CURRENT SCIENCE The Psychology of Cryptocurrency and The Digital Economy

Article · August 2024

DOI: 10.5281/zenodo.13293392

1 author:

Yeşim Sirakaya
St Clements University
20 PUBLICATIONS **0** CITATIONS

SEE PROFILE

CURRENT SCIENCE

Multidisciplinary Journal With Arbitration Committee

The Psychology of Cryptocurrency and The Digital Economy

THIS JOURNAL INCLUDED IN MANY INDEXES, INCLUDING ADVANCED SCIENCES INDEX. ADVANCED SCIENCES INDEX (ASI) EUROPEAN SCIENCE EVALUATION CENTER KIRCHSTRASSE 4.56761 | **RHINELAND-PALATINATE, GERMANY** PHONE: +49(177) 8684-353 PHONE: +49(177) 8684-353 EMAILS: ASI@EUROPE.DE

CURRENT SCIENCE

To cite this article: Collaborate, Current Science, Volume 5, No. 5-04, 2024, p. 01– 39. - 0099-0001-2408-0101.

Our studies are in a format accredited, approved, and supported by EAALS - European Academic Studies and Laboratory Services. ("Scientific Studies -

Current Science Georgia") "EAALS offers all our works, services, and publications to the world scientists at the stage of carrying our control, accreditation, and support processes to the international platform." ("CURRENT SCIENCE")

("Scientific Studies - Current Science Georgia") ISSN: 2667-9515

Barcode: 977266795001

""• Current Science Multidisciplinary Academic Journal with

Review Panel is a monthly multidisciplinary academic" ("CURRENT SCIENCE ("Scientific Studies – Current Science Georgia") ("Scientific Studies - Current

Science Georgia") Science Georgia") journal with a multi-science peer-review." ("Scientific Studies - Current Science Georgia")

""The journal will be at the subscriber's address in the first week of the month."" ("Scientific Studies - Current Science Georgia")

Multidisciplinary Journal With Arbitration Committee

CURRENT SCIENCE

- *The journal continues to be included in all international rankings and registrations. Quality articles and publications accelerate this ("Scientific Studies -Current Science Georgia")*

""• Response or rejection time for applications varies between 30 and 90 days.""

("Scientific Studies - Current Science Georgia")

Assoc. Prof. Yeşim SIRAKAYA
St. Clements University
Psychology Department Faculty Member
Orcid ID: 0009-0004-2558-8194
Mail: yesimsirakaya8282@gmail.com

SUMMARY

Cryptocurrencies and digital economy have attracted great attention in recent years and are among the rapidly developing areas. This article examines the psychological effects of cryptocurrencies and the profound effects of the digital economy on human psychology. It is discussed how the volatility of cryptocurrencies affects investors' risk perception and decision-making processes. Additionally, the effects of features of the digital economy, such as anonymity and security, on individuals' financial behavior and emotional well-being are discussed. The article discusses how the disciplines of psychology and economics have been integrated to understand these issues and potential directions for future research. In conclusion, understanding the psychological dimensions of cryptocurrency and the digital economy represents an important area in both academic and applied studies, and this article aims to contribute to the expansion of the literature in this field.

Keywords: Cryptocurrency, digital economy, psychological effects, financial decisions, risk perception, emotional well-being, anonymity, security, investment psychology, volatility, technology acceptance.

INTRODUCTION

In recent years, the digital economy, and cryptocurrencies in particular, have had a significant impact on traditional financial systems. This impact includes not only financial but also social, psychological and economic dimensions. The rise of cryptocurrencies has brought about not

only an effort to create a new financial instrument, but also a transformation process that has the potential to fundamentally change economic and social structures. The psychological dimensions of the digital economy and cryptocurrencies require a deep understanding of the attitudes and behavior of individuals and societies towards these new financial instruments. In this context, human psychology gains importance as a fundamental factor shaping financial decision-making processes, investment strategies and economic relations.

This article aims to focus on the psychological factors behind the rise of cryptocurrencies and the economic consequences of these factors. In particular, issues such as investors' perception of risk, their reactions to price fluctuations, and the impact of social media are of critical importance in the spread and acceptance of cryptocurrencies.

In addition, issues such as new economic models, income distribution inequality, and regulation needs that have emerged with the expansion of the digital economy will also be discussed within the scope of this article. In this context, understanding the psychological and economic impacts of cryptocurrencies is critical to making more sound financial decisions for both individuals and societies. Based on current literature reviews and empirical research, the article will discuss the psychological foundations of cryptocurrencies and how these foundations may influence future economic trends. As a result, it is anticipated that this study will make a significant contribution to understanding the psychological dimensions of the digital economy and cryptocurrencies and making future predictions.

AIM

The purpose of this article is to delve into the psychological dimensions of cryptocurrencies and the digital economy. In particular, it is aimed to understand and explain the effects of individuals and societies on their perceptions, attitudes and behaviors towards cryptocurrencies.

Unlike traditional financial systems, cryptocurrencies stand out with their internet-based and generally decentralized structure. This structure may give rise to unique psychological factors that influence users' financial decisions. Therefore, this article aims to uncover the psychological motivations underlying the rise and popularity of cryptocurrencies and discuss the economic consequences of these motivations.

