
RESEARCH OF KEY FACTORS THAT INFLUENCE THE ADOPTION AND USAGE OF CRYPTOCURRENCY

Research Proposal

Digital Business International Program

Prince of Songkla University, Phuket Campus

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TERMINOLOGY

Adoption - Technology adoption refers to the process of accepting, integrating, and using new technology in society.

DeFi - Decentralized finance is an emerging financial technology based on secure distributed ledgers like those used by cryptocurrencies. (Decentralized Finance (DeFi) Definition, 2022)¹

CMA - Cryptocurrency mass adoption, the value that we can claim as (crypto users/world citizens * 100).

CUS - Cryptocurrency usage score, that we define and calculate based on few questions in questionnaire. CUS are strongly related to any interests and usage of cryptocurrency and blockchain technologies for single person.

INTRODUCTION

10% of the world's population owns some form of cryptocurrency. Worldwide, **Thailand** has the highest share of cryptocurrencies, with 20.1% of Thai internet users owning digital currencies. ("Big Rise in Cryptocurrency Ownership" #)

This makes current research in **Thailand** so valuable and accurate.

Cryptocurrencies like Bitcoin are seen as the money of the future world that will replace the main currency and on the other hand, it is also seen as the money of criminals. But nowadays, bitcoin transactions have a much higher estimation as well as market capitalization. And some countries use bitcoin as a legal settlement and reserve currency. ("El Salvador's Experiment with Bitcoin as Legal Tender" #)

Global Cryptocurrency Mass Adoption can be seen as much higher. But even if the use of crypto is more widespread. What followed were the scammers scamming investors from October 2020 to March 2021. Over 8000 investors in the USA lost over 80 million USD, an increase of 1000% from the same quarter last year. We can see that Mass Adoption is growing with scammers,

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and in some countries, cryptocurrencies are regulated. And although it is now much easier to keep cryptocurrencies safe by yourself, it still lacks a lot of conveniences. This may be one reason why Individual Cryptocurrency Mass Adoption has not happened yet. (Cryptocurrency security: how to go crypto without getting caught out, 2021)

This research aims to find factors that affect Cryptocurrency Mass Adoption such as safety, and simplicity of use. Control by the government, including emotional factors, personality, and education. We will collect questionnaires from Prince of Songkla University students: both quantitative and qualitative.

PROBLEM STATEMENT

Benefits from blockchain and cryptocurrency adoption is obvious, according with (Gwyneth Iredale, 2021):

- 1. Blockchain can remove the need for a third party or intermediaries.*
- 2. Blockchain allows all parties to verify the records of their transaction partners.*
- 3. The use of blockchain technology shows the technical advantage of an enterprise for potential customers.*
- 4. Blockchain offers the advantage of improved security in comparison to conventional payments.*

With such huge benefits for humankind and all of us, adoption still is not completed. People did not replace their conservative medium of exchange tools with modern crypto wallets. Companies still using banks as trust mediator.

There are still many factors that are making this change challenging for the company or singles, which could be showing signs that cryptocurrency isn't ready to be decentralized and be used yet and it also has a complex and advanced technology that many people are not ready to adapt and get used to yet.

First, cryptocurrencies are not physical currency, and it has online identity which means that it would be hard to be traced, so this is an obvious sign why people are still scared to use it until today.

Second, when you think about privacy, everything you do in DeFi is viewable. We've gotten used to that in crypto, but that's not the way of the future. There will be some trade-off that we can make that is going to be like the kind of privacy we expect in the real world that would still give us the auditability that we care about and that makes DeFi, DeFi. In summary, there need to be a better understanding on cryptocurrencies and it should be more transparent and user-friendly so that it would be used world wide.

OBJECTIVES

The main objective of the research is to determine the most significant negative and positive drivers for cryptocurrency mass usage and adoption (CMA).

Various external drivers affect the CMA process, such as security, usage simplicity, and government control. Moreover, additional personal characteristics can predetermine CMA for certain groups of people, by their biological or psychological characteristics, such as age, education, or curiosity. The objective of the current study is

1. To find and define the most empowering factors that drive or retard CMA after a literature review and analysis of respondents' answers. Particularly, the study has the following sub-objectives:
2. To define the negative and positive key factors that may affect CMA.

The result of this study will be valuable to the industry. The result can be used as a framework that shows knowledgeable points for increasing or decreasing the velocity of the CMA process.

RESEARCH QUESTIONS

The main point of discussion in current time:

1. Which key driver can increase or decrease the CUS?
2. Which Personality Type is the group with the most CUS?
3. Between a woman and a man Which gender is more likely to take the risk?
4. Which key driver is the main key that affects the CUS ?
5. Is it possible to regulate the cryptocurrency adoption process with predefined positive key drivers?
6. Will education and knowledge help the CMA process?

Therefore, it is important to discuss possible ways of cryptocurrency impact to human life in the nearest period.

BOUNDARY OF YOUR RESEARCH

As previously mentioned, Thailand is the first country in world with highest share of crypto assets. (Simon Kemp, DataReportal's chief analyst, 2022)

Hence, will be a great to make research exactly in this location.

Researching provided in **Prince of Songkhla University, Phuket Campus**, with Thai and International students sample respondents.

METHODOLOGY

This is basic research with primary data.

The primary research methods for this study are document analysis and mixed questionnaire approach.

First stage of this research is based on literature review and document analysis in order to select and categorize hypothetical key drivers for CMA.

This study will first review various types of key drivers that may impact CMA, and their characteristics, from external such as security, to internal such as personality or biological factors.

In the **second stage** of this study, data were collected by using questionnaires as a data collection tool by using google form

A questionnaire using both question methods: qualitative and quantitative.

The respondent's sample is average male and female students from Prince of Songkla University.

There are a total of 28 questions which include multiple-choice questions, ratings, and The questionnaires will be divided into 4 parts.

Part1: Student's demographics, faculty, personality trait and type, Hobbies, and Risk by being a multiple-choice question.

Part2: Knowledge about Economics Politics Financial Technologies Algebra Programming by being rating.

Part3: Security awareness by being a multiple-choice question.

Part4: Question about using Cryptocurrency and blockchain experience by being a multiple-choice question and rating. this part will use for calculating CUS.

