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THE ATTITUDE OF ACADEMIC STAFF TOWARDS BITCOIN

Abstract

Purpose: Bitcoin, the most prominent among cryptocurrencies, is a peer-to-peer ("P2P") electronic currency and payment system used based on mutual trust. The study aims to measure awareness of Bitcoin, which has recently become popular among investors with its rapidly increasing use. To this end, a questionnaire was applied to the participants to evaluate their opinions and preferences regarding Bitcoin. With this purpose in mind, a questionnaire was applied to the academics of Erzincan Binali Yıldırım University in Turkey.

Methodology: In the process of analysing the obtained data, frequency analysis and the chi-square test method were used by using the SPSS 26.0 software package.

Results: According to the results of the study, it was observed that 51.6% of the academics (159 persons) had knowledge of Bitcoin, and while 31.5% of the academics participating in the study (97 persons) considered they would buy Bitcoin within five years, 57% (176 persons) conceived the use of Bitcoin would increase within ten years. Despite all these positive attitudes, it was also observed that 45.5% (140 people) considered Bitcoin as unreliable and 51.6% (159 persons) would prefer gold instead of using Bitcoin. As for the opinion of academics, it was concluded that gold and other different investment tools would be preferred instead of Bitcoin despite its increasing use.

Conclusion: This research is important as it is the first research study in the field, which means that no similar study has been conducted in Turkey before, and it is thus expected to greatly contribute to the literature within the context of the importance and originality of the study.

Keywords: Cryptocurrencies, Bitcoin, academic staff, awareness level

1. Introduction

In all currencies used by humans, many security measures are required to be taken so as to prevent counterfeiting. As with fiduciary currencies, cryptocurrencies aim to enable people to transact securely without suspicion. Nevertheless, unlike fiduciary currencies, cryptocurrencies apply completely technological security rules based on cryptographic reality. As the name suggests, cryptography is used extensively in cryptocurrencies that are not dependent on a central authority and make use of an electronic payment system that allows direct transactions without the need for a third party. In cryptography, which is regarded as an academic research field, different mathematical techniques that are not simple to figure out are put to use. The coding of the cryptocurrency system in a secure environment is provided by a mechanism created through cryptography.

Although cryptocurrencies exhibit many features of other financial markets such as foreign exchange and stocks, market structures essentially differ. One
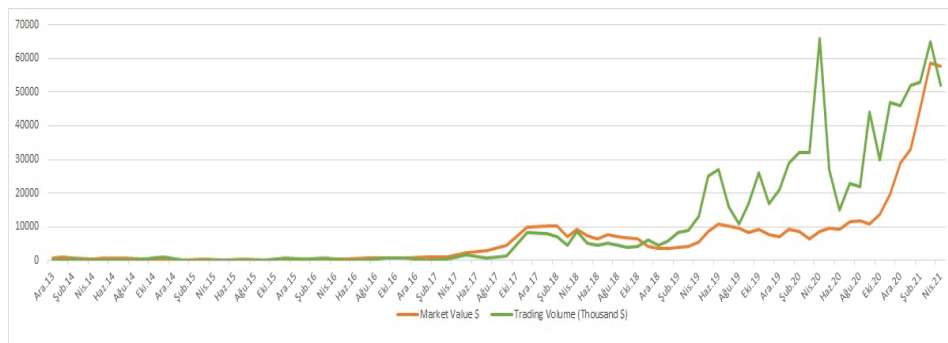
of the cryptocurrencies transacted with cryptographic structures is Bitcoin. Bitcoin was first introduced in an article by Satoshi Nakamoto, a pseudonym of a computer programmer or group in 2008, as a peer-to-peer ("P2P") cryptocurrency protocol that operates without a central authority. Bitcoin is a cryptocurrency or virtual currency derived from mathematical cryptography and designed as an alternative to government-backed currencies. Since it first went online in 2009, Bitcoin has evolved from an experimental commodity traded among enthusiasts to a digital currency that has attracted great attention of investor actors. The database of Bitcoin users is not only becoming more and more global but also diverse day by day. Consequently, Bitcoin has left behind the days when a single exchange completely dominated the market and is traded on numerous exchanges in different countries around the world that support different currencies (Cheah & Fry, 2015, p. 32; Brandvold et al., 2015, p. 18).

As an electronic medium of exchange, Bitcoin is a speculative investment tool that can be traded twenty-four hours a day, seven days a week. Yermack (2015) and Baur et al. (2018) note that a significant portion of Bitcoin transactions are made by speculative investors and the number of people using Bitcoin to purchase goods and services is a minority. They argue that Bitcoin acts more like a speculative investment than a currency. They state that the USA treats Bitcoin as property, the UK and the European Union classify it as currency, and most other countries do not regulate Bitcoin's legal status (Dyhrberg et al., 2018, p. 140).

The rapid change in monthly trading volume and market value since the beginning of Bitcoin trading is shown in Figure 1 below.

Figure 1 Change in Bitcoin monthly market value and trading volume in the December 2013 - April 2021 period

Source: Investing.com

As shown in Figure 1, the change in trading volume and market value reached the highest value in December 2017 after Bitcoin started trading. Trading volume and market value, which decreased in 2018, started to increase again in 2019. Together with the changes in Bitcoin price that attracted the attention of individual and institutional investors, the rapid increase in trading volume caused Bitcoin's market value to reach a record high in April 2021.