Additionally, investigating the effects of social media on the spread and price fluctuations of cryptocurrencies and how these effects are related to psychological processes is another goal of this article. Social media platforms have become an important source of information that can influence users' financial decisions, and in this context, an in-depth analysis on the popularity of cryptocurrencies is required.

Finally, this article aims to make a significant contribution to the relevant academic literature by providing a basis for understanding the psychological underpinnings of cryptocurrencies and predicting future economic and social trends.

THIS JOURNAL INCLUDED IN MANY INDEXES, INCLUDING ADVANCED SCIENCES INDEX. ADVANCED SCIENCES INDEX (ASI) EUROPEAN SCIENCE EVALUATION CENTER KIRCHSTRASSE 4.56761 | **RHINELAND-PALATINATE, GERMANY** PHONE: +49(177) 8684-353 PHONE: +49(177) 8684-353 EMAILS: ASI@EUROPE.DE

METHOD

In this article, a comprehensive literature review was conducted to investigate the psychological dimensions of cryptocurrencies and the digital economy. The focus of the research is to understand the perceptions, attitudes and behaviors of individuals and societies towards cryptocurrencies. Existing literature on the psychological dimensions of cryptocurrencies and the digital economy was reviewed. This literature review helped us understand the findings and methods of previous research on the topic. In particular, studies examining the effects of psychological factors on the prevalence and price fluctuations of cryptocurrencies were taken into account. The information obtained provided a suitable framework to understand the psychological dimensions of cryptocurrencies and achieve the purpose of our research. Additionally, the findings provide an important perspective on the prevalence of cryptocurrencies, investor behavior and their possible impact on the future of the digital economy.

RESULTS

Cryptocurrencies, which emerged in 2008, emerged as an alternative to the centralized financial approach and payment intermediary institutions. These digital currencies have gained popularity around the world and especially in Turkey with the Covid-19 pandemic and the increase in digitalization. Türkiye ranks fourth in the world and first in Europe in cryptocurrency usage. These currencies, which attract particular attention among young people, prefer to invest in technology companies and cryptocurrencies, unlike the traditional investment instruments preferred by the elderly. However, cryptocurrencies have high volatility and require a good level of financial knowledge to invest, so they are viewed by some as a high-risk and speculative investment tool. They are also often criticized for being technologically more susceptible to fraud. For example, the "Africrypt" exchange, which was described as the world's largest fraud in June 2021, and the Thodex and VeBitcoin frauds in Turkey have increased these concerns. All these factors show that cryptocurrencies are a phenomenon and problem that needs to be addressed from a social and sociological perspective.

A. Conceptual Review of Cryptocurrencies

1. Brief Look at the History of Cryptocurrencies and Blockchain

Cryptocurrencies are new products that have created a significant change in the financial structure today, when technological developments are gaining momentum. Blockchain technology and cryptocurrencies, in particular, are among the examples that fall outside the traditional understanding of finance. The first cryptocurrency, Bitcoin, was created by Satoshi Nakamoto in 2008. Nakamoto introduced the working principles of Bitcoin and the reason for its emergence in his work titled "Bitcoin: A Peer-to-Peer Electronic Cash System".

THIS JOURNAL INCLUDED IN MANY INDEXES, INCLUDING ADVANCED SCIENCES INDEX. ADVANCED SCIENCES INDEX (ASI) EUROPEAN SCIENCE EVALUATION CENTER KIRCHSTRASSE 4.56761 | **RHINELAND-PALATINATE, GERMANY** PHONE: +49(177) 8684-353 PHONE: +49(177) 8684-353 EMAILS: ASI@EUROPE.DE

The existence of intermediary financial institutions and the fees paid to these institutions during trading make trading very costly. For this reason, the lack of a system that allows shopping without the need for third parties such as banks creates a problem. At this point, the main requirement is a secure system based on cryptographic evidence (Nakamoto 2008: 1).

Blockchain technology, which laid the foundation for cryptocurrencies that have gained great popularity today, first emerged with Bitcoin. One of the first studies on the blockchain structure and how digital documents can be securely protected by computer systems is the article titled "How To Time-Stamp a Digital Document" published in 1991 by Stuart Haber and W. Scott Stornetta (1991: 109). This article discusses the usability of encryption technology in computer systems with timestamping based on digital signature application. Haber and Stornetta claimed that this technology could allow confidential information such as trade secrets, technological formulas, and even Coca-Cola to be stored reliably and at very low costs (Haber et al. 1991: 109).

With the Cyprus Government announcing in 2013 that it would tax savings accounts, the demand for cryptocurrencies, which is a system that states cannot control, increased. Although they are not currently accepted as official currency by any state other than El Salvador, cryptocurrencies have a commodity value. For example, the value of Bitcoin, which was around $750 at the beginning of 2017, approached $20,000 at the end of the same year (URL-5). As of 2021, the value of Bitcoin has risen to $60,000 at one point. However, following the statements of US Federal Reserve (Fed) Chairman Jerome Powell on March 22, 2021, stating that cryptocurrencies are a means of speculation rather than a means of payment and his statements that measures such as taxation will be taken for these currencies, there has been a rapid decline in cryptocurrencies. These strong rises and pullbacks seen in the market of cryptocurrencies such as Bitcoin show that the market has high volatility and accompanying risks.