Finally, once the data is gathered from respondents, chart analysis was used to outline the visible deviations and correlations between key drivers and cryptocurrency usage.

Charts and illustrations in the main research report were used to present information more clearly by using Google Data Studio.

The method of document analysis was used: selected and analyzed scientific literature, legal documents, and expert conclusions. The literature was selected based on keywords from reliable sources of information.

This study will be conducted between September 2022 and December 2022.

SAMPLING METHOD

This research use **convenience sampling methods** to collect data only from students of PSU Phuket Campus.

POPULATION AND SAMPLE SIZE

In 2022 PSU Phuket Campus have 1580 students (reg.psu.ac.th)

Determination of sample size using **criterion**

The population in PSU Phuket campus has a thousandth of students so we use 10% of 1580 or 158 Students to be sample size

$$\frac{10}{100} \times 1580 = 158$$

RESEARCH TOOLS

Research tools include online questionnaires and Data Visualization, using **Jot Form** as a tool for creating online questionnaires and distributing questionnaires to sample groups and use **Google data studio** for visualization the data that we collect

RESEARCH FRAMEWORK

VARIABLE

- Independent
 - **Demographic** – Gender, Age
 - **Knowledge** – Education in a specific field of knowledge
 - **Personality Trait** – Extraversion and Introversion
 - **Personality Type** – 16 personality types
 - **Risk** – Willing to Risk
 - **Security** – Aware of Secure
 - **Music** – Music genre preferences

- **Sport** – Sport preferences
- **Travel** – Ability to foreign Travels
- **Dependent**
 - **CUS** – Cryptocurrency Usage Score

HYPOTHESIS

H1: Key drivers that have a positive correlation with CUS are Knowledge, Personality trait and type, Risk.

H2: INTJ is the personality with the most CUS.

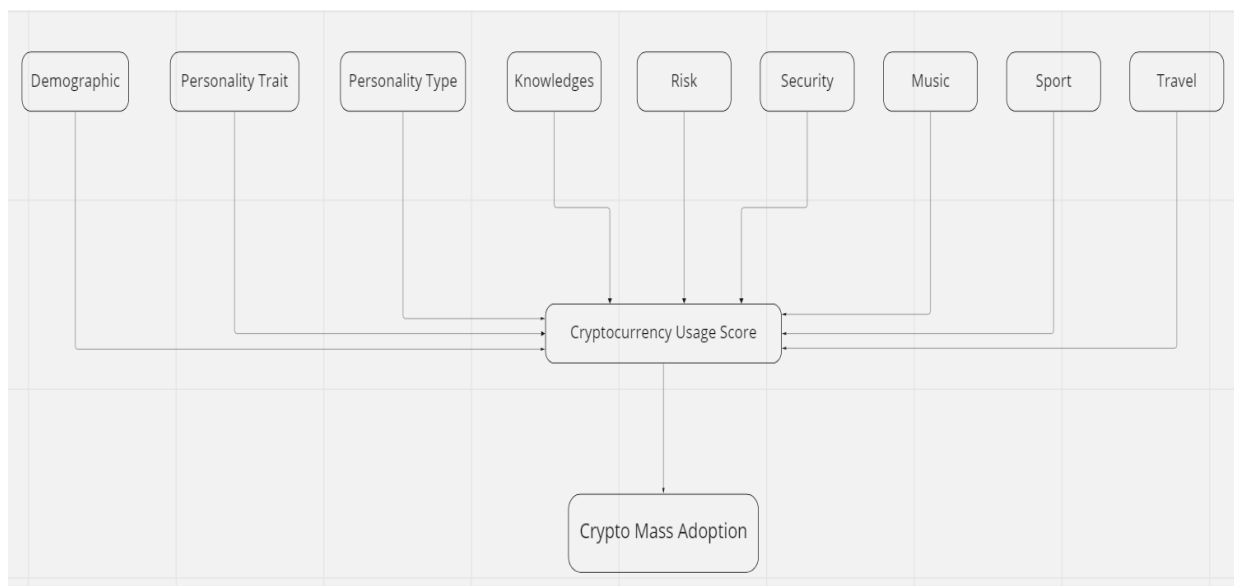
H3: Extravert is the personality with the most CUS.

H4: Males are more CUS than females.

H5: Key Driver that affects the CUS the most is Risk.

H6: Who have ability to foreign Travels will have CUS more than who not Ability to foreign Travels.

