



INDIAN INSTITUTE OF INFORMATION TECHNOLOGY VADODARA

CS318 : BUSINESS ANALYTICS

Research Analysis on

“Perception of Indians About Cryptocurrencies”

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INTRODUCTION

Cryptocurrencies have emerged as a popular alternative to traditional financial systems, enabling transactions that are faster, cheaper, and more secure than traditional payment methods. With the rapid increase in the adoption and use of cryptocurrencies worldwide, it has become a topic of intense interest and discussion. India, with its massive population and growing economy, has shown a significant interest in cryptocurrencies over the past few years. However, there is a lack of understanding of how Indians perceive cryptocurrencies, what factors influence their adoption, and the potential challenges they face in adopting them.

This research topic aims to investigate the perception of Indians about cryptocurrencies, examining their attitudes, beliefs, and behaviors towards digital currencies. The study will use a mixed-methods approach, combining qualitative and quantitative data to gain a comprehensive understanding of the phenomenon. The research will involve a survey to gather data from a diverse sample of the Indian population.

The study will first explore the level of awareness and knowledge of Indians about cryptocurrencies. It will examine the sources of information that Indians use to learn about cryptocurrencies, and their understanding of the benefits and drawbacks of using digital currencies. This will be followed by an investigation of the factors that influence the adoption and use of cryptocurrencies by Indians.

The study will also examine the potential benefits and drawbacks of using cryptocurrencies in India. It will investigate the perceived advantages of using digital currencies, such as faster and cheaper transactions, and the potential risks associated with their adoption, such as cybersecurity threats and regulatory uncertainty.

The findings of this research could have significant implications for the development of cryptocurrency policies in India, as well as for businesses seeking to enter the Indian crypto market. Understanding the perception of Indians about cryptocurrencies can provide valuable insights for policymakers, researchers, and businesses seeking to understand and capitalize on the growing interest in cryptocurrencies in India.

RESEARCH PROCESS

Research Topic: Perception of Indians About Cryptocurrencies

Research Problem: Determine the factors that influence the adoption and use of cryptocurrencies in India and the potential benefits, drawbacks and risks associated with digital currencies among various age groups.

Research Objectives: The objectives associated with our research are:

- To investigate the level of awareness and knowledge of Indians about cryptocurrencies, including their understanding of digital currencies, their benefits, and drawbacks.
- To identify the factors that influence the adoption and use of cryptocurrencies by Indians, including socio-demographic factors such as age, gender, income, and education.
- To examine the potential benefits and drawbacks of using cryptocurrencies in India, including their impact on financial inclusion, economic growth, and cybersecurity risks.
- To explore the perception of Indians about the regulatory environment surrounding cryptocurrencies, including the level of trust and confidence in the legal and regulatory framework for digital currencies in India.

Research Questions: We have tried to investigate the following questions:

- What is the level of awareness and knowledge of Indians about cryptocurrencies, and how does it vary across different age groups?
- What are the factors that influence the adoption and use of cryptocurrencies by Indians?
- What are the potential benefits and drawbacks of using cryptocurrencies in India?
- How do Indians perceive the regulatory environment surrounding cryptocurrencies, and how does it impact their decision to adopt and use digital currencies?
- What are the potential risks and challenges associated with the adoption

and use of cryptocurrencies in India?

Research Methodology:

S.No.	Name	Analysis
1	Unit of Analysis	Indian Citizens
2	Population	India's Population
3	Data Collection	Online Survey through Google Form
4	Sampling Procedure	Random Sampling
5	Time Dimension	Cross-sectional
6	Sample Size	Survey Respondents
7	Data Analysis	Descriptive Statistics and Chi-Square Test
8	Research Design	Descriptive

Table 1: Research Methodology

Questionnaire: [Link to the Questionnaire](#)

The questions asked in the survey are given below. The questions with circular checkboxes are single select type and those with square checkboxes are multiple select type.

1. Your Name: _____

2. Age Group:

☐ 18-25

☐ 26-35

☐ 35-50

☐ 50-60

☐ 60+

3. Occupation: _____

4. Have you ever invested money? If yes, then in which of the following?

☐ Stocks

☐ Mutual Funds

☐ Digital Gold

☐ Cryptocurrencies

☐ Bonds and Other Securities

☐ No, I have never invested

5. Have you heard of crypto currencies such as Bitcoin or Ethereum?

☐ Yes, I have.