2. Prevalence of Digital Currencies in Turkey

In Turkey, the concept of crypto is defined by combining it with the verb "to play", which is slightly distant from the term Blockchain technology. Cryptocurrencies, which have become very popular in the country in recent years, have been adopted as an investment tool by a large audience. According to a study conducted in 2019 (URL-1), while Turkey ranked 9th among the 20 countries that adopted cryptocurrencies the most, according to another study conducted in 2021, this ranking increased to 4th place with a rate of 16% (URL-8). According to a research conducted by ING Bank in 2018, the rate of people considering owning cryptocurrency in Turkey has reached 45% (URL-6). These data show that Turkey's interest in cryptocurrencies is important worldwide.

Studies have shown that there is a higher interest in cryptocurrencies, especially among young people. A study conducted at Niğde Ömer Halisdemir University revealed that university students are generally inclined towards cryptocurrencies and that this tendency may differ depending on the faculties. It has been determined that students of the Faculty of Engineering, Communication and Education are more interested in cryptocurrencies (Doğan 2020: 859, 869).

THIS JOURNAL INCLUDED IN MANY INDEXES, INCLUDING ADVANCED SCIENCES INDEX. ADVANCED SCIENCES INDEX (ASI) EUROPEAN SCIENCE EVALUATION CENTER KIRCHSTRASSE 4.56761 | **RHINELAND-PALATINATE, GERMANY** PHONE: +49(177) 8684-353 PHONE: +49(177) 8684-353 EMAILS: ASI@EUROPE.DE

In this context, the study on university students' interest and orientation towards cryptocurrencies emphasizes that there is diversity on this issue among students studying in different faculties and departments.

With the increasing interest in cryptocurrencies, states have started to make different legal regulations. Turkey also took action in this context and, with a decision published in the Official Gazette on April 16, 2021, banned businesses from buying and selling goods with cryptocurrencies and organizations from making electronic money transfers (URL-7). Following this news, there was a significant volatility in the cryptocurrency market in Turkey and these currencies lost between 4% and 12% in value (URL-4).

3. Reasons Why Cryptocurrencies are Economically Preferred in Turkey

There are many reasons behind the interest in cryptocurrencies. These reasons include the natural consequences of the age such as the Covid-19 pandemic and the increased use of electronic media, the popularity of cryptocurrencies, herd psychology, FOMO (Fear of Missing Out), the fear and uncertainty that young people feel about the future under difficult economic conditions, There are also factors such as the desire to get rich in a short time.

a. Covid-19 Pandemic

The Covid-19 pandemic, which started in China in 2019 and affected the world, had three different effects on the financial system and the use of cryptocurrency. First, the use of physical notes or coins has decreased due to the risk of manual transmission of the virus. Secondly, the restrictions and measures taken with the pandemic have increased the necessity of working from home and encouraged people to make electronic investments in the virtual environment. Finally, the emerging economic uncertainties have increased the interest of people who see the cryptocurrency market as a safe haven. During this period, popular cryptocurrencies such as Bitcoin, Ethereum and Litecoin, which are cryptocurrencies that gained economic value, showed a significant increase (Minutolo et al. 2022: 1; Sarkodie et al. 2022: 1-3).

b. Trend Towards Popularity Trends

The increasing popularity of cryptocurrencies is an important factor in the increasing interest of people in seeing cryptocurrencies as an investment tool. Social media platforms, in particular, can rapidly increase the popularity of an investment instrument. In this context, it is not surprising that young people who frequently use social media and are in touch with digital environments are interested in popular cryptocurrencies. In the studies conducted by Mehmet Cihangir and other researchers (2019: 510, 519), on students of Cumhuriyet University, Gaziosmanpaşa University, Kahramanmaraş Sütçü İmam University and Osmaniye Korkut Ata University, it was determined that the interest of students in cryptocurrencies was related to the popularity factor. However, these studies were conducted before the Covid-19 outbreak. The pandemic process and subsequent developments have further increased this popularity. With

THIS JOURNAL INCLUDED IN MANY INDEXES, INCLUDING ADVANCED SCIENCES INDEX. ADVANCED SCIENCES INDEX (ASI) EUROPEAN SCIENCE EVALUATION CENTER KIRCHSTRASSE 4.56761 | **RHINELAND-PALATINATE, GERMANY** PHONE: +49(177) 8684-353 PHONE: +49(177) 8684-353 EMAILS: ASI@EUROPE.DE

the influence of the increasing popularity of cryptocurrencies, mass psychology (herd psychology) also plays an important role.

c. Herd Psychology

The contagion effect (Bandwagon), defined as "herd psychology" in the literature, means that people generally make their political or economic choices by conforming to the majority (Schmitt-Beck 2008: 1). This may lead to increased demand for products or assets. In the economic context, the influences that push people to conform to the majority are important, and this can be especially effective in practices such as marketing and advertising (Dal 2020: 93).