CONCEPTUAL FRAMEWORK

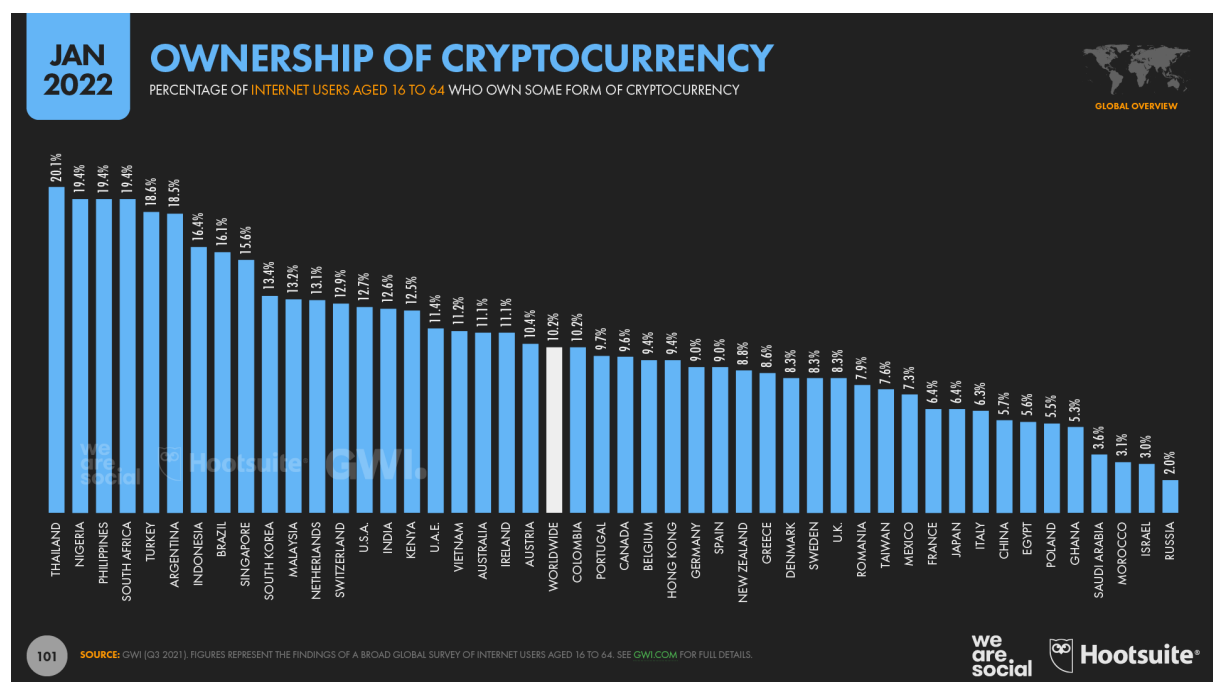


LITERATURE REVIEW

CRYPTOCURRENCY OWNERSHIP

According to (Simon Kemp, DataReportal's chief analyst, 2022), More than 2 in 10 working-age internet users now own some form of “crypto” in Thailand. World overall crypto holders in any other countries can be presented as 1 in 10 internet users.

Let's look at the report, provided by a leading marketing company (GWI, 2022):



What influence most holders from Thailand, Nigeria, the Philippines, and other leading countries, to invest in such a developing and quite new industry?!

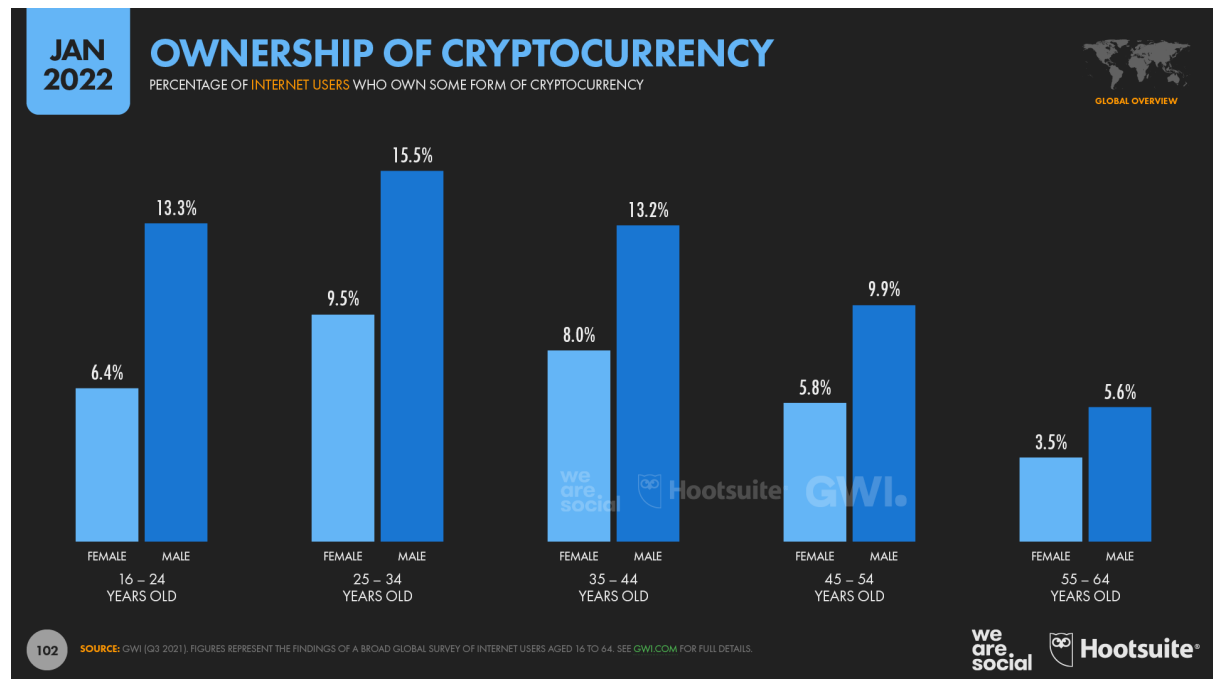
Probably, some key drivers can be clearly defined in the result of the research process with a sample of certain groups of people. Research in exactly leading holders' countries will show results are stronger and clearer.

(Simon Kemp, DataReportal's chief analyst) assumed that:

Cryptocurrencies are particularly popular across developing economies, especially in countries where conventional currencies are more prone to fluctuations in exchange rates.

Another strong correlation that was revealed from (Digital 2022: Big Rise in Cryptocurrency Ownership) is between Gender and crypto ownership.

GWJ's research shows that – overall – 12.7 percent of male internet users now own a decentralised digital currency like Bitcoin or Ether, compared with just 7.2 percent for women.



This is interesting results, and we will include **Gender**, as one of the assumed by us, driver factor that led CMA.

DEMOGRAPHIC FACTORS AND PERSONALITY ASSUMPTIONS

Based on quite recent study (Demographic factors, personality traits, and the performance of cryptocurrency traders, 2022), we can claim few important points towards our hypothesis.

At first, the study results found that **gender** has a relationship with performance. In this case, it cannot describe the direction of the relationship, because variable has minor scale. At least we can see that men trading ROI is 45.85% and woman ROI equals to 55.95%.

(Dewi Prihatini and Danang Sudarso, 2022) research can indicate that female traders perform better than male traders in average:

This confirms the assumption that women are more thorough than men to be more precise in analyzing the crypto market.

At second, study found from each **age** range, the 20–24-year age range has highest performance with 55.6%. Cryptocurrency trading performance in its prime in this age range.

Here is significant relationship between age and trader's performance:

At this age, range traders have a high enthusiasm for work and prove their ability to succeed. A cryptocurrency trader in this age range also mostly does not have significant responsibilities such as supporting his family, so traders can be more willing to take risks to get more profits.

In addition, there is no relationship between the respondent's **education** and performance. This is because majority of respondents are high school graduates or the equivalent.

Majority of our respondent's boundary is university students as well, and we will suppress education as independent variable for this research.

Moreover, (Demographic factors, personality traits, and the performance of crtyptocurrency traders, 2022) research not found strong correlations between **personal traits** and trading performance in cryptocurrency market. Despite this fact, we will assume that extraversion or introversion may be a factor that influence people, at least, to start using new technologies, such as cryptocurrencies.