Bitcoin, whose market value and price have increased tremendously since the day it began trading, has gained outstanding popularity not only among the public but also in the media. The increasing popularity of Bitcoin has led to Bitcoin being increasingly used and accepted as an investment tool. The study aims to determine academics' awareness of Bitcoin, the most popular cryptocurrency. In this context, a questionnaire is distributed to academics working at Erzincan Binali Yıldırım University to determine their awareness of Bitcoin. After a literature review, the purpose, a data collection tool, population, and the sample of the research study are explained in detail. After presenting the findings, they are evaluated and interpreted in the final section and new solutions are offered along with the existing ones for future research.

2. Literature review

Bohr and Bashir (2014) present an analysis of a study on Bitcoin users. In the analysis made by using public survey data of Bitcoin users, they investigate wealth accumulation of Bitcoin users, op-

timism about the future of Bitcoin, and themes attracting Bitcoin users to cryptocurrency. As a result of their study, they state that age, time of initial use, geographic location, mining, intriguing online discourse, and political orientation are relevant factors in explaining various aspects of wealth, optimism and attractiveness of Bitcoin.

Yelowitz and Wilson (2015) collected Google Trends data in their study to examine the determinants of interest groups in Bitcoin, which systematically analyse Bitcoin interest including hard-to-observe customers. Based on anecdotal evidence related to Bitcoin users, they conclude that Bitcoin is represented by four possible types of clients: computer programming enthusiasts, speculative investors, libertarians, and criminals. Furthermore, they testify that computer programming enthusiasts and illegal activities have fuelled interest in Bitcoin.

Applying variance decomposition analysis and the Granger causality test based on the VAR model, Dulupçu et al. (2017) investigate that the price increase of Bitcoin is due to both its real value and speculative transactions in direct proportion to its popularity. The result of their study shows that the direction of causality is from popularity to the price of Bitcoin. They convey that Bitcoin's popularity drives its price movements and that the more popularity Bitcoin gains, the more its price increases.

Sütçü and Aytekin (2018) conduct a study in which they measure the level of entrepreneurship of individuals who mine, buy and sell Bitcoin, or follow its trade, choosing Twitter users related to the topic as their sample. The aim of their research is to investigate the impact of entrepreneurship on the motivation that makes people interested in Bitcoin and similar cryptocurrencies enter this field and evaluate the dominant factors. Upon analysing their findings, they conclude that entrepreneurial values of people interested in Bitcoin mining or trading are at a high level.

In their study, Cihangir et al. (2019) develop a scale to determine the participation tendencies of university students in the Bitcoin market. The study is conducted using a questionnaire distributed to the students of the Faculty of Economics and Administrative Sciences and the Faculties of Engineering studying at Cumhuriyet University, Gaziosmanpaşa University, Kahramanmaraş Sütçü İmam University, and Osmaniye Korkut Ata University. Consequently, it is observed that university students are interested and willing to perform transactions even though they do not have enough knowledge of Bitcoin.

Choi (2021) uses the number of tweets as a representative to attract the attention of investors. He uses high-frequency data to investigate real-time impact of tweets on Bitcoin liquidity. He explains that a 1% increase in tweets leads to a liquidity recovery of about 7% in the next five to ten minutes, and that the impact of tweets decays after about an hour. As a result, the study suggests that active investor interest can significantly increase Bitcoin liquidity in real time.

Guegan and Renault (2021) use a dataset of about one million messages sent to StockTwits to investigate the relationship between investor sentiment on social media and Bitcoin intraday returns. They find a statistically significant relationship between investor sentiment and Bitcoin returns at frequencies up to 15 minutes. They also show that the impact of sentiment on returns is focused on the period around the Bitcoin bubble.

In their study, Steinmetz et al. (2021) conduct a representative online survey of 3,864 Germans. They find that 83% of respondents are aware of cryptocurrencies, but have limited self-assessed knowledge of cryptocurrencies and the underlying blockchain technology. According to their findings, 9.2% of respondents say that they owned cryptocurrency at the time of the survey, and 9.1% state that they used to own cryptocurrency before. The findings appear to have implications for regulators and businesses potentially affected by the growing social interest in cryptocurrency.

3. Purpose and the scope of the research

This study is comprised of two different aims. The first aim of the study is to investigate academics' awareness of Bitcoin which is accepted as an investment tool. Furthermore, the second aim is to make a comparative evaluation of the level of awareness among academics with different income levels. Thus, we believe this study will shed light on the future research into how and in what ways the investor awareness strategies may be developed. In other words, this study, which is, as already mentioned, limited to only the academics working at Erzincan Binali Yıldırım University, will support looking at the big picture in this regard.

The scope of the study is limited to the academic staff working at Erzincan Binali Yıldırım University.

4. Research method

The survey applied online in the study was taken from the Bitcoin research conducted by the Blockchain Capital Company in 2017. In the study, the

questionnaire was distributed to the stratified and randomly selected academic staff at Erzincan Binali Yıldırım University. The population of the study consisted of 1,109 people. The sample size was calculated by equation (1) and obtained as 294 persons (Saracel et al., 2002, p. 28). Later, the sample numbers for each title were calculated and shown in Table 1.

$$n = \frac{N}{1+(N*\alpha^2)} = \frac{1109}{1+(1109*0.05^2)} \cong 294 \qquad (1)$$

Table 1 Sample numbers (stratified) by title

Titles	Population	Sample Number
Prof. Dr.	81	22
Assoc. Prof. Dr.	115	31
Asst. Prof. Dr.	332	88
Res. Asst.	342	91
Lect.	239	63

Source: Authors

In total, 308 academic staff participated in the research, of whom 24 were appointed full professors, 33 associate professors, 90 assistant professors, 94 research assistants and 67 lecturers. This indicates that more participants than the required sample number showed interest in the study.

