Journal of Theoretical and Applied Information Technology
15th November 2022. Vol.100. No 21

ISSN: 1992-8645 www.jatit.org E-ISSN: 1817-3195

ANALYZING THE INFLUENCE OF CRYPTOCURRENCY ON THE SWITCHING INTENTION OF GEN Z AND MILLENNIALS TO USE CRYPTOCURRENCY AS AN INVESTMENT ASSET

WILLY SANDI[1], TANTY OKTAVIA[2]

[1] Information System Department, School of Information Systems Bina Nusantara University Jakarta, Indonesia 11480

[2] Information Systems Management Department, BINUS Graduate Program - Master of Information Systems Management, Bina Nusantara University, Jakarta, Indonesia 11480

E-mail: [1]willy.sandi@binus.ac.id, [2]toktavia@binus.edu

ABSTRACT

Cryptocurrency are proven as assets that have high risk but the owner of the cryptocurrency himself can set the level of risk that suits himself, therefore this study will focus on society and the younger generation where interest in crypto is very large and can be an interest in the future. This study adopts a model based on the Push-Pull-Mooring (PPM) theory. As a result, personal innovativeness, reward sensitivity, and knowledge have proven to have a positive and effective effect on switching intention. The reason that variable play a role in switching intention and ignoring risk factors is that it could be that the individual has more curiosity, and personal motives is tempted by returns so they are competing to try cryptocurrency as their investment. Moving to cryptocurrency become important but there are risks that people need to know before indeed plunging completely into cryptocurrencies. The knowledge that individual investors are trying to acquire is only knowledge related to trends or following and not seeking risk-related knowledge from the cryptocurrency itself.

Keywords:- *Cryptocurrency, Investment, Gen Z, Millennials, Asset, Ppm, Switching Intention, Perceived Risk, Personal Innovativeness,*

1. INTRODUCTION

The world of cryptocurrencies is in the conversation of the world after the occurrence of many trends and innovations issued by leading technology companies such as Facebook which announced meta as their future project. So digital money such as cryptocurrencies is getting attention. The first concern that came up was in 2018 when a young man bought a luxury car from the proceeds of bitcoin whose value of Bitcoin soared. Cryptocurrency itself has existed since 2008 which was created by Satoshi Nakamoto in the type of Bitcoin. Since then, the types of cryptocurrencies have grown rapidly with their respective uses and technologies.

Cryptocurrency is digital money that has existed since 2008 and has an increasing value around the world making it a type of trading tool for the whole world including Indonesia. In terms of trading, of course, there is the same trading issue as stocks and other instruments. In the world of trading, some stocks can be regarded as old players in Indonesia while cryptocurrencies are new players that are experiencing attention from the wider community as promising trading or investment assets. The growth of cryptocurrencies in Indonesia has increased significantly. According to data compiled by [5] in 2021 cryptocurrency investors in Indonesia reached 7.2 million users while stock investors in Indonesia were only 2,001,288 million investors in Indonesia.

ISSN: 1992-8645 www.jatit.org E-ISSN: 1817-3195

Table I: Top 10 Country Own Cryptocurrency [5]

Country	No. of Crypto Owners	% Of Population
India	100,740,320	7.30%
USA	27,491,810	8.31%
Russia	17,379,175	11.91%
Nigeria	13,016,341	6.31%
Brazil	10,373,187	4.80%
Ukraine	5,565,881	12.73%
Pakistan	9,051,827	4.10%
Indonesia	7,285,707	2.66%
Vietnam	5,961,684	6.12%

In Indonesia with a total population of more than 200 million, more than 7.2 million people have cryptocurrency digital assets with penetration of 2.66% in Indonesia and making Indonesia the fifth rank in the world with crypto asset ownership and being ranked 32nd in the world when viewed from crypto penetration and the top-ranked are India and America.

Several factors cause cryptocurrencies to be popular, one of which is thanks to news on the internet and social media that indirectly many people discuss what makes people interested in having cryptocurrency ownership. The results of a survey were conducted by deVere, a crypto exchange. From the results of the survey, it is said that the gen z generation by 56% and millennials 36% prefer to receive their salary in the form of cryptocurrency. In addition, cryptocurrencies are also widely accepted by outside companies as their means of payment. For example, companies like Microsoft, PayPal, Twitch, and Starbucks now accept cryptocurrencies as payment although this is not directly, they accept Bitcoins there is a third application that helps those cryptocurrencies be converted into US dollars. Not only that, in Indonesia itself there are companies that have implemented the system, namely Prestige Motor Group which is engaged in the automotive industry as a seller of luxury cars in collaboration with RajaCoin, RajaCoin itself is a cryptocurrency buying and selling platform where if someone has cryptocurrency and wants to buy a car from Prestige then RajaCoin as a bridge to convert the cryptocurrency into rupiah as a tool to buy the car. From this, we can see that cryptocurrencies can be the digital assets of the future that are studied.

Capitalists of the cryptocurrency and stock markets in Indonesia are also quite far away although this cannot be compared because cryptocurrencies have an interest around the world while Indonesian stocks are only on a national scale. Cryptocurrency market capitalists reached $2 trillion, and stocks listed on the Indonesian stock exchange reached $470 million although they could not see market capitalists, this became an interesting thing for the public.

Trend cryptocurrency is not only from the real world, the development of cryptocurrency trends is also venturing into the digital world namely NFTs and *metaverse*. This is what makes cryptocurrencies more explosive not in terms of currency but from NFTs and metaverses because to have NFTs and the metaverse must have cryptocurrencies as a means of payment, NFTs themselves are non-fungible tokens which is defined as a digital asset that can be an image and has a unique code already installed on each NFT asset, what makes an NFT explode is the price that people often use as an investment. In addition, the Facebook company introduced a metaverse which is defined as a real world in digital form and combines the concepts of blockchain, social media, and a large place that can be owned by each user and can interact with each other using virtual reality. This has caused cryptocurrencies to be favored by the global market and allowed cryptocurrencies to make changes in their functionality

Table II: Top 10 Cryptocurrency Market Cap [3]

Country	Crypto Category	Market Cap in Billion U.S Dollars	Cap Category
Bitcoin (BTC)	Store of value	792.73	High Cap
Ethereum (ETH)	Smart contracts	375.61	High Cap
Tether (USDT)	Stablecoin	78.3	High Cap