TOWARDS THE PSYCHOLOGICAL PROFILE OF CRYPTOCURRENCY EARLY ADOPTERS

In contra version with previous mentioned research, another interesting publication (Towards the psychological profile of cryptocurrency early adopters: Overconfidence and self-control as predictors of cryptocurrency use, 2021) has results and conclusions related to our hypothesis.

Results reveals correlation with **age**:

Being a female is negatively related to cryptocurrency use.

Also, with psychological profile and **personal traits**:

Extraversion shows positive relationship, agreeableness shows negative relationship.

A notable finding is that men are more than three times likely to use cryptocurrencies. Studies show that males are on average both more overconfident and less self-controlled than females. Which is not decline previous mentioned research findings: woman has better trading performance with self-control.

Personal traits, such as extraversion is proxy for self-overconfidence, and increase early adoption of new technologies, in other side agreeableness is lower indicator of self-overconfidence and may show declines of any new technologies.

EXTERNAL FACTORS INFLUENCING ADOPTION

(Spenkelink, 2014) proposed a various external factors that influence cryptocurrency adoption:

Relative advantage, Costs, Transaction speed, Decentralization, No single point of failure, Price stability, Security, Privacy, Protocol scalability, Irreversible Payments, Costs of mining, Ease of use, Result Demonstrability, Visibility, Compatibility, Trialability, Image, Crime, Positive PR, Voluntariness of use.

Many of this factors has real benefits, while some of them only has neutral effect on CMA at all.

Construct	Contribution to adoption
Relative Advantage	
• <i>Low costs</i>	Benefit
• <i>Fast transaction speed</i>	Benefit
• <i>Decentralized</i>	Neutral
• <i>No single point of failure</i>	Neutral
• <i>Price stability</i>	Disadvantage
• <i>Security</i>	Neutral
• <i>Privacy</i>	Neutral
• <i>Scalability</i>	Neutral
• <i>Irreversible payments</i>	Neutral
Ease of Use	Disadvantage
Result Demonstrability	Disadvantage
Visibility	Advantage
Compatibility	Advantage
Trialability	Benefit
Image	
• <i>Crime</i>	Disadvantage
• <i>Positive PR</i>	Advantage
Voluntariness of use	Advantage

This model contains on the one hand intrinsic aspects of cryptocurrencies and the benefits and disadvantages of using cryptocurrencies. Benefits will contribute positively to adoption, while disadvantages contribute negatively to adoption. These benefits and disadvantages are based on the previous sections in this chapter where they are discussed.

In this research we will prove additionally our hypothesis about **Secure** factor. Let's assume that since 2014 year many changes occurred and updates were created in cybersecurity and blockchain technologies. Therefore, some neutral factors such as **Security** and **Privacy** may give a strong visible correlations for user opinion.

(Spengelink, 2014) claims that price stability has neutral effect on adoption. Investing to stable price assets has less risks and we can characterize such investments as low risk investments. Since 2014, cryptocurrency market and market cap multiplied and grow up, changes are very volatile and return huge risks. The price stability now may be a major reason for investment, for

single person. Hence, **willing to risk** to even unstable assets, maybe a key factor that led a person to use a crypto.

NATIONAL DEVELOPMENT FACTORS AFFECT CRYPTOCURRENCY ADOPTION

(Do national development factors affect cryptocurrency adoption?, 2022) researched the relationship between Cryptocurrency adoption with positive and negative variables of 137 countries such as Education, the Human Development Index, the Network Readiness Index, the Gini index, Democracy, Regulatory Quality, and Gross Domestic Product, and negatively and in decreasing order. with Control of Corruption, the Corruption Perception Index, and the Economic Freedom Index. Found that ,The statistical insignificance of most variables in our results could be attributed to the newness of the phenomenon and the limited understanding of its impact. Our cost-benefit analysis reveals that newly industrialized economies from a wider pool of emerging economies, especially the ones with greater income inequality (Gini index) and possessing prerequisite infrastructure shown by the statistical significance of education and network readiness, will adopt cryptocurrency at a growing pace while economies with robust legal. systems may be averse to the idea of wider adoption.

In our research we will research in key factor that effect to individuals , by we can use this research (Do national development factors affect cryptocurrency adoption?, 2022) to compare whether the result is consistent or not to our research

IMPACT OF PERSONALITY TRAITS ON USE OF CRYPTOCURRENCIES

The goal of this conference paper (Impact of personality traits (BFI-2-XS) on use of cryptocurrencies, 2019) was to analyze influence of personality traits and demographics on usage of cryptocurrencies. So far, the new technology has not been explored in terms of user motivation and they have considered that personality traits and demographics could be a very interesting explanatory variable. With regards to the results, openness to experience has a positive influence, being male has a positive influence and having a full-time job within the field of study has a positive influence. It makes sense that

people who are more open to new things would use cryptocurrencies more. When it comes to technology use, in majority studies where gender is significant, it is men adopting it more, which also confirm their results.

We can use this research (Impact of personality traits (BFI-2-XS) on use of cryptocurrencies, 2019) to find out the key factor of cryptocurrencies usage in the Prince of Songkla University Phuket.

QUESTIONNAIRE

PART1: STUDENT'S DEMOGRAPHIC, FACULTY, WILLING TO RISK, PERSONALITY, HOBBIES

No.	Questions
1.	What is your gender? <input type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Other..... <input type="checkbox"/> Prefer not to say
2.	What is your age?
3.	What is your faculty? <input type="checkbox"/> FHT <input type="checkbox"/> FTE <input type="checkbox"/> FIS <input type="checkbox"/> COC
4.	You are Introvert or Extravert person ? <input type="checkbox"/> I'm Introvert <input type="checkbox"/> I'm Extravert
5.	What is your 16 personality type? https://www.16personalities.com/personality-types
6.	How much risk can you afford? https://www.investright.org/informed-investing/know-yourself/test-your-risk-tolerance/ <input type="checkbox"/> Low , I'm careful person <input type="checkbox"/> Medium , I'm not afraid to risk a little, but I don't take risks unnecessarily <input type="checkbox"/> High , I'm gambler, willing to risk everything on the right deal

7.	What is your favorite music genre?
8.	Do you play some sport? <input type="checkbox"/> Yes <input type="checkbox"/> No
9.	Have you ever traveled abroad? <input type="checkbox"/> Yes <input type="checkbox"/> No

PART2: KNOWLEDGE ABOUT ECONOMICS, POLITICS, INFORMATICS, FINANCIAL TECHNOLOGIES, ALGEBRA, AND PROGRAMMING.