In this context, advertising and marketing activities and social media posts specifically for cryptocurrencies play a major role in creating herd psychology and directing people's preferences. For example, after famous businessman Elon Musk's advertisement for DOGE Coin, it was observed that many people showed interest in this cryptocurrency. It should be noted that the fear of missing opportunities among the masses is also effective in such interactions.

d. FoMo (Fear of Missing Out)

FoMO (Fear of Missing Out) is a term generally used in the discipline of economics and expresses the thought or concern that a person has missed an opportunity that others benefit from (Metin-Orta 2020: 68). This feeling can be fed by factors such as news in various media, advertisements for people who make big profits, gossip, news heard from close circle, and can create in people the feeling of "everyone is winning, but I am falling behind." This situation may cause people to fall into herd mentality and make sudden decisions.

"Cryptocurrency rich" advertisements, which are frequently seen especially on social media and investor sites, can create a desire to invest and earn in young people by emphasizing the stories of people who make big profits with small amounts. However, such advertisements generally do not mention the risks of investing and do not include stories of people who lost their assets, for example, in major declines. These ads often fuel the desire to get rich and attract people's attention. In this context, the FoMO effect may also play an important role in cryptocurrency markets. People may make impulsive investment decisions by focusing on others' gains or acting out of fear of missing out, which can increase market volatility and lead investors to ignore their risks.

e. Despair and Anxiety About the Future

An important reason why individuals turn to cryptocurrencies is the difficulty of current economic conditions. Especially young people may feel hopeless due to economic uncertainties and concerns about their future. This may lead young people to show interest in cryptocurrencies in order to reduce these concerns, earn additional income, invest and feel valued.

THIS JOURNAL INCLUDED IN MANY INDEXES, INCLUDING ADVANCED SCIENCES INDEX. ADVANCED SCIENCES INDEX (ASI) EUROPEAN SCIENCE EVALUATION CENTER KIRCHSTRASSE 4.56761 | **RHINELAND-PALATINATE, GERMANY** PHONE: +49(177) 8684-353 PHONE: +49(177) 8684-353 EMAILS: ASI@EUROPE.DE

The potential high returns and new economic opportunities offered by cryptocurrencies may be attractive to young people. Additionally, the idea that they can secure themselves financially by investing in this field may increase young people's interest in cryptocurrencies. However, the high volatility and risks of cryptocurrencies should also be taken into consideration.

f. Desire to Be Rich

The desire to get rich in a short time is quite common in Turkey, especially among young people. This trend has also been observed in the past. For example, a study conducted by Yılmaz and Sarıgöllü in 1982 shows that 55% of people at that time deposited their money with bankers in the hope of becoming rich, and 85% of them were influenced by advertisements (Yılmaz and Sarıgöllü 1982: 103-105).

Our study claims that a similar trend manifests itself in cryptocurrency investments today. It is observed that cryptocurrencies trigger the desire to get rich quickly, especially among young people. However, cryptocurrencies are an investment tool that carries high risks. Blockchain technology and cryptocurrencies are constantly open to new developments and differ from the traditional financial system.

Uçkun and Dal's study revealed that most cryptocurrency investors are willing to take high risks and are "aggressive investor types" (Uçkun et al. 2021: 161-167). Young people's interest in cryptocurrencies also includes taking these risks. This may cause them to face risks, especially momentary price fluctuations. Lack of economic and financial literacy can also lead to great material and moral losses for individuals who cannot manage these risks.

4. Cryptocurrencies and Price Volatility

Volatility refers to price fluctuations and volatility in the market in a short period of time in financial markets. High volatility can reduce confidence in the market because sudden price changes can cause investors to make or lose money quickly (Karabıyık et al. 2007: 64). Especially in sharp declines, investors who do not have the opportunity to sell their products may become seriously worried. Teker, Konuskan, Ömürbek and Bekçi (2020: 73) examined the fluctuations created by news about cryptocurrencies in the markets. This study revealed that volatility levels can be very high at times due to the lack of a central control mechanism in cryptocurrency markets. Sel (2020: 97) emphasizes that fluctuations in the markets during the Covid-19 pandemic require investors to make important decisions. He states that especially speculative markets are open to short-term manipulations rather than long-term investments. One of the biggest risks of cryptocurrencies is the lack of regulatory control mechanisms, unlike traditional investments. This may lead to cryptocurrencies being more vulnerable to financial fraud.

5. Cryptocurrency Tricks (Scams)

Due to electronic-based investment in the financial field, cases of unauthorized access to systems (hacking) or fraud by company managers are frequently observed in cryptocurrency

THIS JOURNAL INCLUDED IN MANY INDEXES, INCLUDING ADVANCED SCIENCES INDEX. ADVANCED SCIENCES INDEX (ASI) EUROPEAN SCIENCE EVALUATION CENTER KIRCHSTRASSE 4.56761 | **RHINELAND-PALATINATE, GERMANY** PHONE: +49(177) 8684-353 PHONE: +49(177) 8684-353 EMAILS: ASI@EUROPE.DE

exchanges. For example, at the end of 2017, a major exchange "Bithumb" was hacked (URL-2). In June 2021, one of the world's largest frauds occurred and $ 3.6 million was stolen from the "Africrypt" exchange (URL-3). Cryptocurrency fraud has also occurred in Turkey through companies such as Thodex and VeBitcoin operating in Muğla province. Especially in Turkey, the fact that cryptocurrency investments are new and the lack of information and financial literacy in this field causes an increase in fraud cases.