☐ No I have not.

6. Do you know how cryptocurrencies work?

☐ Yes I know

☐ I have very little idea

☐ No, I don't know at all

7. If yes, have you ever invested or thought of investing in cryptocurrencies?

☐ Yes I have invested in crypto.

☐ I have just thought about investing in crypto

☐ I do not plan on investing in crypto

8. Why do you thought of investing in crypto?

☐ Expectation for high returns

☐ Diversification of investment portfolio

☐ Your friend or family recommended you to do so

☐ Belief in tech behind crypto

9. How much have you invested in crypto?

☐ 0 - 5000 INR

☐ 5000 - 15000 INR

☐ 15000 - 50000 INR

☐ 50000+ INR

10. How much do you plan to invest (new or further) in crypto?

- ☐ 0 - 5000 INR
- ☐ 5000 - 15000 INR
- ☐ 15000 - 50000 INR
- ☐ 50000+ INR

11. What is your preferred cryptocurrency for investment?

- ☐ Bitcoin
- ☐ Ethereum
- ☐ Solana
- ☐ Binance Coin
- ☐ Aptos
- ☐ PolkaDot
- ☐ Others

12. What is your preferred method of storing and securing your cryptocurrency investments?

- ☐ Keeping them on an exchange or online wallet
- ☐ Keeping them on a hardware wallet
- ☐ Keeping them on a paper wallet
- ☐ Other

13. Do you think investing in crypto is bad idea? If yes, then why?

- ☐ No, I don't think so
- ☐ Yes, because they are non-existent
- ☐ Yes, because they are too volatile
- ☐ Yes, because the returns are comparable to stock and risk is higher

- ☐ Yes, because there is no reliable structure currently for exchange
14. If you have invested, then what do you think are the advantages of cryptocurrencies?
- ☐ Decentralisation
 - ☐ Security
 - ☐ Anonymity
 - ☐ Speed of transaction
 - ☐ Lower transaction fees
 - ☐ None of the above
15. What do you think are the biggest drawbacks of cryptocurrencies?
- ☐ Volatility
 - ☐ Lack of regulations
 - ☐ Speed of transactions
 - ☐ Energy consumption and Environmental impact
 - ☐ Fraud or scams
16. What do you think are the reasons because of which people (or you) hesitate to invest in cryptocurrencies?
- ☐ Lack of Knowledge
 - ☐ Very Risky
 - ☐ Unknown or relatively new concept
 - ☐ Chances of fraud or scam
 - ☐ No idea at all
17. Do you believe that cryptocurrencies have the potential to revolutionize the way that cross-border payments are made?
- ☐ Yes

- ☐ No
- ☐ Unsure

18. Do you think government should regulate cryptocurrencies?

- ☐ No, as it would contradict the basic principle of cryptocurrencies which is Decentralisation
- ☐ Yes, lightly
- ☐ Yes, moderately
- ☐ Yes, heavily

19. Overall, how optimistic or pessimistic are you about the future of cryptocurrencies?

- ☐ Very optimistic
- ☐ Somewhat optimistic
- ☐ Neutral
- ☐ Somewhat pessimistic
- ☐ Very pessimistic

20. What do you think is the future of cryptocurrencies?

- ☐ They will become mainstream and widely accepted
- ☐ They will remain a niche investment option
- ☐ They will eventually fade away and be replaced by something else
- ☐ No idea at all

ANALYSIS

Knowledge About Cryptocurrencies Vs Age

	18-25	26-35	35-50	50-60	60+	Total
I have very little idea	50		3	3		56
No, I don't know at all	6	1	4	5	3	19
Yes I know	47	4	2			53
Total	103	5	9	8	3	128