How would you rate your knowledges?

5 = Most 4 = Very 3 = Moderately 2 = Slightly 1 = Less

No.	Questions	1 Less	2 Slightly	3 Moderately	4 Very	5 Most
1.	Economics					
2.	Politics					
3.	Financial					
4.	Technologies					
5.	Algebra					
6.	Programming					
7.	Psychology					
8.	Geography					

PART3: SECURITY AWARENESS

No.	Questions
1.	Do you use 2FA or MFA with your social or bank account? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> I don't know what 2FA and MFA are
2.	Do you know what Security key and U2F are? <input type="checkbox"/> Yes <input type="checkbox"/> No
3.	Do you follow the best practice of password setting? <input type="checkbox"/> Yes <input type="checkbox"/> No

PART4: CRYPTOCURRENCY AND BLOCKCHAIN

5 = Most 4 = Very 3 = Moderately 2 = Slightly 1 = Less

No.	Questions	1 Less	2 Slightly	3 Moderately	4 Very	5 Most
1.	Do you think cryptocurrency is interesting?					
2.	How well do you think you understand Cryptocurrencies?					
3.	How well do you think you understand Blockchain?					

No.	Questions
1.	Do you have cryptocurrency tokens? <input type="checkbox"/> Yes <input type="checkbox"/> No
2.	Why do you NOT hold cryptocurrencies at the moment?

3.	What cryptocurrency do you have?
4.	Why did you become a cryptocurrency holder?
5.	Do you have friends who have cryptocurrency tokens ? <input type="checkbox"/> Yes <input type="checkbox"/> No
6.	Do you plan to have some cryptocurrency in the next 1-5 years? <input type="checkbox"/> Yes <input type="checkbox"/> No
7.	When do you think is the right time for you to hold cryptocurrency?
8.	Do you use some of these blockchain ? <input type="checkbox"/> Ethereum <input type="checkbox"/> Binance Smart Chain <input type="checkbox"/> Solana <input type="checkbox"/> Near <input type="checkbox"/> Polygon
9.	Your wallet address in Binance Smart Chain To receive free exclusive NFT

RESULTS OF FINDINGS

GATHERING DATA FROM RESPONDENTS

To accomplish this research, we must collect some real sample data from real respondents. As we already discussed this part and research methods, our respondents are students of one of the most famous Thailand university, Prince of Songkla University.

At first, our idea to collect enough responds was make and offer beautiful NFT picture. Exchange of single response fair for NFT picture. As we tried so hard and get only ~10 responds for few weeks, we come out with conclusions: people not interesting to get virtual gift such as NFT. Some of students simply don't know what NFT picture is and considered this as non-valuable offer to spent time in questionnaire.

Our data collection methodology was changed to offer real goods. We offer for people Oreo Cakes, and this give to us a very productive result. We collect our data from students in food area of university right on big break between classes and get almost 100 responds for less than few hours.

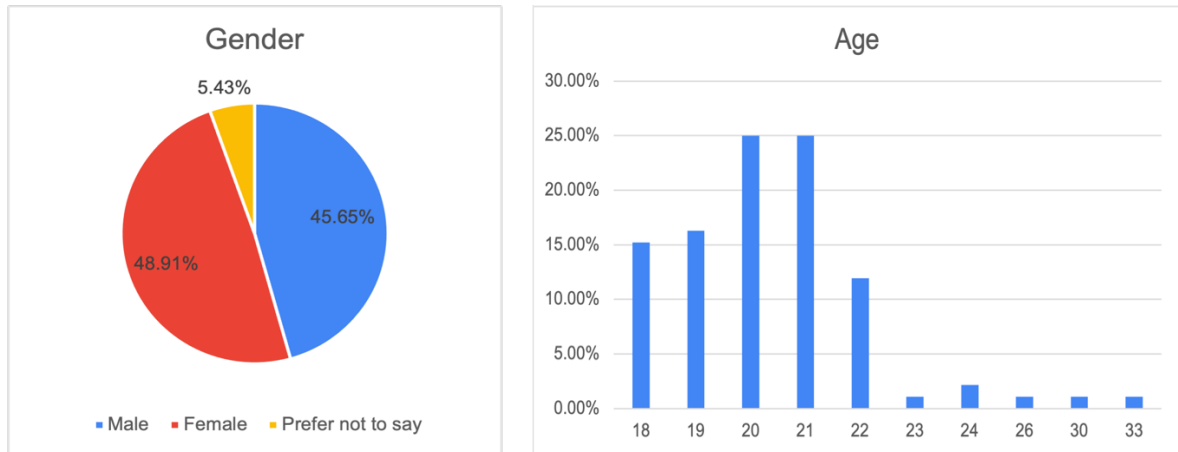
Students are always ready to spend time on questionnaire if they see a real good offer to them.