In the analysis of the study, frequency analysis and the chi-square test were used. The chi-square test was tested according to the 5% significance (95% confidence) level. To make them clear, frequency analysis is a statistical technique used to obtain the observation frequency and percentage distributions of the data. When it comes to the chi-square test, it is a statistical technique used to analyse whether there is a relationship between categorical variables (groups) (Karagöz, 2019, p. 38, p. 518).

5. Findings

Demographic information about the academic staff who participated in the study is shown in Table 2.

Table 2 Demographic information

Variables	N	%	Variables	N	%
Gender			**Marital Status**		
Female	105	34.1	Single	86	27.9
Male	203	65.9	Married	222	72.1
Age			**Title**		
30 years and under	51	16.6	Prof. Dr.	24	7.8
31 - 40 years	183	59.4	Assoc. Prof. Dr.	33	10.7
41 - 50 years	56	18.2	Asst. Prof. Dr.	90	29.2
51 - 60 years	10	3.2	Res. Asst.	94	30.5
61 years and over	8	2.6	Lect.	67	21.8

Source: Authors

Participants in the study consisted of 105 female (34.1%) and 203 male (65.9%) academics. A total of 51 respondents (16.6%) were under the age of 30, 183 (59.4%) were between the ages of 31 and 40, 56 (18.2%) were between the ages of 41 and 50, 10 (3.2%) were between the ages of 51 and 60, and 8 (2.6%) were older than 61. In terms of marital sta-

tus, 86 (27.9%) academics who participated in the study were single, while 222 (72.1%) were married. As to the titles of the participants, 24 (7.8%) were professors, 33 (10.7%) were associate professors, 90 (29.2%) were assistant professors, 94 (30.5%) were research assistants, and 67 (21.8%) had the title of lecturer.

Table 3 Demographic variables and answers given to the question: "How familiar are you with Bitcoin?"

Variables		I own Bitcoin	Very familiar	Somewhat familiar	Heard of it but not familiar	Never heard of it
Gender	Female	10 (9.5%)	19 (18.1%)	27 (25.7%)	48 (45.7%)	1 (1.0%)
	Male	25 (12.3%)	44 (21.7%)	69 (34.0%)	64 (31.5%)	1 (0.5%)
Age	30 years and under	9 (17.6%)	7 (13.7%)	15 (29.4%)	19 (37.3%)	1 (2.0%)
	31 - 40 years	21 (11.5%)	38 (20.8%)	65 (35.5%)	58 (31.7%)	1 (0.5%)
	41 - 50 years	3 (5.4%)	17 (30.4%)	12 (21.4%)	24 (42.9%)	0 (0.0%)
	51 - 60 years	0 (0.0%)	1 (10.0%)	3 (30.0%)	6 (60.0%)	0 (0.0%)
	61 years and over	2 (25.0%)	0 (0.0%)	1 (12.5%)	5 (62.5%)	0 (0.0%)
Marital Status	Single	13 (15.1%)	13 (15.1%)	30 (34.9%)	30 (34.9%)	0 (0.0%)
	Married	22 (9.9%)	50 (22.5%)	66 (29.7%)	82 (36.9%)	2 (0.9%)
Title	Prof. Dr.	2 (8.3%)	8 (33.3%)	2 (8.3%)	12 (50.0%)	0 (0.0%)
	Assoc. Prof. Dr.	2 (6.1%)	6 (18.2%)	12 (36.4%)	13 (39.4%)	0 (0.0%)
	Asst. Prof. Dr.	11 (12.2%)	19 (21.1%)	26 (28.9%)	33 (36.7%)	1 (1.1%)
	Res. Asst.	9 (9.6%)	19 (20.2%)	38 (40.4%)	27 (28.7%)	1 (1.1%)
	Lect.	11 (16.4%)	11 (16.4%)	18 (26.9%)	27 (40.3%)	0 (0.0%)

Source: Authors

According to the results of the chi-square test, it was revealed that there was no difference of opinion between gender (sig. = 0.166), age (sig. = 0.130), marital status (sig. = 0.341) and titles (sig. = 0.366).

Table 4 Demographic variables and answers given to the question: "How much do you agree or disagree with the statement: "Bitcoin is a positive innovation in financial technology."?"

Variables		Not at all sure	Strongly disagree	Somewhat disagree	Somewhat agree	Strongly agree
Gender	Female	27 (25.7%)	9 (8.6%)	19 (18.1%)	36 (34.3%)	14 (13.3%)
	Male	20 (9.9%)	37 (18.2%)	40 (19.7%)	67 (33.0%)	39 (19.2%)
Age	30 years and under	9 (17.6%)	3 (5.9%)	5 (9.8%)	26 (51.0%)	8 (15.7%)
	31 - 40 years	31 (16.9%)	26 (14.2%)	37 (20.2%)	54 (29.5%)	35 (19.1%)
	41 - 50 years	6 (10.7%)	12 (21.4%)	15 (26.8%)	17 (30.4%)	6 (10.7%)
	51 - 60 years	0 (0.0%)	3 (30.0%)	2 (20.0%)	5 (50.0%)	0 (0.0%)
	61 years and over	1 (12.5%)	2 (25.0%)	0 (0.0%)	1 (12.5%)	4 (50.0%)
Marital Status	Single	12 (14.0%)	11 (12.8%)	14 (16.3%)	36 (41.9%)	13 (15.1%)
	Married	35 (15.8%)	35 (15.8%)	45 (20.3%)	67 (30.2%)	40 (18.0%)
Title	Prof. Dr.	3 (12.5%)	2 (8.3%)	5 (20.8%)	8 (33.3%)	6 (25.0%)
	Assoc. Prof. Dr.	4 (12.1%)	7 (21.2%)	8 (24.2%)	10 (30.3%)	4 (12.1%)
	Asst. Prof. Dr.	21 (23.3%)	10 (11.1%)	22 (24.4%)	22 (24.4%)	15 (16.7%)
	Res. Asst.	14 (14.9%)	12 (12.8%)	12 (12.8%)	39 (41.5%)	17 (18.1%)
	Lect.	5 (7.5%)	15 (22.4%)	12 (17.9%)	24 (35.8%)	11 (16.4%)