Pearson's Chi-squared test

data: age_knowledge

X-squared = 49.875, df = 8, p-value = 4.32e-08

Amount Invested in Cryptocurrencies vs Age

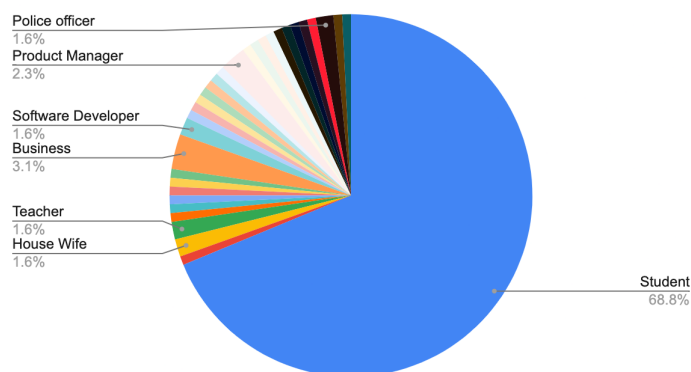
	18-25	26-35	35-50	50-60	60+	Total
0 - 5000	1					1
0 - 5000 INR	70	4	5	6		85
15000 - 50000 INR	3			1		4
5000 - 15000 INR	5		3		2	10
50000+ INR	5	1				6
NA	19		1	1	1	22
Total	103	5	9	8	3	128

Pearson's Chi-squared test

data: age_amount

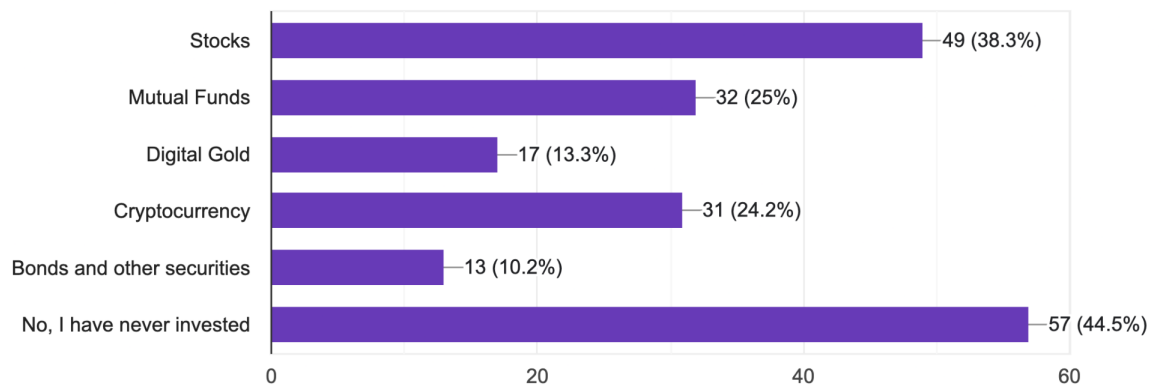
X-squared = 34.004, df = 16, p-value = 0.005426

Count of Occupation

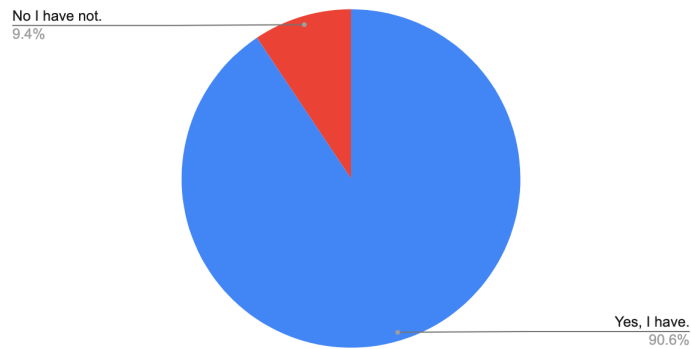


Have you ever invested money? If yes, then in which of the following?