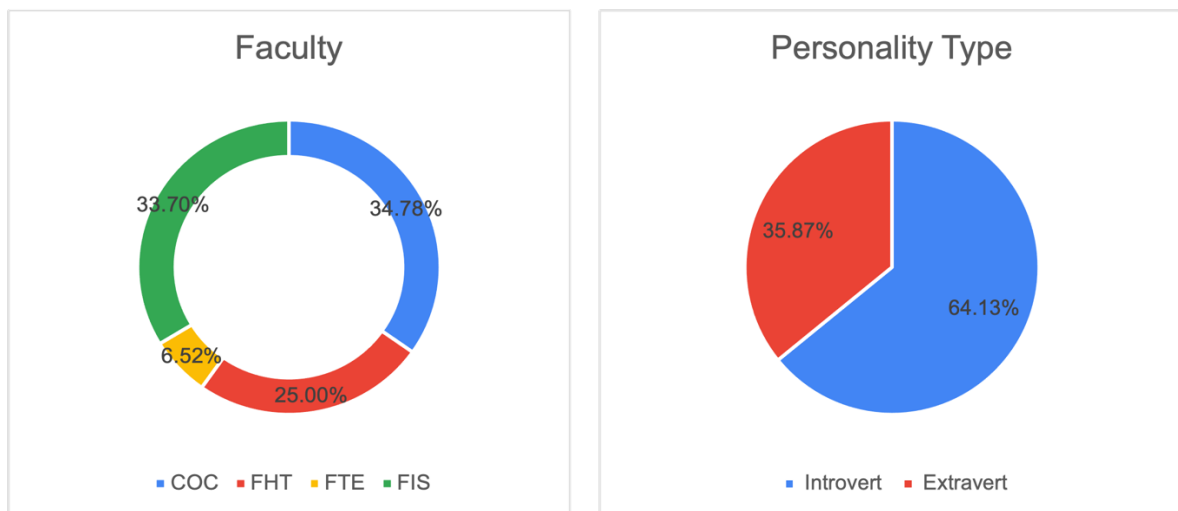
DEMOGRAPHIC DATA OVERVIEW

Let look to demographic findings of our research such as: Gender, Age, Faculty, Personality Type, Personality trait and willing to Risk.

Majority of data in our sample is from **Female** answers, but results is almost same as **Male** with difference of 3.3 percent. This makes results very accurate to compare data by gender.



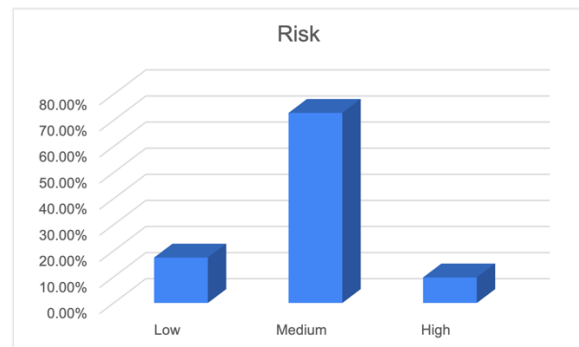
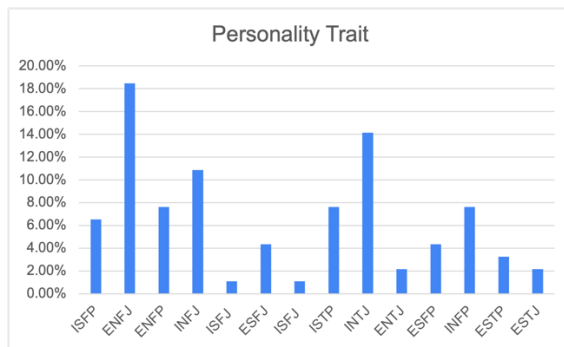
The most of respondents is between **18 – 22** year old.



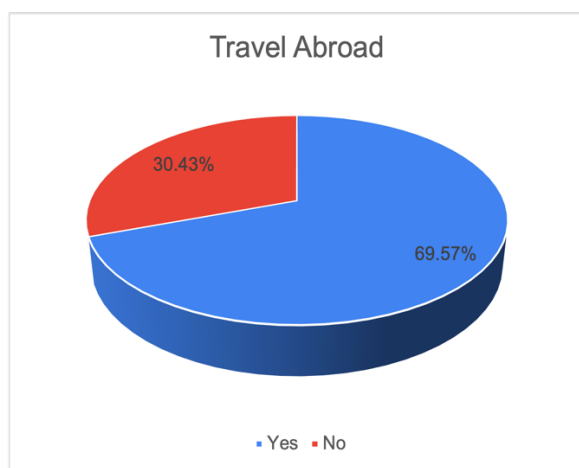
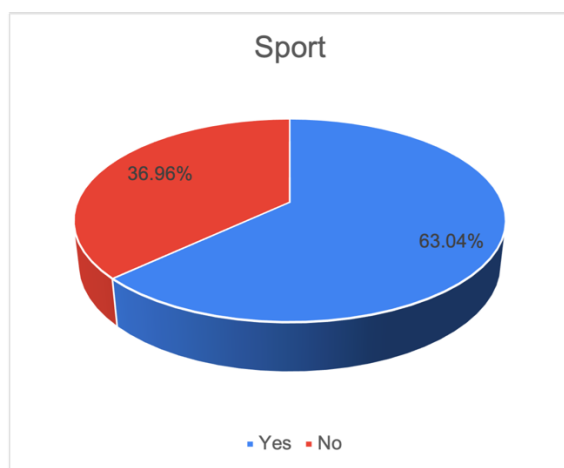
Faculties of respondents:

- College of Computing 34.78%
- Faculty of International Studies 33.70%
- Faculty of Hospitality and Tourism 25%
- Faculty of Technologies and Environment 6.52%

Most of respondents have **Introvert** type of personality and **ENFJ** personality trait by 16 personalities test of Myers and Briggs.



Absolute majority of respondents has characterized themselves as persons who's can afford some **medium risk**, but not high.



63.04% of all respondents are doing some **Sports** on regular basis. And 69.57% did **travel** abroad (which is quite high number and good for our findings to see correlations based on this point)

CRYPTOCURRENCY USAGE SCORE CALCULATIONS

Methodology of CUS calculation and scoring is based on Part 4 of questionnaire and consist of 12 various questions about cryptocurrencies and blockchain technologies.

Let's convert all questions into point and scales depend of question value, and then summarize all points to get the CUS.

- Q1. Simple 1-5 points

- Q2. Simple 1-5 points
- Q3. Simple 1-5 points
- Q4. Yes/No questions is equals to 5 or 1
- Q5. User may skip question in lack of time. We can't be sure that user don't using cryptocurrencies. But majority is answered. Let's give some points for good answers as mark of interest. No answer - 0 points, not specific reason - 1 point, no knowledge - 1 point, specific reason 2 points.
- Q6. Yes/No questions is equals to 5 or 1
- Q7. No answer - 0 points, don't know or not interest - 0 points, uncertain time - 1 points, specified far time (10 years+) 2 points, specified near time 3 points.
- Q8. Skipped question or "NO" answer is 0 points. Every specified token is +1 point
- Q9. Skipped question or "NO" answer is 0 points. Every specified network is +1 point
- Q10. User may skip question in lack of time. We can't be sure that user don't using cryptocurrencies. Hence, all respondents with answer receive additional 3 points.
- Q11. Yes/No questions equals to 5 or 1
- Q12: If respondent left wallet address to receive NFT he/she got additional 4 points. If respondent left only email, he/she probably interesting to get NFT and get 2 points. Respondent does not have point from last question if question is blank.