ISSN: 1992-8645 www.jatit.org E-ISSN: 1817-3195

Binance Coin (BNB)	Exchange token (centralized)	73.31	High Cap
Solana (SOL)	Smart Contracts	44.12	High Cap
USD Coin (USDC)	Stablecoin	43.6	High Cap
Cardano (ADA)	Smart Contracts	39.19	High Cap
Ripple (XRP)	Payments / digital currency	35.6	High Cap
Terra (LUNA)	Exchange token (decentralized)	25.45	High Cap
Polkadot (DOT)	Smart contracts	24.52	High Cap

Of the many types of cryptocurrencies in circulation, of course, there are types of cryptocurrencies that are in demand by the Indonesian people which are Bitcoin, and Ethereum, the factors that make both types of cryptocurrencies are Bitcoins be the pioneer of cryptocurrencies and the price that very high which makes cryptocurrencies widely viewed by the public while Ethereum explodes because Ethereum is a cryptocurrency that is used as a type of payment for someone when they want to transact for NFTs or buy digital goods in the metaverse which is being carried by many technology companies, one of which is Facebook and Microsoft In addition, a cryptocurrency which is in the top ten can not only enter just like that. Many factors affect the market value of cryptocurrencies. One of them is social media. Social media where users of social media are mostly millennials and gen z certainly always use social media to be able to keep up with the times. The factor of the cryptocurrency that can have a large market is the existence of news about one type of cryptocurrency or the influence of a big man as we know is Elon Musk. Elon Musk is in the limelight of millennials and gen z thanks to his tremendous influence in the tech world. As CEO of Tesla and other companies engaged in using technology, Elon Musk was named the richest man in the world. This has triggered many millennials and gen z to want to become Elon Musk as a trend center in the world of technology. No wonder it's a post on Twitter. Elon Musk can move the market price of Dogecoin-type cryptocurrency to a very high level.

Research conducted by [8] targeting residents in America found that 83% of millennials own cryptocurrency and are chosen to be their assets for old age. This shift is very pronounced due to a significant change in the ownership of stocks which can be considered a traditional version compared to cryptocurrencies owned by the millennial generation. Cryptocurrencies seem to be taking future generations of conscience experts to be their assets compared to other instruments. If cryptocurrency can shift it is undeniable that the digital world will grow rapidly with future generations which can be seen from now on with the existence of metaverse and NFT.

There is also research conducted by [23] those who mention that the risk obtained from owning cryptocurrencies can be reduced by the knowledge of each type of cryptocurrency chosen and by building a portfolio well. This explains that cryptocurrencies *are* also risk-friendly because everyone can set the level of risk they want to take. From the two studies that have been discussed, we can relate that cryptocurrencies are assets that have high risk but the owner of the cryptocurrency himself can set the level of risk that suits himself, therefore this research will focus on society and the younger generation where interest in crypto is very large and can be an interest in the future, therefore this study will analyze the factors that influence people to choose cryptocurrency as an investment asset using Push-Pull-Mooring (PPM).

Push-Pull-Mooring (PPM) is a method is commonly used to know the displacement of an individual's intentions considering several instruments that encourage the individual to abandon the behavior that previously moved to new behavior. PPM has three elements namely, the driving factor that forces a group to leave, while the attracting factor attracts people to a goal [7], and the last is the mooring factor that facilitates or acts as a moderation of the driving factor and the attracting factor [12]. Overall, PPM gives a three-dimensional structure for switching intention.

ISSN: 1992-8645 www.jatit.org E-ISSN: 1817-3195

2. LITERATURE REVIEW

2.1 Cryptocurrency

Cryptocurrency can already be an alternative for someone to transact like a bank, but this still cannot be realized because there are legal problems that have not been regulated by the government so cryptocurrency is now still an asset that can be traded and is crowded with enthusiasts in Indonesia because it has a high value. In El Salvador, bitcoin-type crypto has become legal and officially a means of transaction, it is predicted to be followed by large countries such as the US and India and it could be that Indonesia will implement the same.

Based on research conducted by [25] the cryptocurrency market in the world increased tremendously in terms of volume and number of transactions and this has to do with subsequent research conducted by [11] concluding that COVID-19 enlarged the existence of cryptocurrencies rapidly due to the number of active users who grew during the pandemic. Because in 2020 the world was hit by a pandemic that resulted in a crisis in the world's economy, this is not the case with cryptocurrencies that are not regulated by the world bank so that the value of crypto becomes high and people allocate a lot of funds into cryptocurrencies.

2.2 Switching intention

Switching intentions are happening in society, especially since many people are diverting their funds in the form of cryptocurrencies. In this study, the displacement in question is the movement of a person from using traditional assets such as gold, stocks, or currencies such as the dollar to cryptocurrency. Switching intention is the intention of consumers to stop using the services that are being used and change to other services. switching intention that occurs can result from how much reason or ugliness the user has had for the experience that has been passed from the use of new technology, the more reasons or vices experienced, the probability or certainty that the customer will switch from the provider of the current service or product to the provider of the new service or product.

Based on research that has been done related to switching intention by [24] and [16] who researched social commerce and e-commerce that switching intention occurs from social commerce to e-commerce, it is influenced by many other things such as perceived of ease use, perceived risk, motivation, and service. There is also research conducted [22] using switching intention related to mobile providers for consumers in Saudi Arabia shows that the smaller the switching intention, the greater the customer satisfaction.

2.3 Perceived Risk

Cryptocurrencies have a very large risk; these risks are a consideration for people who want to get involved in cryptocurrencies perceived risk is a condition in which in a phenomenon there is a risk that occurs. perceived risk is often a benchmark for researchers from various fields and becomes a consideration for a person in making decisions that can result in other things. Perceived risk is defined as the consumer's perception of uncertainty and the adverse consequences of engaging in purchasing activity. Since the risk is in the mind of the consumer, it is perceived and not necessarily real [21]. In addition, the risk of providing the potential for loss or loss of assets in pursuit of what is desired in the internet world [17].

Based on research conducted by [26] and [2] in the development of technology in the bank industry concluded that perceived risk in the field of banking technology is very influential in this development, this is because the perceived risk is high in the community, of course, the public has a distrust of the development and chooses not to use it because there will be risks that can harm users.