Source: Authors

The results of the chi-square test showed that there was no difference of opinion between marital status (sig. = 0.341) and titles (sig. = 0.366). However, it was determined that there was a difference of opinion between gender (sig. = 0.002) and age (sig. = 0.013).

While 50 female academics (47.6%) stated that Bitcoin was a positive innovation in financial technology, 28 (26.7%) reported that it was not a positive innovation. 106 male academics (52.2%) agreed with the statement, whereas 77 (37.9%) did not agree with the statement.

While 34 academics (66.7%) aged 30 and under agreed with a positive opinion of innovation, 8 (15.7%) did not agree with a positive opinion of innovation. Whereas 89 (48.6%) of the academics between the ages of 31 and 40 stated that they agreed with the statement, 63 (34.4%) stated that they disagreed. While 23 academics (41.1%) between the ages of 41 and 50 reported that Bitcoin was a positive innovation in financial technology, 27 (48.2%) stated that it was not a positive innovation. The same number of academics between the ages of 51 and 60 (5, i.e. 50% in each group) agreed and did not agree with a positive opinion of innovation. In terms of the academics aged 61 and over, 5 (62.5%) stated that they agreed with the statement and 2 (25%) disagreed.

Table 5 Demographic variables and answers given to the question: "How much do you agree or disagree with the statement: "Bitcoin is a bubble.".?"

Variables		Not at all sure	Strongly disagree	Somewhat disagree	Somewhat agree	Strongly agree
Gender	Female	28 (26.7%)	12 (11.4%)	25 (23.8%)	35 (33.3%)	5 (4.8%)
	Male	26 (12.8%)	21 (10.3%)	56 (27.6%)	56 (27.6%)	44 (21.7%)
Age	30 years and under	12 (23.5%)	5 (9.8%)	15 (29.4%)	12 (23.5%)	7 (13.7%)
	31 - 40 years	38 (20.8%)	20 (10.9%)	46 (25.1%)	58 (31.7%)	21 (11.5%)
	41 - 50 years	3 (5.4%)	5 (8.9%)	17 (30.4%)	16 (28.6%)	15 (26.8%)
	51 - 60 years	0 (0.0%)	0 (0.0%)	3 (30.0%)	4 (40.0%)	3 (30.0%)
	61 years and over	1 (12.5%)	3 (37.5%)	0 (0.0%)	1 (12.5%)	3 (37.5%)
Marital Status	Single	16 (18.6%)	13 (15.1%)	23 (26.7%)	19 (22.1%)	15 (17.4%)
	Married	38 (17.1%)	20 (9.0%)	58 (26.2%)	72 (32.4%)	34 (15.3%)
Title	Prof. Dr.	0 (0.0%)	6 (25.0%)	8 (33.3%)	7 (29.2%)	3 (12.5%)
	Assoc. Prof. Dr.	4 (12.1%)	2 (6.1%)	11 (33.3%)	11 (33.3%)	5 (15.2%)
	Asst. Prof. Dr.	18 (20.0%)	10 (11.1%)	15 (16.7%)	30 (33.3%)	17 (18.9%)
	Res. Asst.	21 (22.3%)	8 (8.5%)	30 (31.9%)	23 (24.5%)	12 (12.8%)
	Lect.	11 (16.4%)	7 (10.4%)	17 (25.4%)	20 (29.9%)	12 (17.9%)

Source: Authors

The chi-square test results revealed that there was no difference in opinions between marital status (sig. = 0.324) and titles (sig. = 0.207). However, it was determined that there was a difference of opinion between gender (sig. = 0.000) and age (sig. = 0.016).

While 40 female academics (38.1%) said that Bitcoin was a bubble, 37 (35.2%) stated that Bitcoin was not a bubble. When it comes to male respondents, 100 male academics (49.3%) agreed with the statement that Bitcoin is a bubble, whereas 77 of them (37.9%) did not agree with that statement.

In terms of age, 19 academics aged 30 and under (37.2%) agreed with the statement, and 20 (39.2%) did not, 79 academics between the ages of 31 and 40 (43.2%) said that Bitcoin was a bubble, and 66 (36%) stated that it was not a bubble. Among the academics aged between 41 and 50, 31 of them (55.4%) agreed with the said statement, while 22 (39.3%) did not agree. On the other hand, 7 academics between the ages of 51 and 60 (70%) agreed with the statement, and 3 of them (30%) stated that they disagreed with the statement. Four academics aged 61 and over (50%) reported that Bitcoin was a bubble, and 3 (37.5%) stated that it was not.

Table 6 Demographic variables and answers given to the question: "How much do you agree or disagree with the statement: "Most people will probably use Bitcoin in the next 10 years."?"

