-value was

above 1.96 and the p-value below 0.05, it was concluded that perceived value had a

significant influence on adoption. Perceived value also had a F^2 value of 0.550, which

can be seen as a large effect size on the path coefficient. Since the findings showed

that perceived risk had no influence on adoption, **Hypothesis 1 (H1)** is rejected. On

the other hand, perceived value was found to have a significant influence on adoption.

Therefore, **Hypotheses 2 (H2)** is accepted. The second question asked whether

gender, age, education, income and investment experience have significant

differences on the SEM-PLS Model? If yes, how? According to the findings, all five

demographic factors passed the validity and reliability tests. In terms of relationships,

according to the results regarding path coefficients, only education was found to have

a significant difference on the adoption of cryptocurrencies with a t-value of 2.262

and p-value of 0.024, while gender, age, income and investment experience were

found to not have a significant difference since their t-values were all below 1.96 and

p-values were all above 0.05. With these results, we can correspondingly conclude

that adopters of cryptocurrency recognize the value of cryptocurrencies, but not the

risk, with education level influencing the consumer's adoption of cryptocurrency

investments. In this regard, the two research questions are both answered.

5.2 Discussion

Respondent's data illustrated demographic factors which include their gender, age, education level, monthly income and investment experience. It also presented data on the perception of risk and value to the adoption of cryptocurrency investments. The findings showed that perceived value had a significant influence on adoption, while perceived risk had no influence on adoption. This suggests that the adopters of cryptocurrency recognize the value of cryptocurrencies but not the risk. Perceived value was found to have a positive influence on cryptocurrency investment adoption. The findings of this study on perceived risk are consistent with Mendoza-Tello et al., Arias-Oliva et al. and Sukumaran et al. as cited in (Sukumaran et al., 2022). All three of the previous studies found that perceived risk had no influence on cryptocurrency adoption. Previous studies linked this to the idea that casual investors lack the education in finance and investing in order to justify the risk they are exposed to when adopting cryptocurrency investments. In terms of a cultural context, Zhao and Zhang's (2021, as cited in Sukumaran et al., 2022) have provided evidence that Malaysian investors have a low level of risk perception and a higher tolerance for risk. Out of the five demographic factors (gender, age, education level, monthly income, investment experience) tested in this study, education level was found to have a significant influence among cryptocurrency adopters. According to (Bernheim, Garrett, Maki, 2001, as cited in Wang, 2011), research has suggested that financial education could improve financial behavior. Additionally, studies have demonstrated a strong relationship between investors' education levels and their comprehension of financial literacy, with higher levels of education being associated with a stronger grasp of financial literacy. Higher levels of financial literacy also have a significant

correlation with investment decision making, with a positive relationship (Rizaldy Insan Baihaqqy et al., 2020). Since adopters of cryptocurrencies do not recognize the risk, we can interpret this as investors not being aware of the potential risk cryptocurrency investment poses. With how education level was found to have a significant influence among cryptocurrency adopters, we can link this finding to the notion that adopters of cryptocurrency lack the education needed in order to justify the risk of adopting cryptocurrencies. They are simply not aware of the risks involved, therefore taking the necessary actions in educating themselves concerning the potential risks involved in cryptocurrency adoption will go a long way in the consumer adoption of cryptocurrencies going forward.

On the other hand, gender, age, monthly income and investment experience were found to be insignificant in relation to cryptocurrency adoption. According to the descriptive statistics present in **Table 2**, males and females have a near 50% split with 48.5% of the respondents being male and 51.5% being female. This can be interpreted as gender not being a significant factor in the adoption of cryptocurrency investments since there are a relative number of adopters from both genders. Age was deemed insignificant, this could be attributed to the fact that cryptocurrency is in its early stage of adoption, therefore it is not widely adopted by a certain age group, but rather by all age groups. Monthly income was also found to be insignificant, which according to Sukumaran et al. (Sukumaran et al., 2022), can be attributed to how cryptocurrencies can be acquired in fractions, thus buying power does not have an impact on whether an investor may be able to adopt cryptocurrencies. Lastly, investment experience was also found to be insignificant in the adoption of cryptocurrency investments. Since cryptocurrency investments are relatively new to

mainstream retail investors, most adopters of cryptocurrency investments are probably adopting cryptocurrency investments as a speculative play, rather than as a reflection of their knowledge and understanding of cryptocurrency investments.

5.3 Implications

5.3.1 Theoretical Implications

This study has examined perceived risk and perceived value along with demographic factors (gender, age, monthly income, education level, and investment experience) as control variables in relation to their influence on cryptocurrency adoption among Reddit members. The results of this research indicate that Reddit adopters of cryptocurrency consider the value of cryptocurrency investments and not their risks.

Previous research has examined the influence of perceptions of risk and value to cryptocurrency adoption, however little research has been done on the perceptions of risk and value to consumer adoption of cryptocurrencies from an online platform. Since Sukumaran et al. (Sukumaran et al., 2022) only investigated the perceptions of risk and value of Malaysian retail investors, this study extends the line of research by providing findings concerning online adopters of cryptocurrencies.