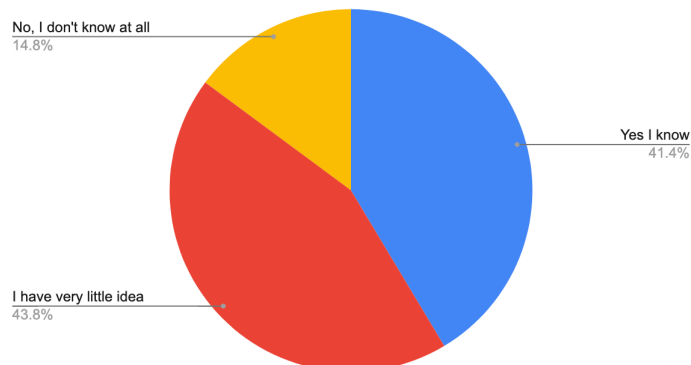
128 responses



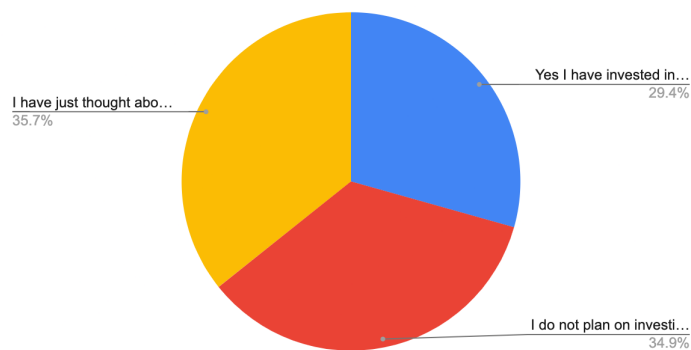
Count of Have you heard of crypto currencies such as Bitcoin or Ethereum?



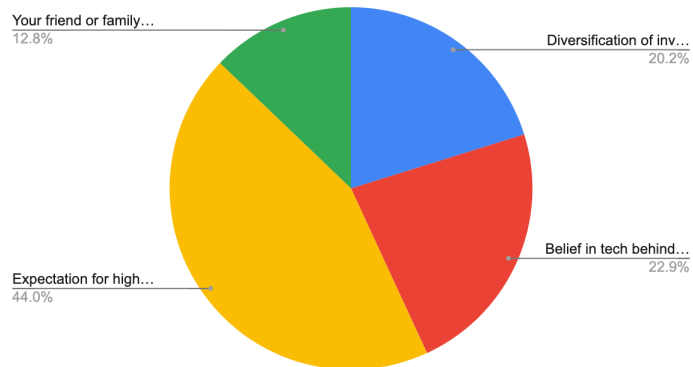
Count of Do you know how cryptocurrencies work?



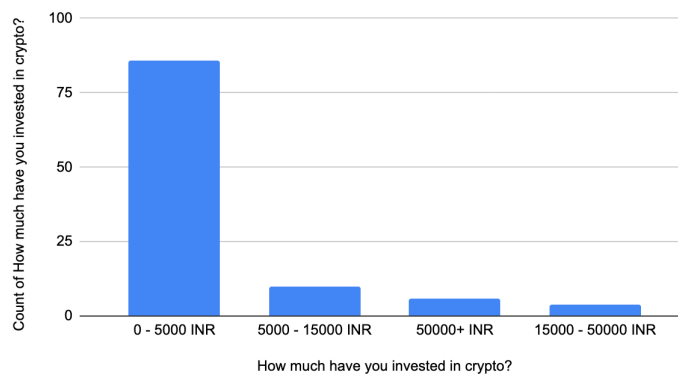
Count of If yes, have you ever invested or thought of investing in cryptocurrencies?



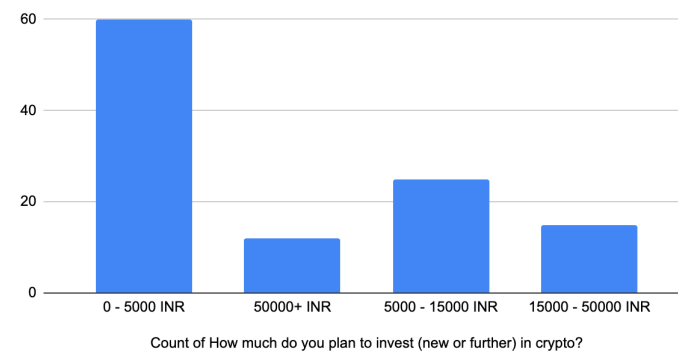
Count of Why do you thought of investing in crypto?



Count of How much have you invested in crypto?