Variables		Not at all sure	Strongly disagree	Somewhat disagree	Somewhat agree	Strongly agree
Gender	Female	26 (24.8%)	5 (4.8%)	17 (16.2%)	41 (39.0%)	16 (15.2%)
	Male	28 (13.8%)	14 (6.9%)	42 (20.7%)	99 (48.8%)	20 (9.9%)
Age	30 years and under	9 (17.6%)	0 (0.0%)	9 (17.6%)	24 (47.1%)	9 (17.6%)
	31 - 40 years	35 (19.1%)	15 (8.2%)	37 (20.2%)	74 (40.4%)	22 (12.0%)
	41 - 50 years	8 (14.3%)	2 (3.6%)	11 (19.6%)	33 (58.9%)	2 (3.6%)
	51 - 60 years	0 (0.0%)	1 (10.0%)	1 (10.0%)	7 (70.0%)	1 (10.0%)
	61 years and over	2 (25.0%)	1 (12.5%)	1 (12.5%)	2 (25.0%)	2 (25.0%)
Marital Status	Single	12 (14.0%)	5 (5.8%)	19 (22.1%)	35 (40.7%)	15 (17.4%)
	Married	42 (18.9%)	14 (6.3%)	40 (18.0%)	105 (47.3%)	21 (9.5%)
Title	Prof. Dr.	4 (16.7%)	1 (4.2%)	3 (12.5%)	14 (58.3%)	2 (8.3%)
	Assoc. Prof. Dr.	7 (21.2%)	1 (3.0%)	8 (24.2%)	17 (51.5%)	0 (0.0%)
	Asst. Prof. Dr.	18 (20.0%)	9 (10.0%)	13 (14.4%)	38 (42.2%)	12 (13.3%)
	Res. Asst.	16 (17.0%)	3 (3.2%)	22 (23.4%)	42 (44.7%)	11 (11.7%)
	Lect.	9 (13.4%)	5 (7.5%)	13 (19.4%)	29 (43.3%)	11 (16.4%)

Source: Authors

According to the results of the chi-squared test, it was ascertained that there was no difference of opinion between gender (sig. = 0.058), age (sig. = 0.201), marital status (sig. = 0.248) and titles (sig. = 0.486).

Table 7 Demographic variables and answers given to the question: "Which of the following is similar to investing in Bitcoin?"

Variables		Currency	A commodity	A technology company	A bank	Other
Gender	Female	25 (23.8%)	21 (20.0%)	28 (26.7%)	11 (10.5%)	20 (19.0%)
	Male	43 (21.2%)	39 (19.2%)	48 (23.6%)	6 (3.0%)	67 (33.0%)
Age	30 years and under	12 (23.5%)	8 (15.7%)	16 (31.4%)	2 (3.9%)	13 (25.5%)
	31 - 40 years	36 (19.7%)	39 (21.3%)	48 (26.2%)	13 (7.1%)	47 (25.7%)
	41 - 50 years	19 (33.9%)	9 (16.1%)	6 (10.7%)	1 (1.8%)	21 (37.5%)
	51 - 60 years	0 (0.0%)	2 (20.0%)	4 (40.0%)	1 (10.0%)	3 (30.0%)
	61 years and over	1 (12.5%)	2 (25.0%)	2 (25.0%)	0 (0.0%)	3 (37.5%)
Marital Status	Single	9 (10.5%)	15 (17.4%)	38 (44.2%)	5 (5.8%)	19 (22.1%)
	Married	59 (26.6%)	45 (20.3%)	38 (17.1%)	12 (5.4%)	68 (30.6%)
Title	Prof. Dr.	7 (29.2%)	8 (33.3%)	2 (8.3%)	0 (0.0%)	7 (29.2%)
	Assoc. Prof. Dr.	9 (27.3%)	2 (6.1%)	12 (36.4%)	0 (0.0%)	10 (30.3%)
	Asst. Prof. Dr.	16 (17.8%)	14 (15.6%)	28 (31.1%)	7 (7.8%)	25 (27.8%)
	Res. Asst.	23 (24.5%)	28 (29.8%)	18 (19.1%)	6 (6.4%)	19 (20.2%)
	Lect.	13 (19.4%)	8 (11.9%)	16 (23.9%)	4 (6.0%)	26 (38.8%)

Source: Authors

According to the chi-square test results, there was no difference in opinions between age (sig. = 0.217) groups. However, it was determined that there was a difference of opinion between gender (sig. = 0.015), marital status (sig. = 0.000) and titles (sig. = 0.012).

In terms of gender, 25 female academics (23.8%) stated that investing money in Bitcoin was like investing in currency, 21 (20%), 28 (26.7%) in a technology company, 11 (10.5) in a bank, and 20 (19%) in other types of investment. As for male academics, 43 (21.2%) reported that investing money in Bitcoin was similar to investing in currency, 39 (19.2%) in a commodity, 48 (23.6%) in a technology company, 6 (23.6%) in a bank and 67 (33%) in other types of investment.

In terms of marital status, 9 single academics (10.5%) stated that it was similar to investing in currency, 15 (17.4%) in a commodity, 38 (44.2%) in a technology company, 5 (%) 5.8 in a bank, and 19 (22.1%) in other investment types. Of the married academics, 59 (26.6%) reported that it was similar to investing in currency, 45 (20.3%) in a commodity, 38 (17.1%) in a technology company, 12% (17.1%) in a technology company, 12 (5.4%) in a bank, and 68 (30.6%) in other investment types.