The findings of this study provide a significant theoretical contribution to the development of adoption intention factors for analyzing the decision-making process of Reddit members from a consumer behavior viewpoint. By studying the perceptions of risk and value on consumer adoption of cryptocurrencies, we are able to add significantly to the field of consumer perception.

The findings on the moderation effects of demographic variables (gender, age, education, income, investment experience) provides an extension to the research on the perceptions of risk and value to cryptocurrency adoption. By comparing our findings to previous research, we can extend our current understanding about the influence of education on the adoption of cryptocurrency investments. For instance, Sukumaran et al. (Sukumaran et al., 2022) stated that education was not significant in influencing cryptocurrency adoption. However, this study concluded that education is significant in influencing cryptocurrency adoption, therefore adding to the body of research on the influence of demographic variables on the consumer adoption of cryptocurrencies.

5.3.2 Practical Implications

When compared to Cryptocurrency as an Investment: The Malaysian Context (Sukumaran et al., 2022), some similarities and differences are found. In terms of findings on perception of risk and value, this study shares the same conclusion to Sukumaran et al. (Sukumaran et al., 2022) where perceived value was found to have a significant influence on the adoption of cryptocurrency investments, while perceived risk was found to have no influence on adoption. Since this study was conducted on a social media platform with users worldwide, we can interpret this finding by noticing how it provides a new perspective on the notion that the perceptions of risk and value are the same whether an adopter is Malaysian or from an online community with members from different nations around the world.

In terms of the control variables (gender, age, education level, monthly income, investment experience) tested in this study and in Sukumaran et al. (Sukumaran et al., 2022), differences and similarities can be observed. Both studies concluded that

monthly income and investment experience were found to be insignificant in relation to cryptocurrency investment adoption. On the other hand, different results were obtained for the variables of gender, age, and education level. Sukumaran et al. (Sukumaran et al., 2022) have found gender and age to be significant in influencing cryptocurrency investment adoption, however this study found that gender and age were insignificant in influencing cryptocurrency investment adoption. This can be attributed to how societal roles play a part in consumer adoption of a particular investment instrument. According to Sukumaran et al. (Sukumaran et al., 2022), most of the respondents in their study were male (74.4%). According to (Beyer & Bowden, 1997; Deaux & Emswiller, 1974; Slovic, 1966, as cited in Felton et al., 2003), socialization is said to play a strong role in sex differences, with greater caution and less confidence in women, and more risk-seeking tendencies in men. Therefore, we can interpret this as Malaysians having strong social-cultural roots with clear differences in gender roles. Sukumaran et al. (Sukumaran et al., 2022) also found age to be significant, where most of the respondents (31.3%) belong to the 25 and 34 age group. This can be attributed to how different generations have different perspectives on technology, creating a digital divide. Even though our study found that age had no significant influence on cryptocurrency investment adoption of Reddit members, it is important to note that age of adopters from a particular group may be significant to the study, therefore it is important to conduct tests on this variable when studying adoption of cryptocurrency investment.

Lastly, according to Sukumaran et al. (Sukumaran et al., 2022), education level was found to not have a significant influence on cryptocurrency adoption of Malaysian retail investors. However, this study found that education level is

significant in influencing cryptocurrency investment adoption. This can be attributed to this study being conducted on a cryptocurrency-based platform, where members of the subreddit are generally more educated in cryptocurrencies when compared to the average retail investor. Since multiple studies show that adopters of cryptocurrencies do not recognize the risk, this could be because adopters regarded the danger associated with cryptocurrencies to be low (Sukumaran et al., 2022). Therefore, communication practitioners will need to adequately communicate the risks involved in cryptocurrency adoption, whether they be from the volatility of price to the importance of securing a seed phrase of their own personal cryptocurrency wallet. This way, cryptocurrency adopters will be more aware of the risks involved when adopting cryptocurrencies.

5.4 Limitations and Recommendations

This study involved a small sample size of 200 respondents and only surveyed individual adopters of cryptocurrency investment. Therefore, future studies may want to consider including larger players such as institutional investors and government entities. Furthermore, this study did not ask respondents for their country of residence. Future research may want to explore the different countries respondents are from. This study also only focused on Reddit as the platform for data collection. Future studies may want to consider including other large social media platforms such as Facebook, Twitter and Discord for variety. Furthermore, this study only examined the general concepts of risk and value. This can be expanded in future studies by investigating how cryptocurrency investment adopters perceive risk and value in their cryptocurrency investments.

APPENDIX

APPENDIX A

Questionnaire

Part 1: Screening Questions

Perceived Risk and Perceived Value on Consumer Adoption of Cryptocurrency.

Questionnaire (6 sections, 21 questions total)

This project is conducted by a Faculty member and a student of M.A Strategic Communication Management from Faculty of Communication Arts, Chulalongkorn University. The purpose of this questionnaire is to examine the influence of Perceived Risk and Perceived Value on Consumer Adoption of Cryptocurrency. The data collected will be analyzed and used for educational purpose only and the respondent's identity will be concealed.