6. Financial Literacy

Financial literacy is extremely important for all investments in general, not just cryptocurrencies. Just as every profession has basic knowledge, economics also has basic knowledge. Research conducted throughout Türkiye shows that the level of financial literacy is generally at a good level. According to research conducted over the years, it is observed that the financial literacy rate has increased. For example, a study by Karaca (2018: 2) revealed that the financial literacy rate, which was 59.9% in 2013, increased to 61.5% in 2018. However, these rates may differ between age groups and occupational groups. For example, according to a study conducted with Gaziantep University students, the financial literacy level of undergraduate students was determined to be 48%. According to this research, it was observed that males had higher financial literacy than females, students of the Faculty of Economics and Administrative Sciences had higher financial literacy than other faculties, and students of the Faculty of Architecture had the lowest financial literacy level (Kılıç et al. 2015: 144). Such differences indicate that there is considerable variation in the level of financial literacy across faculties. As a result, the issue of financial literacy may vary according to age groups and professions, but the general trend is that the level of financial literacy is increasing in Turkey.

7. Opposing Election

The term adverse selection, frequently used in financial markets, refers to a problem that negatively affects the market. This problem arises when the parties in the market cannot observe the quality of each other's goods or services (McConnel et al. 1996, cited in Erdoğan 2008: 2). Adverse selection is also known as the "lemon problem". According to this theory put forward by George A. Akerlof, people can buy a good without knowing whether it is good or bad. These goods, called "lemons" in US street jargon, are often defective or of poor quality. People make adverse selection by purchasing a good that is presented as good at a price above its value, without knowing that it is bad (Akerlof 1970: 489). One of the important factors that lead to adverse selection is not having sufficient financial literacy, as well as making emotional decisions when investing. To understand this situation, it is necessary to touch upon behavioral finance and herd psychology. In behavioral finance, it is known that people act not only for rational reasons but also with emotional and herd psychology when investing (Tufan and Sarıçiçek 2013: 166). Traditional finance theories assume that people are rational beings, but in reality financial decisions are often shaped by emotional and psychological factors. For this reason, behavioral finance theories also examine psychological factors. For example, psychologist Daniel Kahneman states that investors sometimes rely on their intuition instead of thinking rationally when making economic decisions (Akın 2017: 12-13).

8. Risk Element (Risk)

THIS JOURNAL INCLUDED IN MANY INDEXES, INCLUDING ADVANCED SCIENCES INDEX. ADVANCED SCIENCES INDEX (ASI) EUROPEAN SCIENCE EVALUATION CENTER KIRCHSTRASSE 4.56761 | **RHINELAND-PALATINATE, GERMANY** PHONE: +49(177) 8684-353 PHONE: +49(177) 8684-353 EMAILS: ASI@EUROPE.DE

The last concept to be used in the study, "risk", is used synonymously with the words risk and danger and refers to the danger of suffering loss. This term is widely used especially in the field of insurance (Mergen Bayer 2019: 10-11). The cryptocurrency market is a system where movements can be predicted using chart analysis, formation tracking and indicators with good financial literacy. However, in cases where financial literacy is lacking and the herd mentality is acted upon, predictability decreases and uncertainty increases. This may lead to increased risks. Other factors that create risks for investors in the market are exposure to electronic attacks such as fraud and hacking in cryptocurrency exchanges (Kahveci et al. 2021: 271-272).

B. Interpretation of Digital Currencies in Terms of Economics and Politics Perspective

While new technologies sometimes present attractive and transformative opportunities, they can also raise deep doubts about transaction volume and monetary exchange relations. Today, cryptocurrencies and financial transactions supported by blockchain technology are included in the financial technology management information systems (MIS) curriculum (Firth, 2018). Cryptocurrencies may be designed independently of a particular nation state and are becoming increasingly powerful; However, countries or international institutions cannot remain indifferent to these. The emergence of a viable alternative currency such as Bitcoin today is based on the idea that its nature is based on superior, confidential and secure payment technologies. Blockchain technology offers an algorithmic method that enables transactions to be carried out securely and confidentially without the need for a central authority or bank. As distributed ledger technologies and the concept of peer-to-peer digital money become widespread, it is thought that they may have significant impacts on traditional currencies issued by banks. However, it is difficult to give clear answers about the exact effects of blockchain and cryptocurrencies on banks. The integration of these technologies into financial systems and how the regulatory framework will be shaped carry significant uncertainties.