2.4 Reward Sensitivity

In the world of investment, the purpose of investing is to receive rewards or values that can increase. This is what makes motivation, and happiness for people to make investments. Cryptocurrencies are becoming a new investment alternative that offers quite lucrative rewards to society. Reward sensitivity is a term used to describe how humans are sensitive and engaged in their daily lives, with many reasons that might suggest a desire for happy thoughts or activities. [6]. In this case, reward sensitivity helps to explain human behaviors, motivation, and emotions. Reward sensitivity in this study discusses community movement related to cryptocurrency with anticipation of community sensitivity rewards before and after carrying out investment activities.

Based on research that has been done by [23] about cryptocurrencies. Sensitivity rewards are

one of the important keys that are considered by people when they want to use cryptocurrencies. In addition, sensitivity rewards have differences based on gender, it is revealed from research conducted by [4] that men prefer the most optimal option in sensitivity rewards, while women are more inclined to choose worse options in sensitivity rewards.

2.5 Knowledge

Knowledge is very important when you want to run something, especially things that have a lot of risks, with the knowledge we can minimize the risks that exist, cryptocurrencies with high rewards certainly have a reasonable, therefore knowledge is very important for someone when they want to start jumping into cryptocurrencies. Knowledge cannot be defined universally, but rather what is accepted by a person regarding a certain knowledge [19]. Knowledge is one of the important components to help with a certain job or task. Knowledge obtained by a person from a collection of information that has been experienced or learned to be used in the future, therefore knowledge in cryptocurrency can be interpreted as knowledge received by a person and used as a component to determine the action to be taken so that the public can prepare themselves to switch to investment cryptocurrency with more confidence [23].

Based on research that has been done related to knowledge, one of which is research conducted [20] in the field of finance that knowledge is very weak on a person's financial performance in the first year but in the second year and so on knowledge becomes strong in financial performance as much as possible There are other studies conducted by [13] that involves financial education and knowledge, the result of the research is that financial education can affect individual knowledge and behaviors.

2.6 Personal Innovativeness

Cryptocurrencies are categorized into technologies in digital form that issue digital currencies of various types at this time. In making digital money, it is supported by each technology such as blockchain, Solidity, and others so that the acceptance of new technologies and new programs to someone. Apart from the side of making acceptance occurs in the wider community about the acceptance of information technology in the form of cryptocurrencies to be understood by the public. Acceptance of society is an important concept to understand a person's willingness the acceptance of information technology [27]. According to [10] defining personal innovativeness is a concept related to the attitude of the individual toward ideas and innovative decisions from the experience of others. From this, a person's will must have a strong enough basis such as positive benefits to be accepted. Personal innovativeness is a reference to changes in society over people's perception of cryptocurrencies because cryptocurrency is a new thing recently showing a stir in society and personal innovativeness focus on the public's acceptance of new information technology.

Based on the research conducted by [23] concluded in his research that personal innovativeness plays the most important role in the research model of such cryptocurrencies. The reason could be that most of the people who are involved in cryptocurrencies are middle class and have a good education with a lot of investment experience, which makes them

3. METHOD

A. Model Building

The researcher adopts a model based on the Push-Pull-Mooring (PPM) theory. PPM theory is divided into three parts, including the push factor, pull factor, and mooring factor. This study chooses PPM as the model used because PPM is a well-known model for explaining the displacement that occurs, especially in the transfer of behaviors in a person. Researchers used the variables perceived risk (PR), personal innovativeness (PI), reward sensitivity (RS), knowledge (KE), and switching intention (SI).

Each selected variable has a solid basis so that the variable is selected. Cryptocurrency self is a new technology that requires a deeper approach, in which case an SI is needed to measure the level of possible movement of people towards cryptocurrencies with four variables, namely PR, PI, RS, and KE which affect SI. Each of the four variables has an important role to play in influencing the SI. Risk, acceptance of technology, and motivation towards certain advantages and knowledge will affect the individual in moving, therefore the hypothesis of the push-pull-mooring research model with each predetermined variable is formed. The push effect which is defined as the push for individuals to move from a bad which in this

study is PR has a push effect on SI, on the contrary, the pull effect can be interpreted as attracting individuals to move with something good offered which is where RS and KE affect SI and the last is the mooring effect which is interpreted as a barrier to intervention to the intended variable and in this study, PI affects SI besides that PI also affects the relationship between PR to SI, KE to SI and RS to SI.

B. Push effect on public's switching intention

The market cryptocurrency currently consists of thousands of cryptocurrencies, each with a different value and level of risk or profit/loss, and each society can focus on cryptocurrency financial assets with their choice based on different risk tolerances and profit expectations, without having to invest in all types of cryptocurrencies offered. Therefore, the perceived risk can be used to describe potential losses in the pursuit of profits in traditional financial markets. In addition, people easily find suitable investment products in traditional financial markets, but it is too difficult to get the expected returns. On the other hand, since the cryptocurrency market currently consists of thousands of cryptocurrencies, and each has a different function and level of risk, everyone can focus on a specific cryptocurrency based on different risk tolerances and profit expectations, without having to invest in any type of crypto. [14] From what has been explained, it is indicated that society can move from conventional to digital, it is concluded hypothesis:

H1: Perceived risk of cryptocurrency in the community has an impact on switching intention on cryptocurrencies

C. Pull effect on public's switching intention

Cryptocurrencies become attractive to the public own them therefore researchers use reward sensitivity as a shift in the public intentions about what the anticipation of community appreciation is before and after making an investor indicate in the research that perceived risk affects switching intention. In addition, to this research, knowledge can be taken as some perception of what society has about cryptocurrencies as an investment option and attribute-related techniques, and their underlying features. No society wants to try cryptocurrencies until they feel they have enough knowledge about related matters [23]. From the statement may indicate that perceived risk affects switching intention, then the hypothesis is concluded:

H2: Reward sensitivity about cryptocurrency impacts switching intention on cryptocurrencies.

H3: Knowledge about cryptocurrencies has an impact on switching intentions towards cryptocurrencies.

D. Mooring effect on public's switching intention

The mooring effect, commonly known as the intervention barrier, is related to the variables that drive the migration of human behaviors. These variables are connected to an individual's mental state, mental factors, values, level of life, and societal impact, and they work in tandem with the push-pull mooring effect. [15]

Mooring effect can increase switching intention in society to try cryptocurrency and influence the relationship between adoption progress, In the field of cryptocurrency, personal innovativeness indicates the intention of society to consider cryptocurrency as an optional investment tool. Knowledge of cryptocurrencies including trading techniques, colleagues in the community, and social networking groups can be seen as progressing innovations to reduce the complexity and uncertainty of switching intentions.