Section 1 – Screening

* **1. How long have you been involved in cryptocurrency investment?**

○ I have never invested in Cryptocurrency (End of survey)

○ Less than a year

○ From 1-2 years

○ From 2-3 years

○ Over 3 years

* **2. Are you knowledgeable about cryptocurrency?**

○ No knowledge (End of survey)

○ A little

○ A moderate amount

○ A lot

○ Expert

Part 2: Respondents Profile

Section 2 - Respondent's Profile

* 1. Gender

○ Male   ○ Female

* 2. Age

○ 18-24   ○ 35-44   ○ 55+

○ 25-34   ○ 45-54

* 3. Education Level

○ No formal education   ○ Bachelor's degree

○ High School   ○ Master's degree

○ Diploma   ○ Doctoral degree

○ Professional degree

* 4. Monthly Income

○ Below $500   ○ $1,501-$2,500   ○ $3,501-$4,500

○ $501-$1,500   ○ $2,501-$3,500   ○ Above $4,501

* 5. Investment Experience

○ Less than 1 year   ○ 1-3 years   ○ More than 3 years

Part 3: Respondents Investment Profile

Section 3 – Investment Profile

* **1. How much of your investment portfolio is allocated to cryptocurrencies?**

- ○ 0-20%
- ○ 41%-60%
- ○ 81-100%
- ○ 21-40%
- ○ 61-80%

* **2. Have you invested in cryptocurrencies?**
(please, select all that apply)

- ☐ Bitcoin
- ☐ Tether
- ☐ Binance
- ☐ Ethereum
- ☐ XRP
- ☐ Polkadot
- ☐ Litecoin
- ☐ Uniswap
- ☐ Dogecoin
- ☐ Other (please specify)

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Part 4: Adoption variable

* **Section 4 – Adoption variable**
To what extent do you agree with the following statements. Mark only one oval.

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1. How likely are you to invest in Cryptocurrency this year?	○	○	○	○	○
2. I have plans to invest in Cryptocurrencies in the future	○	○	○	○	○
3. I am very likely to invest in cryptocurrencies next time	○	○	○	○	○
4. I will encourage others to invest in Cryptocurrencies	○	○	○	○	○

Part 5: Perceived Risk variable

* Section 5 – Perceived Risk variable
To what extent do you agree with the following statements. Mark only one oval.

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1. Investing in cryptocurrencies is risky.	○	○	○	○	○
2. There is too much uncertainty associated with investing in cryptocurrencies.	○	○	○	○	○
3. Compared with other investments, cryptocurrencies are riskier.	○	○	○	○	○

Part 6: Perceived Value variable

* Section 6 – Perceived Value variable
To what extent do you agree with the following statements. Mark only one oval.

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1. Using cryptocurrency in trading helps me improve the effectiveness, profitability, and investment of my money.	○	○	○	○	○
2. I find that trading in cryptocurrencies can save money as it allows me to invest it efficiently with lower transaction costs.	○	○	○	○	○
3. Using cryptocurrency helps me improve my financial performance because I have total control over my money.	○	○	○	○	○
4. I feel satisfied with my cryptocurrency investment decisions.	○	○	○	○	○
5. Investing in cryptocurrencies will increase opportunities to achieve important goals for me.	○	○	○	○	○

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Raffle (Optional)

Amazon Gift Card Raffle

As a small token of appreciation for your time, we have created a Raffle with $50 in prizes! Each respondent has 1 entry with a chance to win one of five $10 Amazon gift cards. Only the first 230 respondents (first 30 for sample test, first 200 for true test) will be counted towards the sweepstakes. Winning respondents will be generated through Random.org. All the respondent data obtained will be treated unidentifiably to any individual and kept confidential and destroyed after the research is complete. Enter your email below to enter into the raffle (Optional).

Your Email (Optional)

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APPENDIX B

Caption and Poster Design to Attract Respondents in Reddit Group

Caption

Posted by u/Key-Professional2690 1 - 2 years account age. -15 - 35 comment karma. 2 months ago

10 Participate in a scientific research study on The Influence of Perceived Risk and Perceived Value on Consumer Adoption of Cryptocurrency.

PERSPECTIVE

Hello members of r/cc,

I am a Masters student who is conducting an independent study on **The Influence of Perceived Risk and Perceived Value on Consumer Adoption of Cryptocurrency**.

In order to test my hypothesis and research questions, I will need to gather sufficient data by conducting an online questionnaire. You can take part in this study by filling out a short survey. It will only take you 3-5 minutes to complete. **No personal information is required in doing so.**

Click here to do the survey ✓

If you do decide to participate in the survey, please carefully read the questions before answering them to ensure the accuracy of your answers. Feel free to share the questionnaire to fellow Redditors you know. As a small token of gratitude, I have created a raffle with Amazon gift cards as prizes. You may enter the raffle through the questionnaire, however it is optional.

Once the research is complete, I will be updating you all with the results here. Thanks in advance for participating in this research! Looking forward to seeing all your responses.

Edit: The survey goals have been met, thanks everyone who participated!

💬 33 Comments   Award   Share   Save   …

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Poster Design

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