The growing popularity of cryptocurrencies marks a period in which governments are faced with disparate and disconnected regulations that often rely on law, challenging international coordination. For example, according to 2020 data, Bitcoin's rise from $ 10,000 to an all-time high of $ 65,000 in April 2021 and the similar rapid appreciation of other major cryptocurrencies caused blockchain and cryptocurrency-focused companies to break eight records in the 2021 Fintech 50 list. . This situation has attracted not only the masses but also large capital groups and multi-billion dollar investors (Bambisheva, 2021). The wave of institutional adoption has included global player capital groups in crypto initiatives, signaling the arrival of a new era for Industry 4.0. With the rapid rise of cryptocurrencies and the expansion of their usage areas, central banks have also begun to explore the concept of digital currencies (CBDC). For example, the CBDC Group think tank, formed between international organizations and central banks such as the International Monetary Fund (IMF), Bank for International Settlements (BIS), pioneers research and studies in this field (Ledgerinsight, 2020). A BIS survey published in 2021 found that developed economies are actively analyzing the potential impacts of cryptocurrencies together with central banks such as the US Federal Reserve, European Central Bank (ECB), Bank of England (BoE) and Bank of Japan (BoJ) (Boar, 2020).

THIS JOURNAL INCLUDED IN MANY INDEXES, INCLUDING ADVANCED SCIENCES INDEX. ADVANCED SCIENCES INDEX (ASI) EUROPEAN SCIENCE EVALUATION CENTER KIRCHSTRASSE 4.56761 | **RHINELAND-PALATINATE, GERMANY** PHONE: +49(177) 8684-353 PHONE: +49(177) 8684-353 EMAILS: ASI@EUROPE.DE

Cryptocurrencies are considered to serve the traditional monetary functions of unit of account, medium of value, and means of payment, but there are some challenges in fully fulfilling these functions. In particular, the anonymity feature makes it difficult to monitor cryptocurrency transactions, allowing shady transactions to occur that exceed the limits of intervention by regulatory authorities. This situation causes elements such as criminal organizations to use cryptocurrencies to obtain "clean money" and groups such as terrorist organizations that want to escape embargoes to benefit from this system. While liberals may see cryptocurrencies as a way to reduce state intervention, opposition states may see them as an alternative opportunity for international political order. Although the global market value of cryptocurrencies has grown significantly, the full scale of their abuse is still unclear.

The rise of cryptocurrencies raises concerns that they could pose a potential threat to national currencies. Traditionally, money has been considered an expression of a state's sovereignty. States with strong currencies are generally considered reliable in terms of economic, political and military power. But the rise of new technologies such as cryptocurrencies may challenge national governments and central banks to manage and control monetary policies.

The questions of whether cryptocurrencies will threaten national currencies and what impact they will have on national sovereignty and money printing rights cause serious debates at the global level. Some globalists approach this process calmly, with the idea that the world will eventually move towards a single currency. However, many countries are taking precautions out of concern that cryptocurrencies may destabilize their national currencies. For example, countries such as India are trying to introduce regulations by emphasizing the potential risks of cryptocurrencies. Regulatory authorities and governments are also concerned about the potential for cryptocurrencies to be used for illegal activities. The fact that cryptocurrencies can be used for crimes such as money laundering, terrorist financing and tax evasion causes regulatory institutions to take stricter measures in these areas. Some countries, such as Turkey, take a cautious approach on this issue by deciding not to accept cryptocurrencies as official means of payment. As a result, cryptocurrencies have the potential to greatly transform the relationship between money and state, which could lead to profound impacts on national sovereignty and monetary policies.

Privacy is also considered the biggest issue when it comes to tax evasion transactions. When a tax authority does not know who is participating in a taxable transaction, it cannot detect or sanction tax evasion because of this anonymity. For this reason, there are many arguments that cryptocurrencies violate the sovereign rights of nations, are incompatible with the social contract and consent, and therefore should be banned. So, “So what is this cryptocurrency and what does it fundamentally express in terms of political and economic philosophy?” Questions such as these need to be answered. In this context, in studies conducted with an interdisciplinary approach, the research problem is first determined; Relevant discussions in the literature are examined, analyzing the conceptual framework for cryptocurrency with the discussion of "money" or "value"; Philosophically, cryptocurrencies are discussed in the context of the philosophy of freedom; The hidden motivations behind cryptocurrencies are discussed and conclude with a comparison of various applications.

THIS JOURNAL INCLUDED IN MANY INDEXES, INCLUDING ADVANCED SCIENCES INDEX. ADVANCED SCIENCES INDEX (ASI) EUROPEAN SCIENCE EVALUATION CENTER KIRCHSTRASSE 4.56761 | **RHINELAND-PALATINATE, GERMANY** PHONE: +49(177) 8684-353 PHONE: +49(177) 8684-353 EMAILS: ASI@EUROPE.DE

Various risks and unsolved problems of cryptocurrencies concern many disciplines. The increasing interest of states in adopting cryptocurrencies is causing much speculation about how they will affect the international monetary system. Traditional theories and tools in the field of monetary theory and monetary policy have begun to become outdated over time. The current system is based on internationally accepted rules, norms and institutions that enable trade and investment between countries. Cryptocurrencies, on the other hand, often function as public databases of financial transactions via blockchains with decentralized control mechanisms (Wikipedia, Cryptocurrency). A major concern is the possibility that if enough countries launch their own digital currencies, they could operate outside the current framework of global central banks (Bloomberg, 2018). Some organizations, such as the International Monetary Fund, believe that cryptocurrencies could replace banks and existing financial systems by reducing the need for intermediaries and third-party service providers. Other experts predict that cryptocurrencies could replace approximately 25% of national currencies by 2030 (James, 2018).