As for the titles, 7 professors (29.2%) stated that it was similar to investing in currency, 8 (33.3%) in a commodity, 2 (8.3%) in a technology company, and 7 (29.2%) in other types of investment. For 9 associate professors (27.3%) it was like investing in currency, for 2 (6.1%) like investing in a commodity, for 12 (36.4%) like investing in a technology company, and for 10 (30.3%) like in other investment types. Sixteen assistant professors (17.8%) stated that it was like investing in currency, 14 (15.6%) in a commodity, 28 (31.1%) in a technology company, 7 (7.8%) in a bank, and 25 (27.8%) in other investment types. Twenty-three research assistants (24.5%) said that it was similar to investing in currency, 28 (29.8%) in a commodity, 18 (19.1%) in a technology company, 6 (6.4%) in a bank, and 19 (20.2%) in other investment types. Thirteen lecturers (19.4%) stated that investing in Bitcoin was like investing in currency, 8 (11.9%) in a commodity, 16 (23.9%) in a technology company, 4 (6.0%) in a bank, and 26 (38.8%) in other investment types.

Table 8 Demographic variables and answers given to the question: "When you compare Bitcoin to other forms of financial assets, which of the investment tools worth $1,000 would you prefer to own instead of $1,000 worth of Bitcoin?"

Variables		Stock	Government bonds	Real estate	Gold	Foreign currency
Gender	Female	13 (12.4%)	6 (5.7%)	22 (21.0%)	51 (48.6%)	13 (12.4%)
	Male	34 (16.7%)	12 (5.9%)	28 (13.8%)	108 (53.2%)	21 (10.3%)
Age	30 years and under	10 (19.6%)	0 (0.0%)	11 (21.6%)	24 (47.1%)	6 (11.8%)
	31 - 40 years	28 (15.3%)	9 (4.9%)	24 (13.1%)	100 (54.6%)	22 (12.0%)
	41 - 50 years	5 (8.9%)	8 (14.3%)	14 (25.0%)	24 (42.9%)	5 (8.9%)
	51 - 60 years	4 (40.0%)	1 (10.0%)	0 (0.0%)	4 (40.0%)	1 (10.0%)
	61 years and over	0 (0.0%)	0 (0.0%)	1 (12.5%)	7 (87.5%)	0 (0.0%)
Marital Status	Single	17 (19.8%)	3 (3.5%)	18 (20.9%)	42 (48.8%)	6 (7.0%)
	Married	30 (13.5%)	15 (6.8%)	32 (14.4%)	117 (52.7%)	28 (12.6%)
Title	Prof. Dr.	5 (20.8%)	3 (12.5%)	3 (12.5%)	10 (41.7%)	3 (12.5%)
	Assoc. Prof. Dr.	5 (15.2%)	6 (18.2%)	5 (15.2%)	12 (36.4%)	5 (15.2%)
	Asst. Prof. Dr.	5 (5.6%)	3 (3.3%)	18 (20.0%)	50 (55.6%)	14 (15.6%)
	Res. Asst.	21 (22.3%)	4 (4.3%)	13 (13.8%)	48 (51.1%)	8 (8.5%)
	Lect.	11 (16.4%)	2 (3.0%)	11 (16.4%)	39 (58.2%)	4 (6.0%)

Source: Authors

The chi-square test results ascertained that there was no difference of opinion between gender (sig. = 0.463) and marital status (sig. = 0.177). However, it was determined that there was a difference of opinion between age (sig. = 0.021) and titles (sig. = 0.016).

Of all respondents aged 30 and under, 10 (19.6%) stated that instead of $1,000 worth of Bitcoin, they would prefer $1,000 worth of stocks, 11 (21.6%) would prefer $1,000 worth of real estate, 24 (47.1%) would prefer $1,000 worth of gold, and 6 (11.8%) would prefer $1,000 worth of foreign currency. Academics aged between 31 and 40, 28 (15.3%) said that instead of $1,000 worth of Bitcoin, they would prefer $1,000 worth of stocks, 9 (4.9%) would prefer $1,000 worth of government bonds, 24 (13.1%) would prefer $1,000 worth of real estate, 100 (54.6%) would prefer $1,000 worth of gold, and 22 (12%) would prefer $1,000 worth of foreign currency. Five academics between the ages of 41 and 50 (8.9%) said that instead of $1,000 of Bitcoin, they would prefer $1,000 worth of stocks, 8 (14.3%) would prefer $1,000 worth of government bonds, 14 (25%) would prefer $1,000 worth of real estate, 24 (42.9%) would prefer $1,000 worth of gold, and 5 (8.9%) would prefer $1,000 worth of foreign currency. Of the academics aged 51-60, 4 (40%) stated that instead of $1,000 worth of Bitcoin, they would prefer $1,000 worth of stocks, 1 (10%) would prefer $1,000 worth of government bonds, 4 (40%) would prefer $1,000 worth of gold, and 1 (10%) would prefer $1,000 worth of foreign currency. Finally, 1 academic aged 61 and over (12.5%) stated that instead of $1,000 worth of Bitcoin, they would prefer to own $1,000 worth of real estate, and 7 (87.5%) would prefer $1,000 worth of gold.