Society can have a more positive aspect related to personal innovativeness that is the same as optional conditions through a combination of technology, creative and sensitivity rewards that are highly expected by the community and the perceived risk is relatively low. For people who have higher personal innovativeness, then their switching intention towards cryptocurrencies will increase. In other words, as society wants to become more innovative, the variable drivers and pullers will be more important for the development of switching intentions towards cryptocurrencies [23].

H4: Personal innovativeness has an impact on switching intentions on cryptocurrencies.

H5: Personal innovativeness has an impact on the relationship between perceived risk and switching intention towards cryptocurrency.

H6: Personal innovativeness has an impact on the relationship between reward sensitivity and switching intention towards cryptocurrency.

ISSN: 1992-8645 www.jatit.org E-ISSN: 1817-3195

H7: Personal innovativeness has an impact on the relationship between knowledge and switching intention towards cryptocurrency.

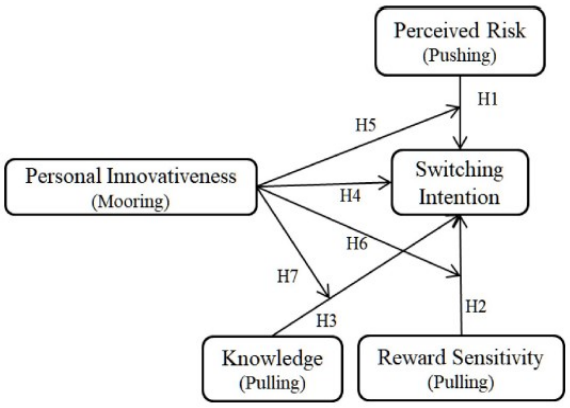

Fig 1. Research Model [23]

E. Population and samples

This study's participants include Indonesians who are users of cryptocurrencies. According to data from the Ministry of Trade, the Indonesian people who use cryptocurrencies are recorded to reach approximately 11,200,000 million people so the population in the study conducted is 11,200,000 million people who will be used as a reference in the sample calculation.

The samples in this study used non-probability sampling with purposive sampling techniques. The reason for using this technique is because in this study respondents must have a condition, namely cryptocurrency users who live in Indonesia. The number of samples to be taken will be determined by the slovin formula.

$$n = \frac{N}{1 + NE^2}$$

Information:
n = Sample size
N = Population size
e = Margin of error

After the calculations carried out, the nature of this study with a population of 7,200,000 million people [5] with a margin of error of 10% then in this study the sample will be 99 respondents and with rounding adjusted to 100 respondents and after the distribution of the questionnaire obtained the results of 109 Respondents.

F. Data Collection

In this study, there are two types of data collection, the first is primary data. Primary data has been collected from 112 people who have completed the questionnaire using sharing through social media, messengers such as WhatsApp, and even communication provider applications such as Discord. In this study, respondents from the questionnaire must have special criteria to be able to receive their data, namely as cryptocurrency users. Three respondents have never used cryptocurrencies, so the primary data used in this study are 109 respondents. The data that has been collected will be calculated and analyzed according to the results received. While the second is secondary data, secondary data is collected from various sources, including literature, scientific articles, journals, or websites, which have accredited and trusted publications, after which the data that has been collected will be analyzed and produce conclusions for the study.

G. Analysis Design

Based on the hypothesis of the variables that have been explained, this study intends to look for factors that influence a person toward the desire to want to own cryptocurrency. The Push-Pull-Mooring Model (PPM) was analyzed using research methods using SEM-PLS.

SEM (Structural Equation Modeling) is a statistical technique that can analyze the pattern of the relationship between latent constructions and their indicators, latent constructions with one another, as well as measurement errors directly. According to [9] PLS-SEM will help researchers and provide an improved evaluation of the model theoretically in this study also, researchers used the Partial Least Square (PLS) approach using SmartPLS software. PLS is a variant-based structural equation (SEM) analysis that can simultaneously test models and take measurements as well as structural model testing

SEM-PLS itself has several advantages, such as a small sample size and because this research discusses new cryptocurrencies and there are still few existing theories, it is suitable for the use of SEM-PLS, in addition, SEM-PLS has been used in many different research fields including social media services, e-commerce, business administration, and investment

In this study, researchers used a likert scale to be a parameter of the questionnaire answers. The likert scale is used to measure the attitudes, opinions, and perceptions of a person or group of people about the social phenomenon that is taking place. In research, this social phenomenon has been specifically established by the researcher, which is hereinafter referred to as the research variable. The likert scale is used to express the level of agreement or disapproval of respondents regarding various questions about a person's behavior, the object being studied, or related events about the research being carried out. In this study, researchers chose a likert scale that has six scales on the choice of questions from strongly disagreeing to strongly agreeing.

In table III which shows the variables and indicators in this study, fifteen indicators are the parameters of the questionnaire questions, the 15 indicators come from five variables, including Personal Innovativeness (PI), Perceived Risk (PR), Knowledge (KE), Reward Sensitivity (RS), and Switching Intention (SI).

Table III: Variables And Indicators

Variable	Indicator		Ref
Personal Innovativeness	Explore New Things (PI1)	I am always first time trying new things with my colleagues a	[23]
	Experiment With New Things (PI2)	I want to try and experiment with new things	
	Experiment to Getting High Return (PI3)	Attractive investing potential with high returns inspires me to innovate.	
Perceived Risk	Find Convenience (PR1)	In the Cryptocurrency market, finding a decent investment target is difficult.	[23]
	Time Efficiency (PR3)	I spent a lot of time exploring where to invest in cryptocurrencies because there is so much potential.	
	Cost Efficiency (PR3)	The expenses incurred outweigh the profits earned.	
Switching Intention	Potential of Purchasing Cryptocurrency (SI1)	I'm most likely going to invest in cryptocurrencies.	[23]
	Willingness to Purchase Cryptocurrency (SI2)	I'd like to make a cryptocurrency investment.	
	Plan to Buy Cryptocurrency (SI3)	I plan to invest in cryptocurrencies	
Knowledge	Informed (KE1)	I was informed about the cryptocurrency's offer.	[23]
	Knowledgeable (KE2)	I know about cryptocurrencies	
	Awareness (KE3)	I am aware of the existence and trend of cryptocurrencies	
Reward Sensitivity	Net Profit (RS1)	A good chance of benefitting from cryptocurrencies could convince me	[23]

		to invest.	
	Return rate (RS2)	In most cases, I prefer to perform something that pays off right away.	
	Dominate Environment (RS3)	Based on the assets I have; I want to be the best for the people around me.	