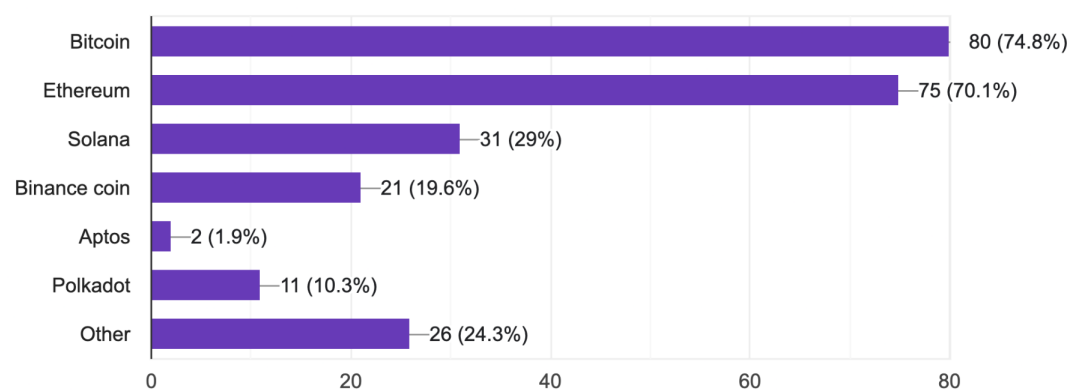


Count of How much do you plan to invest (new or further) in crypto?

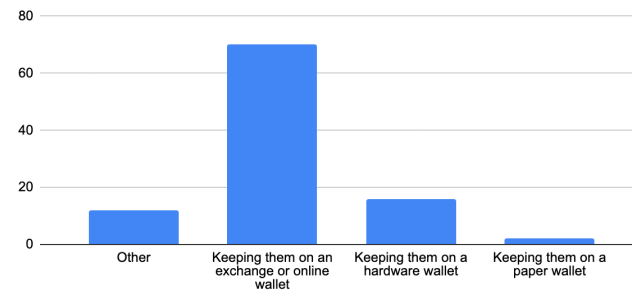


What is your preferred cryptocurrency for investment?

107 responses

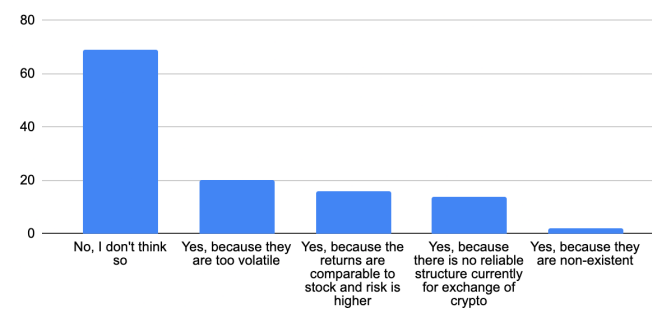


Count of What is your preferred method of storing and securing your cryptocurrency investments?



Count of What is your preferred method of storing and securing your cryptocurrency investments?

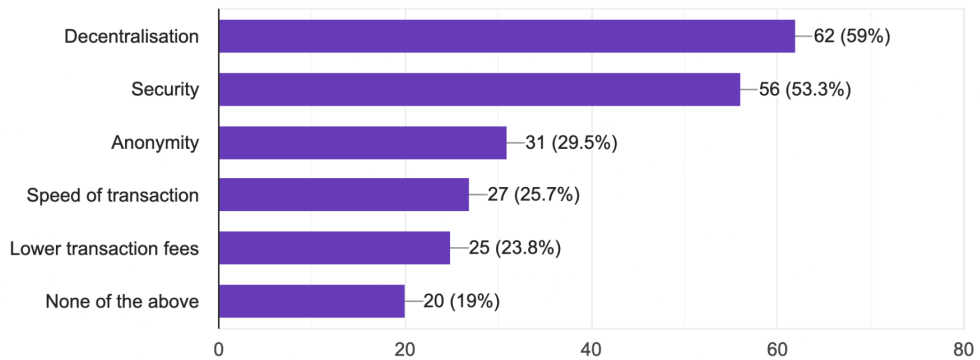
Count of Do you think investing in crypto is bad idea? If yes, then why?



Count of Do you think investing in crypto is bad idea? If yes, then why?