Minimum CUS possible: $1 + 1 + 1 + 1 + 0 + 1 + 0 + 0 + 0 + 0 + 1 + 0 = 6$

Maximum CUS possible: $5 + 5 + 5 + 5 + 2 + 5 + 3 + 5 + 5 + 3 + 5 + 4 = 52$

After CUS calculation the minimum CUS reached is 9 and maximum CUS reached is 39.

DATA ANALYSIS WITH T-TESTS AND ANOVA

From data collection, researchers analyzed using SPSS statistical program divided into 2 parts as follows.

- Descriptive Statistics: Frequency Mean, Standard deviation to analyze CUS with other variables such as gender, risk afford, knowledges.
- Inferential Statistics: We use T-test, Anova, Pearman correlation to test the hypothesis.

Gender			
Description	N	Mean	S.D
Female	45	0.000	5.887
Male	42	0.000	6.882
LGBTQ+	5	19.400	6.309
Total	92	21.435	

Males have higher CUS than females and LGBTQ+ have lowest CUS rate. Confidence: 95%.

Personality			
Description	N	Mean	S.D
Introvert	59	20.847	6.541
Extravert	33	22.485	6.376
Total	92	21.435	6.529

Extravert normally have higher CUS score rather than **introvert**.

Personality Trait			
Description	N	Mean	S.D
INTJ	13	24.692	5.787
ENFP	7	25.714	7.158
ISFJ	3	24.000	8.756
ISTP	7	22.571	5.740
ENTJ	2	30.000	1.414
ENFJ	17	22.765	4.855

ESTJ	2	22.000	8.485
INFP	7	20.000	4.619
INFJ	10	18.600	5.787
ESFJ	4	21.000	4.550
ISFP	6	16.167	4.535
ESFP	4	19.500	5.802
ESTP	3	15.667	6.658
INTP	1	22.000	0.000
ISTJ	3	16.667	5.508
Total	89	24.921	

Most frequent type of personality to reach higher CUS score is **INTJ (Architect)** and **ENFP (Protagonist)**.

Risk			
Description	N	Mean	S.D
Low	16	19.750	5.686
Medium	67	21.582	6.814
High	9	23.333	3.421
Total	92	21.435	6.529

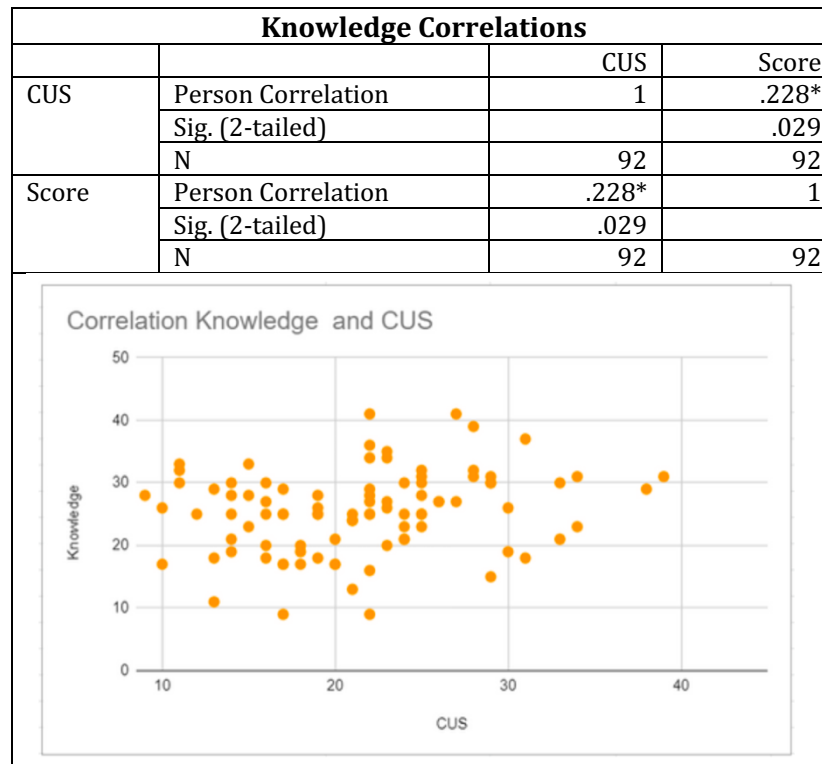
Respondents who's ready for **high risk** have highest CUS score, which is predictable and additionally prove correctness of our research. Ready to high risk people will play more on market and trades.

Sport			
Description	N	Mean	S.D
Yes	58	23.552	6.244
No	34	17.824	5.374
Total	92	21.435	6.529

Respondents who's have some **sport** in life have higher CUS score. Confidence 100%.

Travel aboard			
Description	N	Mean	S.D
Yes	64	21.766	6.737
No	28	20.679	6.074
Total	92	21.435	6.529

Travelling is not much significant factor for CUS score.



Summarized **Knowledges** scores have positive correlation with CUS at **0.228** correlation coefficient.

We used many inferential statistics, because we have many types of data that using to test hypothesis. After analyzing process, we tested hypothesis and can surely define what is a key factor that affect CUS.

Main factors:

- Playing Sport
- Gender
- Personality trait

- Knowledge

The factors that can regulate is knowledge, the most respondents who have low CUS tell us they have less knowledge and want to learn more about cryptocurrencies before start to use it.

RESULTS APPENDIX 1: CORRELATIONS OF HIGHEST CUS RESPONDENTS

In addition, let's analyze what similarity have between respondents with higher CUS. For high accurate, let's take a sample of respondents with higher CUS (13.8% of all - 15 respondents) and explore correlation with another data. Range of CUS: 28 – 39.

At first, we can surely claim that Higher CUS respondents have most knowledges in: Technologies, Economics, Finances fields.