4. RESULT

A. Demographics Of Respondents

This research starts from February 2022 to June 2022. In this study, the authors used a sample who are owners or people who are interested in cryptocurrencies. The sample used is people who are interested in or have cryptocurrencies that have an age range that falls into the category of gen z and millennials. Researchers determined the sample size using the slovin formula using the Confidence Interval of 90%. The sample size obtained from the calculation results of the slovin formula is 99 rounded to 100 people which will then be used as the minimum sample size in the study. Researchers managed to collect 112 respondents. Among these respondents, there were 109 respondents (97.3%) who owned or were interested in cryptocurrencies ever and as many as 3 respondents (2.7%) who were not interested in or own cryptocurrencies. This study used a likert scale consisting of seven assessment categories from 1 to 7 with 1 indicating "Strongly Disagree (STS)" and 5 indicating "Strongly Agree (SS)".

B. Respondent Profile

The object that meets the test is the profile of the respondent based on the age of the respondent and the interest in cryptocurrencies, following the data that has been collected:

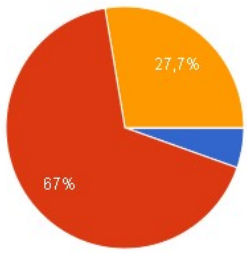

Fig 2. Respondent Profile Based On Age

Based on figure 3, the respondents in this study were 5.4% with the age of <22 years, 67%, with the age of 22 - 30 years, 27.7% with the age of 31 - 40 years, and 0% with the age of 30 - 34 years so that it can be concluded that the age of the respondent already includes the gen z generation and millennials

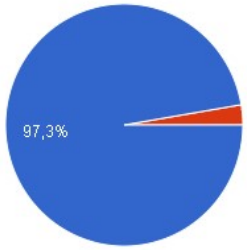

Fig 3. Respondent Profile Based On Cryptocurrency Interest

Based on fig 4 above, respondents who are interested / have cryptocurrencies in this study are 97.3 % or a total of 109 respondents, while 2.7% or 3 respondents are not interested / have cryptocurrencies.

C. Readability Test

The purpose of conducting a readability test is to determine the effectiveness of the sentences used in each item to minimize errors that may occur due to the incompatibility of the researcher's goals with the understanding of the prospective research subject. In this study, the readability test was carried out by asking respondents to assess the readability of the questionnaire statement on a scale of 1-5 from bad to very good and selected 5 adults aged 20-30 years. After the assessment, the questionnaire statement did not undergo any changes in the sentence structure.

Journal of Theoretical and Applied Information Technology
15th November 2022. Vol.100. No 21

ISSN: 1992-8645 www.jatit.org E-ISSN: 1817-3195

Table IV : Readability Test

Assessment	Average value	Category
Respondent 1	3.5	Excellent
Respondent 2	4.1	Excellent
Respondent 3	3.6	Excellent
Respondent 4	3.8	Excellent
Respondent 5	4.0	Excellent

D. Measurement Model: Validity & Reliability

In this research model, researchers use validity and reliability tests with various types of tests. The validity test use convergent validity and average variance extracted (AVE) and for reliability use cronbach's alpha and composite reliability. Validity is the accuracy or accuracy of an instrument in measurement. The validity test is used to find out how strong the relationship between variables is and measure the validity of the research instrument. A valid instrument is an instrument that can later be used to measure the relationship of variables from research. An instrument valid if it has a positive correlation value of > 0.5 according to the AVE value.

Convergent validity is a reflective measurement of each indicator based on the correlation between data from the results of data collection with values to be calculated using partial least square (PLS) and in this study will use SmartPLS 3.3.9.

Table V: Pls Algorithm Test

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
KE	0.701	0.701	0.834	0.627
PI	0.738	0.739	0.852	0.657
PI Moderating RS And SI	1.000	1.000	1.000	1.000
PI Moderating KE And SI	1.000	1.000	1.000	1.000
PI Moderating PR And SI	1.000	1.000	1.000	1.000
PR	0.796	0.800	0.880	0.710
RS	0.742	0.743	0.853	0.660
SI	0.728	0.729	0.847	0.648

Based on table V, the AVE value has passed 0.5 as the standard value, this proves that the AVE value on each indicator has met the predetermined value requirements.

Table VI: Outer Loading Test

	KE	PI	PI Moderating ...	PI Moderating ...	PI Moderating ...	PR	RS	SI
KE * PI			0.865					
KE1	0.769							
KE2	0.767							
KE3	0.837							
PI1		0.811						
PI2		0.777						
PI3		0.843						
PR * PI				0.860				
PR1						0.861		
PR2						0.821		
PR3						0.846		
RS * PI					0.875			
RS1							0.815	
RS2							0.827	
RS3							0.794	
SI1								0.840
SI2								0.771
SI3								0.803

Based on table VI, the outer loading value of each indicator is enough to be said to be valid because it has exceeded the specified minimum value of 0.5. With this, the research model already meets the requirements of convergent validity.