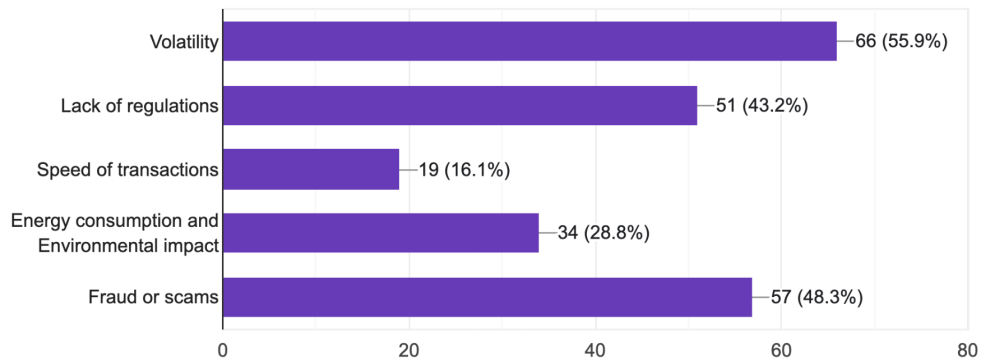
If you have invested, then what do you think are the advantages of cryptocurrencies?

105 responses



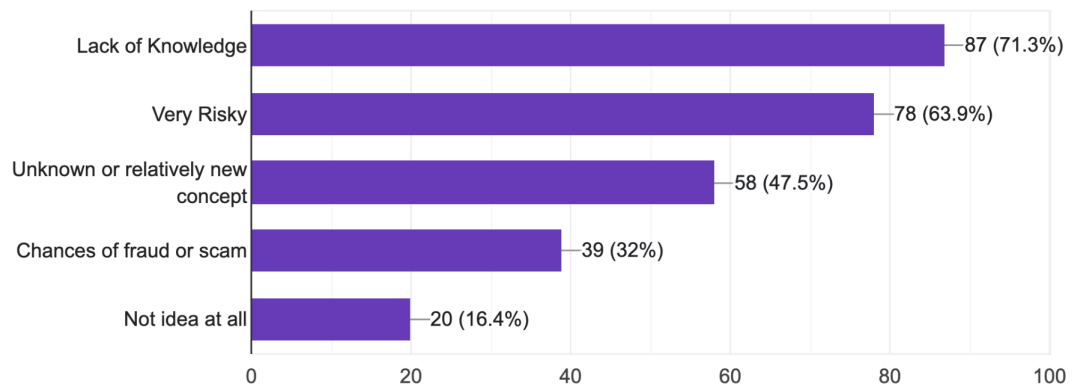
What do you think are the biggest drawbacks of cryptocurrencies?

118 responses

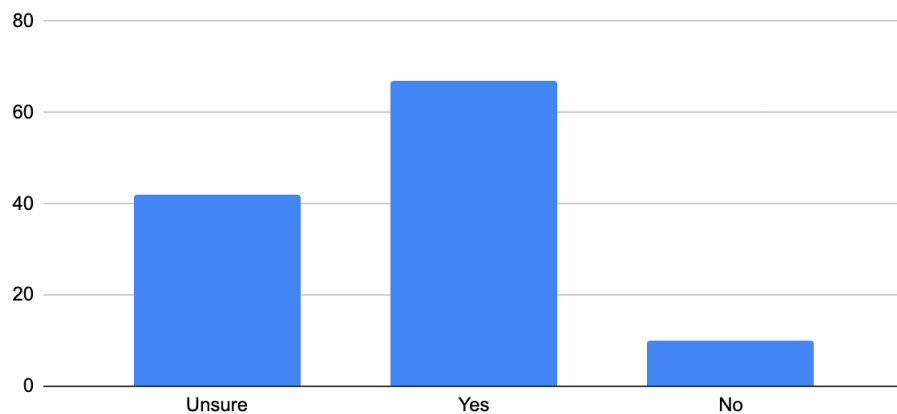


What do you think are the reasons because of which people (or you) hesitate to invest in cryptocurrencies?

122 responses



Count of Do you believe that cryptocurrencies have the potential to revolutionize the way that cross-border payments...



Count of Do you believe that cryptocurrencies have the potential to revolutionize the way that cross...