First 15 higher CUS respondents by knowledges							
Economics	Politics	Financial	Technologies	Algebra	Programming	Psychology	Geography
4.00	2.00	4.00	5.00	5.00	5.00	2.00	3.00
4.00	4.00	4.00	4.00	3.00	2.00	3.00	4.00
5.00	3.00	4.00	3.00	3.00	2.00	1.00	1.00
3.00	4.00	4.00	4.00	3.00	2.00	5.00	5.00
3.00	3.00	3.00	4.00	4.00	4.00	4.00	3.00
3.00	3.00	3.00	4.00	1.00	3.00	2.00	1.00
2.00	2.00	2.00	2.00	2.00	3.00	2.00	2.00
5.00	5.00	5.00	4.00	5.00	4.00	4.00	4.00
2.00	2.00	2.00	3.00	3.00	3.00	1.00	1.00
3.00	4.00	3.00	3.00	4.00	2.00	3.00	3.00
1.00	1.00	1.00	2.00	2.00	2.00	2.00	3.00
3.00	4.00	3.00	5.00	4.00	3.00	4.00	3.00
4.00	3.00	4.00	4.00	3.00	3.00	4.00	4.00
5.00	4.00	4.00	3.00	3.00	4.00	3.00	3.00
5.00	3.00	5.00	5.00	4.00	4.00	2.00	2.00
52	47	51	55	49	46	42	42

Additional findings for highest CUS respondents:

- 100% of higher CUS respondents at least have friends who carry some cryptocurrency assets
- 93% of higher CUS respondents is doing some Sport
- 80% of higher CUS respondents is ready for medium risk
- 80% of higher CUS respondents is did travel abroad

- 80% of higher CUS respondents using 2 factor Authentication
- 73.3% of higher CUS respondents are Male, 26.6% Female

RESULTS APPENDIX 2: INTERESTING INFORMATION

Also, we would like to add in this block additional finding that doesn't includes in any other blocks above, because of not match with any narrow findings category, but still very interesting.

- Most reason why people not using cryptocurrencies: Not enough knowledge about cryptocurrencies
- Most reason why people become cryptocurrency holders: Become rich or study

ANALYSIS & DISCUSSION

All mentioned factors in this research are based on the assumptions that the personal factors might influence adoption of crypto and blockchain technologies. However, we can't identify adoption process in full picture and make full predictions over a year, as blockchain technologies is very innovative and changes rapidly over a year.

But gained results in this research can, at least, give us good point of view and platform for future research, that may be used in future to calculate person and cryptocurrency correlations more accurate.

Identified factors might be simultaneously forced in certain groups to see if adoption is increased in practice. This is a good point to continue.

CONCLUSIONS

The adoption process of cryptocurrencies is not progressing as fast as one might think. Behavior of cryptocurrency users changes only very slowly, just look at the amount of transactions that is still done with cash (50%).

The adoption process of cryptocurrencies is influenced by many different factors, making that there is a lot of uncertainty about the future for cryptocurrencies.

In this research five main assumptions were successfully proved and at least 5 key factors was identified which are important for future mass adoption by the general public.

1. **Sport** as one of the main factors: respondents with the highest cryptocurrency usage score are on the top of statistics. What exactly kind of sport motivate them to carry crypto assets? Still a question. But active style of life gives significant advantage, probably in wide areas of life. Not only for cryptocurrency adoption.

2. **Gender** determination: Males is more interesting in new technologies at all. This makes a gap between gender means of cryptocurrency holders. Factor is independent, but we at least know, who's should be the main customer segment for future business Idea in cryptocurrency marketplace.

3. **Personality trait**: Elon Musk is INJT (Architect), Barack Obama is ENFP (Protagonist). Architects don't just learn new things for show – they genuinely enjoy expanding the limits of their knowledge. Changing people's minds is no easy task – but if anyone can do it, it's Protagonists.

4. **Knowledges** are characterized respondents as high biased for using cryptocurrency. Technologies, Economics, Finances – are three main pillars for start going dive into blockchain world.

5. **Friendship** with holders. All of 100% higher CUS respondents have friends that do the same. They are in community of holders and traders. Some of friends at least hold some cryptocurrency. Good example are probably influence other to try new technologies.

In this research we also tried to find correlation with other factors, such as favorite music genre, but strong visible relations was not found. Moreover, the security risks associated with stealing cryptocurrency of users by a direct attack or by the hacking of exchanges was not ranked highly by the respondents.

Cryptocurrencies have benefits over existing payment methods. The low transaction costs and low barriers to entry of the system make that it is very easy for newcomers to enter the cryptocurrency ecosystem and start using it.

We are, researchers, hope to make, at least, some little drop of progress in toward to increase adoption speed in the world, with this research. And we are hope this finding will be helpful for further academic commitments.

LIMITATIONS

Care has been taken to select a sample of Thai and International students of Prince of Songkla University, Thailand. However, it is possible that their combined views are biased and differ from how the average potential adopter values cryptocurrencies.

Cultural habits or geographical specifics may vary a findings for some direction.

This results in a quantitative dataset of a limited number of interviewees. 92 respondents make a short overview of real picture, but shape of real situation is clear and visible.

Increasing sample size number might increase accuracy of research, but probably not change results in common.

Therefore, a possibility for future research is to test the model with a larger sample size on a more quantitative basis and widely range of ages and occupations.

It is also possible that the factors that were found to influence the adoption might be different for different cryptocurrency assets, therefore threatening the external validity of the findings.

FURTHER RESEARCH

There are many interesting issues that have come to the light during the literature review and questionnaire analysis that need more research. Each of the finding factors that lead cryptocurrency adoption that are identified are in need for more in depth research.

Each factor can be divided into few more subtopics and deeply analyzed in future research. This will help to create a more realistic output and might even be the basis for a model that can be used to predicts adoption figures.

More research is needed on the topic of **sport** and what exactly kind of sport are influence increasing of cryptocurrency usage score. There are many more applications appear on mobile market that using some sport activities in alongside with blockchain. Analysis of certain sport can give a clear picture of market needs, and hence It can be a good foundational idea to create new popular applications for this sport segment.

Knowledges in certain areas that have higher CUS users, Technologies, Economic and Finances, looks obvious. In Future works are good to identify such subtopics and categories of studies may be included to non-technological students that can helps to learn cryptocurrencies in other faculties either.

Gender factor is independent. We can't choose it, but new research horizons can identify what exactly lead Male gender to use cryptocurrency and why Female is not much interested in that area of life.

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