In terms of titles, 5 professors (20.8%) stated that instead of $1,000 worth of Bitcoin, they would prefer $1,000 worth of stocks, 3 (12.5%) would prefer $1,000 worth of government bonds, 3 (12.5%) would prefer $1,000 worth of real estate, 10 (41.7%) would prefer $1,000 worth of gold, and 3 (12.5%) would prefer $1,000 worth of foreign currency. Instead of $1,000 worth of Bitcoin, 5 associate professors (15.2%) stated that they would prefer $1,000 worth of stocks, 6 (18.2%) would prefer $1,000 worth of government bonds, 5 (15.2%) would prefer $1,000 worth of real estate, 12 (36.4%) would prefer $1,000 worth of gold, and 5 (15.2%) would prefer $1,000 worth of foreign currency. Five assistant professors (5.6%) stated that instead of $1,000 worth of Bitcoin, they would prefer $1,000 worth of stocks, 3 (3.3%) would prefer $1,000 worth of government bonds, 18 (20%) would prefer $1,000 worth of real estate, 50 (55.6%) would prefer $1,000 worth of gold, and 14 (15.6%) would prefer $1,000 worth of foreign currency. Of the total number of research assistants, 21 (22.3%) stated that instead of $1,000 worth of Bitcoin, they would prefer $1,000 worth of stocks, 4 (4.3%) would prefer $1,000 worth of government bonds, 13 (13.8%) would prefer $1,000 worth of real estate, 48 (51.1%) would prefer $1,000 worth of gold, and 8 (8.5%) would prefer $1,000 worth of foreign currency. When it comes to lecturers, 11 of them (16.4%) stated that instead of $1,000 worth of Bitcoin, they would prefer $1,000 worth of stocks, 2 (3%) would prefer $1,000 worth of government bonds, 11 (16.4%) would prefer $1,000 worth of real estate, 39 (58.2%) would prefer $1,000 worth of gold, and 4 (6%) would prefer $1,000 worth of foreign currency.

Table 9 Demographic variables and answers given to the question: "If someone gave you Bitcoin, what would you do with it?"

Variables		Hold on to it	Sell it	Spent it	Other
Gender	Female	65 (61.9%)	17 (16.2%)	9 (8.6%)	14 (13.3%)
	Male	90 (44.3%)	48 (23.6%)	20 (9.9%)	45 (22.2%)
Age	30 years and under	29 (56.9%)	9 (17.6%)	2 (3.9%)	11 (21.6%)
	31 - 40 years	99 (54.1%)	40 (21.9%)	15 (8.2%)	29 (15.8%)
	41 - 50 years	24 (42.9%)	11 (19.6%)	6 (10.7%)	15 (26.8%)
	51 - 60 years	3 (30.0%)	2 (20.0%)	3 (30.0%)	2 (20.0%)
	61 years and over	0 (0.0%)	3 (37.5%)	3 (37.5%)	2 (25.0%)
Marital Status	Single	47 (54.7%)	15 (17.4%)	12 (14.0%)	12 (14.0%)
	Married	108 (48.6%)	50 (22.5%)	17 (7.7%)	47 (21.2%)
Title	Prof. Dr.	10 (41.7%)	5 (20.8%)	7 (29.2%)	2 (8.3%)
	Assoc. Prof. Dr.	14 (42.4%)	4 (12.1%)	7 (21.2%)	8 (24.2%)
	Asst. Prof. Dr.	46 (51.1%)	21 (23.3%)	5 (5.6%)	18 (20.0%)
	Res. Asst.	52 (55.3%)	17 (18.1%)	5 (5.3%)	20 (21.3%)
	Lect.	33 (49.3%)	18 (26.9%)	5 (7.5%)	11 (16.4%)

Source: Authors

The chi-square test results show no difference of opinion between marital status (sig. = 0.139). However, a difference of opinion was found between gender (sig. = 0.029), age (sig. = 0.020) and titles (sig. = 0.016).

In terms of gender, 65 female academics (61.9%) would hold on to Bitcoin, 17 (16.2%) would sell it, 9 (8.6%) would spend it, and 14 (13.3%) would consider other options, while 90 male academics (44.3%) would hold on to Bitcoin, 48 (23.6%) would sell it, 20 (9.9%) would spend it, and 45 (22.2%) would consider other options.

When age is taken into consideration, 29 academics aged 30 and under (56.9%) would hold on to it, 9 (17.6%) would sell it, 2 (3.9%) would spend it, and 11 (21.6%) would consider other options. A total of 99 academics (54.1%) between the ages of 31 and 40 would hold on to it, 40 (21.9%) would sell it, 15 (8.2%) would spend it, and 29 (15.8%) would consider other options. On the other hand, 24 academics (42.9%) between the ages of 41 and 50 would hold on to it, 11 (19.6%) would sell it, 6 (10.7%) would spend it, and 15 (26.8%) would consider other options. Of the academics between the ages of 51 and 60, 3 (30%) would hold on to it, 2 (20%) would sell it, 3 (30%) would spend it, and 2 (20%) would consider other options. As for the academics aged 61 and over, 3 (37.5%) reported that they would sell Bitcoin, 3 (37.5%) would spend it, and 2 (25%) would consider other options.

Ten professors (41.7%) stated that would hold on to Bitcoin, 5 (20.8%) would sell it, 7 (29.2%) would spend it, and 2 (8.3%) would consider other options, whereas 14 associate professors (42.4%) would hold on to it, 4 (12.1%) would sell it, 7 (21.2%) would spend it, and 8 (24.2%) would consider other options. Out of a total number of assistant professors, 46 (51.1%) would hold on to Bitcoin, 21 (23.3%) would sell it, 5 (5.6%) would spend it, and 18 (20%) would consider other options, while 52 research assistants (55.3%) would hold on to it, 17 (18.1%) would sell it, 5 (5.3%) would spend it, and 20 (21.3%) would consider other options. On the other hand, 33 lecturers (49.3%) would hold on to it, 18 (26.9%) would sell it, 5 (7.5%) would spend it, and 11 (16.4%) would consider other options.