Perspective of People on Cryptocurrencies (Responses) - Sheet1 Pivot

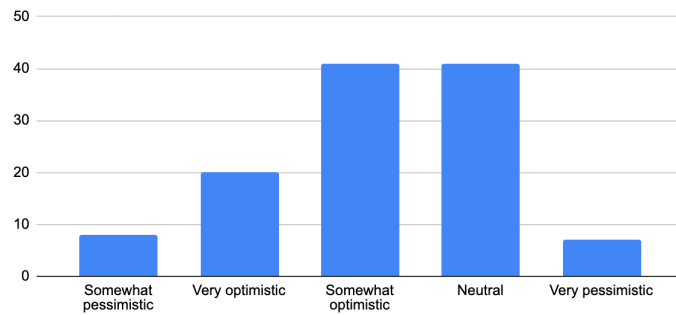
Invested in crypto?	0 - 5000 INR	15000 - 50000 INR	5000 - 15000 INR	50000+ INR	(blank)	Grand Total
Do you think government should regulate cryptocurrencies? (Count All)						
No, as it would...	22	2	4	4	1	33
Yes, heavily	6	1			2	9
Yes, lightly	27		3	1	8	39
Yes, moderately	25	1	2	1	4	33
(blank)	0		0		0	0
Grand Total	80	4	9	6	15	114

Pearson's Chi-squared test

data: regulation_amount

X-squared = 8.8979, df = 9, p-value = 0.4468

Count of Overall, how optimistic or pessimistic are you about the future of cryptocurrencies?



Count of Overall, how optimistic or pessimistic are you about the future of cryptocurrencies?

Perspective of People on Cryptocurrencies

Invested in crypto?	0 - 5000 INR	15000 - 50000 INR	5000 - 15000 INR	50000+ INR	(blank)	Grand Total
Overall, how optimistic or pessimistic are you about the future of cryptocurrencies? (Count All)						
Neutral	30	3	2	1	5	41
Somewhat optimistic	25	1	4	2	9	41
Somewhat pessimistic	8					8
Very optimistic	14		3	3		20
Very pessimistic	5				2	7
(blank)	0		0		0	0
Grand Total	82	4	9	6	16	117

Pearson's Chi-squared test

```
data: optimism_amount
X-squared = 11.089, df = 12, p-value = 0.5213
```

CONCLUSION

The following conclusions can be drawn from the research analysis:

1. Knowledge About Cryptocurrency Versus Age

Pearson's Chi-squared test

```
data: age_knowledge
X-squared = 49.875, df = 8, p-value = 4.32e-08
```

Before inferring let us list down the hypotheses:

H0: Knowledge of cryptocurrencies doesn't depend on the age group.

H1: Knowledge of cryptocurrencies is different for different age groups.

More formally we can write it as:

H0: $P_{18-25} = P_{26-35} = P_{35-50} = P_{50-60} = P_{60+}$

H1: $P_{18-25} \neq P_{26-35} \neq P_{35-50} \neq P_{50-60} \neq P_{60+}$

where H0 is the Null Hypothesis and H1 is the Alternate Hypothesis.

We can infer that the X-squared value we got is 49.875, and the Chi-square critical value from the Chi Distribution table is 15.507 corresponding to $\alpha = 0.05$ and $df = 8$. Hence, as our calculated alpha is greater than the critical value, we can reject the null hypothesis. This can also be proved using other conditions of rejection i.e, the p-value obtained must be less than alpha and we can clearly see that $p\text{-value} = 4.32e-08$ is very less than $\alpha = 0.05$. Hence we can say that our results are consistent and we can reject the null hypothesis and conclude that the knowledge about cryptocurrencies does differ for different age groups.

2. Amount Invested in Cryptocurrency Vs Age

Pearson's Chi-squared test

```
data: age_amount
X-squared = 34.004, df = 16, p-value = 0.005426
```

Before inferring let us list down the hypotheses:

H0: The amount of cryptocurrencies invested does not depend on the age group.

H1: The amount of cryptocurrencies invested does depend on the age group.

More formally we can write it as:

H0: $P_{18-25} = P_{26-35} = P_{35-50} = P_{50-60} = P_{60+}$

H1: $P_{18-25} \neq P_{26-35} \neq P_{35-50} \neq P_{50-60} \neq P_{60+}$

We can infer that the X-squared value we got is 34.004, and the Chi-square critical value from the Chi Distribution table is 26.296 corresponding to $\alpha = 0.05$ and $df = 16$. Hence, as our calculated alpha is greater than the critical value, we can reject the null hypothesis. This can also be proved

using other conditions of rejection i.e., the p-value obtained must be less than alpha and we can clearly see that p-value = 0.005426 is less than alpha = 0.05. Hence we can say that our results are consistent and we can reject the null hypothesis and conclude that the amount of cryptocurrencies invested is different for different age groups.