The move to a centralized cryptocurrency may not be welcomed by the crypto community at large. However, some may argue that meeting the need for regulatory oversight should come from a decentralized regulatory body, independent of governments and Central Banks. Currently, cryptocurrencies such as Bitcoin and Ethereum are considered safe, and the reversal process may take time as some countries, including Japan, accept Bitcoin as legal tender (Graham, 2017).

Bitcoin is not only a virtual currency, but also an asset that can be invested like gold. National cryptocurrencies are unlikely to offer such investment opportunities because the centralized structure would behave similarly to a paper currency controlled by the respective central banks. While it is not possible to counterfeit crypto currencies thanks to blockchain technology, paper currencies can be counterfeited. If the United States were to adopt a digital currency, it would be an alternative to cash and would have the advantage of fast money transfer due to being electronic. Some assumptions are that this digital currency could be free or nearly free. However, it is also thought that private sector players may add additional fees and this issue needs to be addressed in more detail. Although it is a digital currency, it is thought that accessing the US CBDC should be as easy as cash. Alternative methods such as chip-based cards, POS systems and web accounts can be recommended to provide this access.

Central Bank Digital Currency (CBDC), a digital currency that anyone can use, should be accessible to a wide range of people, not just those with the latest smartphones. In addition, infrastructure needs to be developed so that transactions can be carried out offline. In this way, CBDC exchanges can occur even if two people are not on the same cell or wifi network (Rodeck and Jury, 2021). Zetzsche et al.'s (2020) study focuses on how technology may reshape money and payments in the future. It addresses policy issues and choices regarding cryptocurrencies, stablecoins, and sovereign digital currencies, highlighting the diversity of independent digital currency designs. For example, Facebook's proposal for Libra, a global stablecoin, has received a swift and strong response from regulators around the world. China's global central bank digital currency initiative, such as Digital Yuan, has the potential to affect the international financial

THIS JOURNAL INCLUDED IN MANY INDEXES, INCLUDING ADVANCED SCIENCES INDEX. ADVANCED SCIENCES INDEX (ASI) EUROPEAN SCIENCE EVALUATION CENTER KIRCHSTRASSE 4.56761 | **RHINELAND-PALATINATE, GERMANY** PHONE: +49(177) 8684-353 PHONE: +49(177) 8684-353 EMAILS: ASI@EUROPE.DE

order. In research on cryptocurrencies, the effect of Bitcoin on stock market indices has been examined. For example, while there are short-term relationships between the UK stock exchange (FTSE) and Bitcoin, the effects of Bitcoin on the S&P 500 and the Canadian Stock Exchange have also been observed (Öget and Kanat, 2018). Additionally, research has shown that there are relationships between cryptocurrencies and foreign currencies.

According to the research conducted by Gürbüz and Zeren (2021), it was stated that Bitcoin has a long-term and positive relationship between the dollar and the euro. Eric Hughes, in his article "A Cypherpunk's Manifesto", states that in the European Central Bank's (ECB) "Plans for a Virtual Currency" report, the decentralized digital currency is linked to the Austrian School of Economics. According to the ECB's report, Bitcoin's philosophical origins are the current fiat currency and government interventions criticized by Ludwig von Mises, Friedrich von Hayek and Eugen von Böhm-Bawerk, also important thinkers who laid the ideological foundations of the modern libertarian movement (Daughtry, 2021) . Central bank digital currencies are promising for future payment systems while offering the advantages of private solutions without some of the risks and costs. Account-based digital currencies could potentially change the current dominance of global currencies by providing global digital money (Suster, 2020). Modern states control the state money supply using paper and coin systems and use this authority to direct the economy and control inflation (Cook, 2014). In order to strengthen and stabilize the economy, central banks exercise control over the money supply and use it to stimulate employment, ensure stable prices and moderate long-term interest rates. Central banking institutions effectively maintain control over the money supply through open market operations.

As the dominant form of monetary policy, open market operations refer to the central bank's participation in the government securities market. The central bank can expand or contract the money supply by buying and selling bonds in the public market, which affects the federal funds rate (the interest rate charged on short-term interbank loans). Changes in the national funds rate have a cascading effect on the economy by affecting overall interest rates (Cook, 2014). A central bank aims to increase confidence in its currency by keeping inflation low and positive. With a positive inflation rate, money loses purchasing power over time and people are incentivized to spend and invest their money to increase (or at least maintain) their purchasing power. However, in this case, if there is a tendency to use foreign currencies as investment or savings instruments, it may cause serious devaluation. The state's monopoly on money creation is crucial to this process, and competitive or alternative currencies can undermine the effectiveness of central banks. The existence and acceptance of rival currencies creates doubt in the value of paper currency and can weaken the power of the state. This reveals the concern that competitive currencies reduce the value of the state's currency and draws attention as a difficult process to control (Cook, 2014). States therefore have an incentive to avoid competitive currencies. Once Bitcoin becomes widely adopted, central banks' ability to influence the aggregate demand and supply of money in the market could be seriously compromised. Technology brings new relationship networks and structures to replace the traditionally accepted ones, effective in all areas of life (Bozoğlu, 2018). Cryptocurrencies and blockchain applications, which are considered among innovative technological developments, create important problems in the fields of economy, finance and public administration. There