Table 10 Demographic variables and answers given to the question: "If you had to choose, what would be more reliable?"

Variables		Big banks	Bitcoin
Gender	Female	93 (88.6%)	12 (11.4%)
	Male	186 (91.6%)	17 (8.4%)
Age	30 years and under	44 (86.3%)	7 (13.7%)
	31 - 40 years	167 (91.3%)	16 (8.7%)
	41 - 50 years	54 (96.4%)	2 (3.6%)
	51 - 60 years	8 (80.0%)	2 (20.0%)
	61 years and over	6 (75.0%)	2 (25.0%)
Marital Status	Single	75 (87.2%)	11 (12.8%)
	Married	204 (91.9%)	18 (8.1%)
Title	Prof. Dr.	22 (91.7%)	2 (8.3%)
	Assoc. Prof. Dr.	31 (93.9%)	2 (6.1%)
	Asst. Prof. Dr.	83 (92.2%)	7 (7.8%)
	Res. Asst.	83 (88.3%)	11 (11.7%)
	Lect.	60 (89.6%)	7 (10.4%)

Source: Authors

The chi-square test results revealed that there was no difference in opinions between gender (sig. = 0.384), age (sig. = 0.134), marital status (sig. = 0.207) and titles (sig. = 0.842).

6. Conclusion

This study aims to contribute to the literature by being the first study to systematically investigate Bitcoin awareness among academics in Turkey. In the study, Bitcoin awareness of academics was analysed in depth. The statistical results obtained from the findings highlight the importance of developing strategies that could help raise awareness of Bitcoin investors in Turkey.

One of the strengths of the study is considered to be the use of a quantitative methodology, which is quite appropriate for the contexts of the questions evaluated, the sample of the study, the quality of the findings, and the presentation of the results. As mentioned earlier in the study, although the limitation to the academics working at Erzincan Binali Yıldırım University can be considered as a weakness, the detailed determination of the sample through stratified sampling can completely eliminate this weakness.

The results of the study showed that only two people had no information about Bitcoin. In addition, it was found that 25 persons owned Bitcoin, and 159 (51.6%) persons were informed about Bitcoin. This showed that academics were very well informed about Bitcoin.

While 156 (50.7%) academics agreed that Bitcoin is an innovation in financial technology, only 105 (34.1%) academics disagreed with this positive statement. It was also found that there was a difference of opinion between male and female academics on this issue. Interestingly, male academics were more likely to agree that Bitcoin was an innovation in financial technology than female academics. This difference was not limited to gender, as differences in opinion also appeared across age groups. Academics aged 41-50 were less likely to approve of Bitcoin as an innovation in financial technology than the other age groups. Among academics aged 51-60, half thought Bitcoin was an innovation, while the other half did not. This suggests that the new and complex Bitcoin technology has created this difference of opinion among academics.

While 114 (37%) academics thought Bitcoin was reliable, 140 (45.5%) academics said it was not. There were differences in opinion between genders and

age groups on this question. It was observed that male academics trusted Bitcoin less than female academics. 50 (16%) of academics aged 40 and below said they were not sure. Therefore, as mentioned above, it can be argued that doubts about Bitcoin's reliability persist and academics are wary of Bitcoin.

Furthermore, 176 of academics (57.1%) indicated that they would use Bitcoin within a decade. Thus, the use of Bitcoin is expected to increase as doubts about its reliability are likely to be resolved in the coming years.

In addition, most academics stated that investing in Bitcoin was similar to investing in technology companies and then in currency. This shows uncertainty about what type of investment tool Bitcoin is.

Another finding was that 159 of academics (51.6%) would prefer gold over Bitcoin. It was found that 50 (16.2%) would prefer real estate, 47 (15.2%) would prefer stocks, 34 (11%) would prefer foreign currency, and 18 (5.8%) would prefer government bonds. This indicates that gold, which is a classic investment tool, might be preferred to a new investment tool such as Bitcoin. Additionally, the subjective nature of investment preference could lead to differences in relation to demographic variables.

155 academics (50%) stated that they would hold on to Bitcoin. More than 50% of academics, who are exclusively 40 years old and younger indicated that they would hold on to it. It can be concluded that the upward trend of Bitcoin has led academics to consider Bitcoin as a custody tool for investment purposes.

279 academics (90.5%) considered big banks more reliable than Bitcoin, which makes it possible to evaluate Bitcoin as less reliable than big banks.

In conclusion, all results draw attention to one point: No matter how much you know about Bitcoin, it remains uncertain what Bitcoin is. Although Bitcoin was considered an investment tool, it was not known what type of investment tool it was. Although participants noted that there are innovations in financial technology, it was observed that traditional investment tools, especially gold, are preferred. It was concluded that the uncertainties in the minds regarding reliability led to a kind of ambiguity that could not be resolved. Despite the fact that participants expressed negative opinions about Bitcoin, it was found that Bitcoin is used by academics and will be available to most people in the coming years.

Based on the results of this study, several suggestions can be made. First of all, it could be suggested to increase confidence in Bitcoin and find out what kind of investment tool Bitcoin is. Apart from academics, surveys can also be conducted among persons who are in the financial markets and are difficult to observe. This study could also serve as a stimulus for other research studies to be conducted that would deal with different cryptocurrencies. Last but not least, new strategies can be developed to raise Bitcoin awareness, and existing research studies on understanding awareness can be extended.

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