3. Investment of Individuals in Crypto vs Their Views on Future of Crypto Let

Pearson's Chi-squared test

```
data: optimism_amount
X-squared = 11.089, df = 12, p-value = 0.5213
```

us start by generating the hypothesis for the same:

H0: The perspective of people on the future of cryptocurrencies from different investment groups is the same.

H1: The perspective of people on the future of cryptocurrencies from different investment groups is different.

More formally we can write it as:

H0: $P_{0-5000} = P_{5000-15000} = P_{15000-50000} = P_{50000+}$

H1: $P_{0-5000} \neq P_{5000-15000} \neq P_{15000-50000} \neq P_{50000+}$

Now the rules of the chi-squared test say that if we get chi_calculated \leq chi_critical or else p-value \geq alpha then we can reject our null hypothesis. Now here we got our chi_calculated as 11.089 and chi_critical as 21.026 as we can see in this case the chi_calculated is coming less than the chi_critical we cannot reject the null hypothesis. We can confirm this as our p-value is also coming greater than the alpha. Hence we can confirm that we cannot reject our null hypothesis and hence that people in different investment groups have the same views for the future of cryptocurrencies.

4. Investment of Individuals in Crypto vs Views on Regulation of Crypto by Government Let us start by generating the hypothesis for the same:

Pearson's Chi-squared test

```
data: regulation_amount
X-squared = 8.8979, df = 9, p-value = 0.4468
```

H0: The perspective of people on the regulation of cryptocurrencies by the government from different investment groups is the same.

H1: The perspective of people on the regulation of cryptocurrencies by the government from different investment groups is different.

More formally we can write it as:

H0: $P_{0-5000} = P_{5000-15000} = P_{15000-50000} = P_{50000+}$

H1: $P_{0-5000} \neq P_{5000-15000} \neq P_{15000-50000} \neq P_{50000+}$

Now the rules of the chi-squared test say that if we get chi_calculated \leq chi_critical or else p-value \geq alpha then we can reject our null hypothesis.

Now here we got our $\chi^2_{\text{calculated}}$ as 8.8979 and χ^2_{critical} as 16.919 as we can see in this case the $\chi^2_{\text{calculated}}$ is coming less than the χ^2_{critical} we cannot reject the null hypothesis. We can confirm this as our p-value is also coming greater than the alpha. Hence we can confirm that we cannot reject our null hypothesis and hence that people in different investment groups have the same views for the government regarding the regulation of cryptocurrencies.

5. Most people who opted to give information on the topic were among students and are in learning and exploring phase, so the major percentage of unit of analysis were students and age group of 18-25.
6. Majority of people have refrained from investing the money in any kind of assets like stocks, digital gold, cryptocurrency or bonds.
7. Majority of the people have heard about the famous cryptocurrency, i.e., Ethereum and Bitcoin and know little or nothing about the working of the cryptocurrency. 41% of total respondent are very well aware of the working of the cryptocurrencies.
8. A very little, 29.4% of respondents have actually invested in crypto and most of them have a investment in the range of 0-5000 INR.
9. Most of the respondents have invested in crypto in expectation of high returns.
10. Those who have already invested in crypto are more interested in investing further.
11. Bitcoin and Ethereum are most preferred cryptocurrencies for investment among the population.
12. Most individuals feel that the cryptocurrencies are very volatile and there are risks and frauds associated with the same and hence they refrain from investing in cryptocurrencies. Another reason for not investing in cryptos is lack of knowledge of individual about the technology behind the cryptocurrencies.
13. Majority of the respondents think that cryptocurrencies have the potential to revolutionize the way cross-border payments work.
14. The regularization of cryptocurrencies by the government is disputed. 28.7% of people believe that government should not regularize the cryptocurrencies while 33.9% of people believe that government should have light regularization on crypto market.
15. There is no conclusion on whether cryptocurrencies will be the future or not, as the number of people who think cryptocurrencies will become mainstream are neutralised by the people who think cryptocurrencies will fade away or remain a niche investment option.