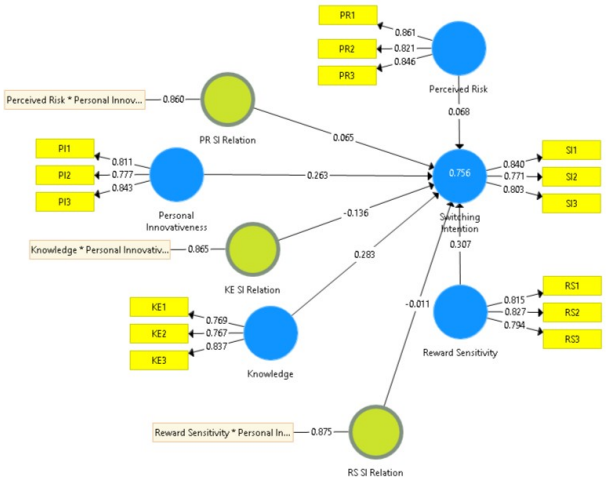

Fig 4. Measurement Model Validity & Reliability

Based on fig 5 above, the output of the test conducted to meet the convergent validity requirement. In this research model, the

Journal of Theoretical and Applied Information Technology
15th November 2022. Vol.100. No 21

ISSN: 1992-8645 www.jatit.org E-ISSN: 1817-3195

indicators tested amounted to 15 indicators. The personal innovativeness variable has three indicators, namely PI1 (explore new things), PI2 (experiment with new things), and PI3 (experiment to get a high return). The perceived risk variable has three indicators, namely PR1 (find convenience), PR2 (time-efficiency), and PR3 (cost-efficiency). The switching intention variable has three indicators, namely SI1 (potential to buy cryptocurrency), SI2 (desire to buy cryptocurrency), and SI3 (plan to buy cryptocurrency). The knowledge variable has three indicators, namely KE1 (informed), KE2 (knowledgeable), and KE3 (awareness). The reward sensitivity variable has three indicators, namely RS1 (net profit), RS2 (return rate), and RS3 (dominate environment).

Table VI: Instrument Reliability Coefficient [1]

Cronbach's Alpha Score	Level of Reliability
0.0 – 0.20	Less Reliable
>0.20 – 0.40	Rather
>0.40 – 0.60	Quite
>0.60 – 0.80	Reliable
>0.80 – 1.00	Very Reliable

Model Cronbach's Alpha is a model used to reinforce reliability testing with expected values greater than 0.7. The following is a graph of the results of processing using the model Cronbach's Alpha.

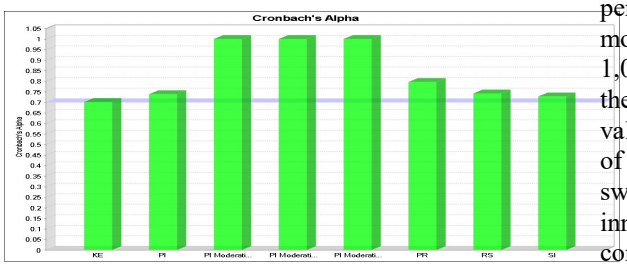

Fig 5. Cronbach's Alpha Test

The value of Cronbach's alpha on the relationship variable between knowledge (KE) and switching intention (SI) moderated by personal innovativeness (PI) is 1,000. The value of Cronbach's Alpha in the knowledge (KE) variable is 0.701. The value of Cronbach's alpha in the variable personal innovativeness (PI) is 0.738. The value of Cronbach's Alpha in the variable relationship perceived risk (PR) and switching intention (SI) moderated by personal innovativeness (PI) is 1,000. The value of Cronbach's alpha on the variable perceived risk (PR) is 0.796. The value of Cronbach's alpha on the relationship of the variables reward sensitivity (RS) and switching intention (SI) moderated by personal innovativeness (PI) is 1,000. The value of Cronbach's alpha in the variable reward sensitivity (RS) is 0.742. The value of Cronbach's alpha in the variable switching intention (SI) is 0.728. It can be concluded that the variable is already above the value of 0.7 is already established as the minimum value of Cronbach's alpha.

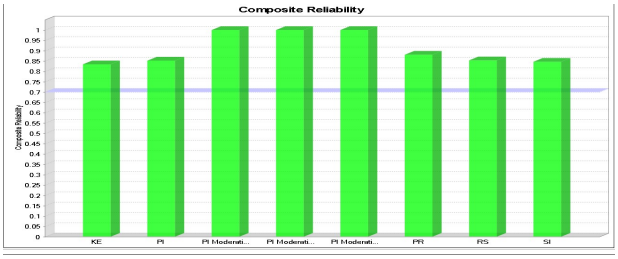

Fig 6. Composite Reliability

Based on table 4.6, the value of composite reliability in the relationship variable between knowledge (KE) and switching intention (SI) moderated by personal innovativeness (PI) is 1,000, The value of composite reliability on the knowledge (KE) variable of 0.8 34. The value of composite reliability in the variable personal innovativeness (PI) is 0.852. The value of composite reliability on the relationship variable perceived risk (PR) and switching intention (SI) moderated by personal innovativeness (PI) is 1,000, and the value of composite reliability in the variable perceived risk (PR) is 0.880. The value of composite reliability on the relationship of the variables rewards sensitivity (RS) and switching intention (SI) moderated by personal innovativeness (PI) is 1,000. The value of composite reliability in the variable reward sensitivity (RS) is 0.8 53. The value of composite reliability in the variable switching intention (SI) is 0.847. It can be concluded that the variable is already above the value of 0.5 which has been set as the minimum value of composite reliability.

E. Normality Test

Journal of Theoretical and Applied Information Technology
15th November 2022. Vol.100. No 21

ISSN: 1992-8645 www.jatit.org E-ISSN: 1817-3195

The normality test is used to determine whether the data obtained is normally distributed or the answers from the questionnaire are from a normal population. There are many different normality tests including Kolmogorov-Smirnov and Shapiro-Wilk. The Shapiro-Wilk test is commonly used for less than 50 respondents while Kolmogorov-Smirnov is used for more than 50 respondents [18], so this study with 109 respondents will use Kolmogorov-Smirnov as a reference for normality. Based on the reference from the normality test, if the sig value is more than < 0.05, it can be stated that the data comes from a normal population, and vice versa.

Table VII: Normality Test

Kolmogorov-Smirnov[a]			Shapiro-Wilk		
Statistic	df	Sig.	Statistic	df	Sig.
0.52	108	0.200	0.986	108	0.313

Based on table 4.7, the sig value obtained from the normality test using Kolmogorov-Smirnov is 0.2 where the value is more than < 0.05 which is the standard reference value of the normality test so it can be concluded that the data tested are normally distributed data.

F. Test Model

The t-test is used to partially test the effect of independent variables on dependent variables. Meanwhile, the F test is used to test the influence of independent variables together on dependent variables. For calculations as follows:

t = (a/2; n-k-1)
t = (0.10/2; 108-12-1)
t = (0.05; 96) = 1,660

f = (k; n-k)
f = (12; 97) = 1,85

Information:
n = Sample
k = Number of variables
a = 0.10 = confidence level = 90%

Table VIII: F-Test

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	438.220	4	109.555	72.805	<,001[b]
Residual	154.993	105	1.505		
Total	593.213	109			

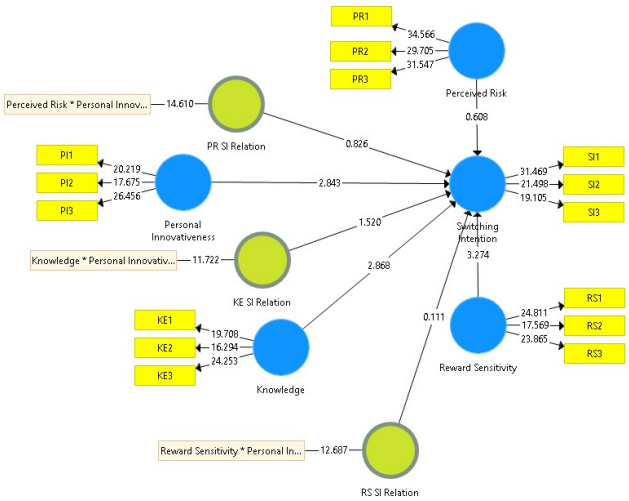

Fig 7. Output SEM-PLS After Bootstrapping

The conclusion of the t-test with SEM-PLS in figure 4.2 is that the perceived risk (PR) variable to switching intention (SI) is known that the value of t count 0.619 < t table 1.660, so it can be concluded that perceived risk (PR) does not affect switching intention (SI). For the variable reward sensitivity (RS) to switching intention (SI), it is known that the value of t counts 3,112 > t table 1,660 so it can be concluded that reward sensitivity (RS) affects switching intention (SI). For the variable knowledge (KE) to switching intention (SI), it is known that the value of t counts 2,543 > t table 1,660 so it can be concluded that knowledge (KE) affects switching intention (SI). For the variable personal innovativeness (PI) to switching intention (SI), it is known that the value of t counts 2,882 > t table 1,660 so it can be concluded that personal innovativeness (PI) affects switching intention (SI). The relationship between the perceived risk

ISSN: 1992-8645 www.jatit.org E-ISSN: 1817-3195

(PR) and switching intention (SI) variables influenced by personal innovativeness (PI) has a calculated t value of 0.790 > t table 1.660 so it can be concluded that the variables perceived risk (PR) and switching intention (SI) are not influenced by personal innovativeness (PI). The relationship between the variable knowledge (SI) and switching intention (SI) influenced by personal innovativeness (PI) has a calculated value of t 1,441 > t table 1,660 so it can be concluded that the variable knowledge (KE) and switching intention (SI) are not influenced by personal innovativeness (PI). The relationship between the variables reward sensitivity (RS) and switching intention (SI) influenced by personal innovativeness (PI) has a calculated value of t 0.109 > t table 1.660 so it can be concluded that the variable perceived risk (PR) and switching intention (SI) are not influenced by personal innovativeness (PI). Meanwhile, the results of the F test in table 4.9 with the variables perceived risk (PR), reward sensitivity (RS), knowledge (KE), and personal innovativeness (PI) state that the calculated F value is 72,805 > F of table 1.85, so it can be concluded that there is an influence on the perceived risk (PR), reward sensitivity (RS), knowledge (KE) variables and personal innovativeness (PI) simultaneously against switching intention (SI).

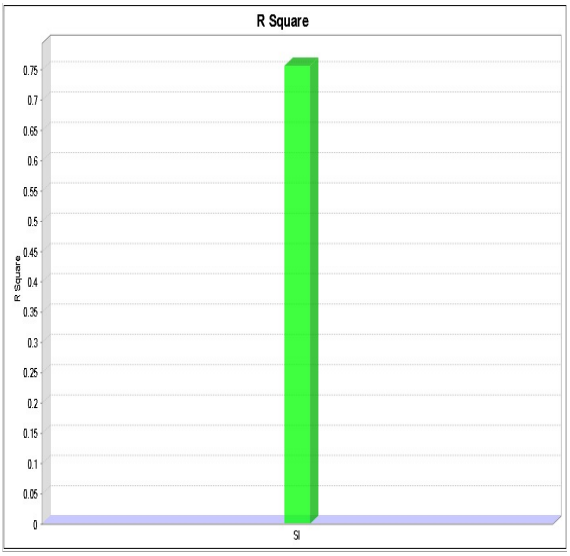

Fig 8. R Square

Based on table 4.10, the value of R Square for the switching intention (SI) variable is 0.756, this concludes that the variables of perceived risk (PR), reward sensitivity (RS), knowledge (KE), personal innovativeness (PI) affect SI by 75.6%.

5. CONCLUSION

This study discusses switching intentions from individuals, especially in generation z and millennials in Indonesia. This study uses the concept of push-pull-mooring theory (PPM) as a model. The main objective of this study is to identify the impact of individual factors switching intentions on cryptocurrencies. The use of cryptocurrency as an investment among young people is still somewhat in its early stages therefore, many problems must be solved before cryptocurrency investment can be widely adopted. The results show that personal innovativeness, reward sensitivity, and knowledge are the main problems among individual investors. Personal innovativeness, reward sensitivity, and knowledge have proven to have a positive and effective effect on switching intention. The reason that personal innovativeness, reward sensitivity, and knowledge play a role in switching intention and ignoring risk factors is that it could be that the individual has more curiosity, and personal motives is tempted by returns so they are competing to try cryptocurrency as their investment rather than having to consider and study the relevant risks about cryptocurrencies to avoid missing opportunities in following cryptocurrencies.

From the perspective of the researcher, building a financial portfolio that corresponds to the risk profile of everyone will significantly reduce investment risks. Indonesia already has regulations made by the Commodity Futures Trading Supervisory Agency that have reduced the risk of cryptocurrencies. The public is advised to pay attention to such rules and increase their knowledge about the different characteristics of different types of cryptocurrencies to find suitable crypto to build their portfolio that can bring the expected results or rewards. Furthermore, people can join the investment community to find individuals who have similar thoughts to share ideas and get rational advice to improve their innovativeness and knowledge skills.

This research has tried to provide a thorough discussion in the field of investment using cryptocurrencies, there is something that cannot be reached in this study, namely lies in the consistency of the research results and the region that is the object of this research. In each region, of course, there are differences in accepting a new technology so it must be tested and verified in future research. In addition, future research

may consider different types of cryptocurrency characteristics and situational factors. The more countries or individuals who decide to adopt/own cryptocurrencies, it is advisable to need to compare the types of cryptocurrencies based on factors that exist within the country such as regulation and economy

In research that has been carried out on cryptocurrencies, the conclusions drawn have implications for society in technology, finance, and subsequent research. Based on the research above a person's knowledge and motivation in moving to cryptocurrency become important but there are risks that people need to know before indeed plunging completely into cryptocurrencies. According to the results of the study, the knowledge that individual investors are trying to acquire is only knowledge related to trends or following and not seeking risk-related knowledge from the cryptocurrency itself. Expanding the risk knowledge of each cryptocurrency characteristic can reduce the likelihood of unwanted losses occurring and with such knowledge individual investors can set their risk level based on their respective profiles

REFERENCES

[1] Ahdika, A. (2017). Improvement of Quality, Interest, Critical, and Analytical Thinking Ability of Students through the Application of Research Based Learning (RBL) in Introduction to Stochastic Processes Subject. *International Electronic Journal of Mathematics Education*.

[2] Alalwan, A. A., Dwivedi, Y. K., Rana, N. P., & Williams, M. D. (2016). Consumer adoption of mobile banking in Jordan: Examining the role of usefulness, ease of use, perceived risk and self-efficacy. *Journal of Enterprise Information Management*.

[3] Best, R. d. (2022, Januari 31). *Market cap of 120 crypto - including stablecoin, NFT, DeFi - on January 10, 2022*. Diambil kembali dari Statista: https://www.statista.com/statistics/1269013/biggest-crypto-per-category-worldwide/

[4] Byrne, K. A., & Worthy, D. A. (2015). Gender differences in reward sensitivity and information. *Journal of Risk and Uncertainty*.

[5] Chand, M. (2021, October 21). *Top 10 Countries With The Most Cryptocurrency Holders*. FromC-Sharpcorner: https://www.c-sharpcorner.com/article/top-10-countries-with-the-most-cryptocurrency-holders/

[6] Corr, P. J. (2016). Reinforcement Sensitivity Theory of Personality Questionnaires: Structural survey with recommendations. *Personality and Individual Differences*.

[7] Fang, Y. H., & Tang, K. (2017). Involuntary migration in cyberspaces: The case of MSN messenger discontinuation. *Telematics and Informatics*.

[8] Frank, R. (2021, June 10). *Millennial millionaires have a large share of their wealth in crypto, CNBC survey says*. from CNBC : https://www.cnbc.com/2021/06/10/millennial-millionaires-have-large-share-of-wealth-in-crypto-cnbc-survey-.html

[9] Hair Jr, J. (2021). Next-generation prediction metrics for composite-based PLS-SEM. *Industrial Management and Data Systems*.

[10] Hwang, Y. (2014). An Empirical Study of Enterprise Resource Planning Integration: Global and Local Perspectives. *Information Development*.

[11] Iqbal, N., Fareed , Z., Guangcai, W., & Shahzad, F. (2020). Asymmetric nexus between COVID-19 outbreak in the world and cryptocurrency market. *International Review of Financial Analysis*.

[12] Jung, J., Han, H., & Oh, M. (2017). Travelers' switching behavior in the airline industry from the perspective of the push-pull-mooring framework. *Tourism Management*.

[13] Kaiser, T., Lusardi, A., Menkhoff, L., & Urban, C. (2021). Financial education affects financial knowledge and downstream behaviors. *Journal of Financial Economics*.

[14] Kim, M. K., Chang, L. Y., Wong, S. F., & Park, M. C. (2013). The effect of perceived risks and switching barriers on the intention to use smartphones among non-adopters in Korea. *Information Development*.

[15] Kim, S., Choi, M. J., & Choi, J. S. (2020). Empirical Study on the Factors Affecting Individuals' Switching Intention to Augmented/Virtual Reality Content Services Based on Push-Pull-Mooring Theory. *MDPI*.

ISSN: 1992-8645 www.jatit.org E-ISSN: 1817-3195

[16] Marseto, F., Handayani, P. W., & Pinem, A. A. (2019). Push, Pull, and Mooring Evaluation of User Switching Intention from Social Commerce to E-Commerce. *International Conference on Information Management and Technology*.

[17] Masoud, E. Y. (2013). The Effect of Perceived Risk on Online Shopping in Jordan . *European Journal of Business and Management*.

[18] Mishra, P., Pandey, C. M., Singh, U., Gupta, A., Sahu, C., & Keshri, A. (2019). Descriptive Statistics and Normality Tests for Statistical Data. *Annals of Cardiac Anaesthesia*.

[19] Oeberst, A., Kimmerle, J., & Cress, U. (2016). What Is Knowledge? Who Creates It? Who Possesses It? The Need for Novel Answers to Old Questions.

[20] Papazoglou, M. E., & Spanos, Y. E. (2021). Influential knowledge and financial performance: The role of time and rivals' absorptive capacity. *Technovation*.

[21] Pathak, V. K., & Pathak, A. (2017). Understanding Perceived Risk: A Case Study of Green Electronic Consumer Products. *Management Insight - The Journal of Incisive Analysers*.

[22] Saleh, M., Althonayan, A., Alhabib, A., & Alrasheedi, E. (2015). Customer Satisfaction and Brand Switching Intention: A Study of Mobile Services in Saudi Arabia.

[23] Sun, W., Dedahanov, A. T., Shin, H. Y., & Kim, K. S. (2020). Switching intention to crypto-currency market: Factors predisposing some individuals to risky investment. *PLoS ONE* .

[24] Sung, H., & Kim, E. Y. (2018). Market segmentation by loyalty and switching intentions of mobile social commerce apps - differences in perceived service quality and switching barriers. *Journal of the Korean Society of Clothing and Textiles*.

[25] Tran, V. L., & Leirvik, T. (2020). Efficiency in the markets of crypto-currencies. *Finance Research Letters*.

[26] Trivedi, J. (2019). Examining the Customer Experience of Using Banking Chatbots and Its Impact on Brand Love: The Moderating Role of Perceived Risk. *Journal of Internet Commerce*.

[27] Wijesundara, T., & Xixiang, S. (2017). Impact Of Personal Innovativenes Of Information Technology On Intention To Use Social Networking Sites. *Journal on Innovation and Sustainability volume 8*.