THIS JOURNAL INCLUDED IN MANY INDEXES, INCLUDING ADVANCED SCIENCES INDEX. ADVANCED SCIENCES INDEX (ASI) EUROPEAN SCIENCE EVALUATION CENTER KIRCHSTRASSE 4.56761 | **RHINELAND-PALATINATE, GERMANY** PHONE: +49(177) 8684-353 PHONE: +49(177) 8684-353 EMAILS: ASI@EUROPE.DE

are many more problems with cryptocurrencies than are actually known, but they are rarely discussed in the context of political and economic philosophy.

The following issues can be stated as problems that should be taken into consideration in the context of our study:

- In many countries, such as in Turkey, the current legal framework does not address cryptocurrencies in detail and they are generally not accepted only as official means of payment.

- While some cryptocurrencies may be banned in different states, they may be accepted as money or currency in other states.

- An important problem in combating issues such as money laundering, terrorist financing and tax evasion through crypto currencies is the anonymity feature provided by these currencies.

- Fighting crimes such as money laundering, terrorist financing and tax evasion carried out through cryptocurrencies can be done at the national level, but since cryptocurrency transactions cross international borders, binding regulations do not yet exist at the international level.

The problems mentioned above can actually be addressed within different disciplines; such as economics, monetary theory, philosophy and finance. However, it is difficult to make any scientific discipline limitations in philosophy's approach to this issue. Like traditional money, the value of cryptocurrencies is based on people accepting it. The greater the power of the ruler, the more prestigious the currency of that country. However, the acceptance of cryptocurrencies is not forced, it is inevitable because people benefit from it and use it with their own consent. However, the attitude of states on this issue is unclear and there is no consensus among academic circles. While some disciplines focus on specific topics, philosophy has no boundaries and can evaluate all kinds of basic data. Neither psychology, nor monetary theory, nor economics, nor cryptography, nor computer science alone are sufficient to fully make sense of this system. The philosophy of cryptocurrencies is of great importance in understanding issues such as the right to print national currency, seigniorage and security of monetary values. Especially in the context of political philosophy and ethics, it is necessary to evaluate whether the "principle of double effect" applies.

The nature of cryptocurrencies can lead to metaphysical arguments, with some deeming them unreal. These discussions arise because cryptocurrencies do not rely on any physical support and are produced only by computer algorithms. Cryptocurrencies, which have no physical value like gold and exist only digitally, are often described as "unreal". However, in fact, cryptocurrencies can be defined as algorithms that produce a result through computer codes, and these results can be accepted as a medium of exchange. The definition of cryptocurrencies can be complex. Like blockchain technology, cryptocurrencies refer to technological advances that use various cryptography techniques to protect information with secret keys and encrypt it

THIS JOURNAL INCLUDED IN MANY INDEXES, INCLUDING ADVANCED SCIENCES INDEX. ADVANCED SCIENCES INDEX (ASI) EUROPEAN SCIENCE EVALUATION CENTER KIRCHSTRASSE 4.56761 | **RHINELAND-PALATINATE, GERMANY** PHONE: +49(177) 8684-353 PHONE: +49(177) 8684-353 EMAILS: ASI@EUROPE.DE

in a way that can only be accessed by those who have that key. Therefore, cryptocurrencies can be traded instead of real money. The terms that countries use to refer to cryptocurrencies are diverse (Faulkner, 2016):

- Digital currency: Argentina, Thailand, Australia
- Virtual commodity: Canada, China, Taiwan
- Crypto token: Germany
- Payment token: Switzerland
- Cyber currency: Italy, Lebanon
- Electronic currency: Colombia, Lebanon
- Virtual entity: Honduras, Mexico

Should market mechanisms or democratic institutions manage the money supply? Is there a suitable basis for technocratic management of monetary systems? Could the positive effects that a healthy network provides to citizens undermine sovereignty? Does the use of cryptocurrencies ensure privacy for others through obscurity? How can I limit my moral liability for laundering human trafficking proceeds when using Cryptocurrency? When I use cryptocurrencies, do I run the risk of being legitimately accused? In terms of legal philosophy, is Bitcoin a transaction, a record, an asset or a nominal value? What is Cryptocurrency metaphysically? To which ontological category do its nature and existence belong?

Cryptocurrency ownership and use is increasing significantly in Vietnam, South Africa, Türkiye and Peru. According to a study, the region with the most cryptocurrency users in the world is Latin America. In particular, countries such as Brazil, Colombia, Argentina, Mexico and Chile have reached double-digit rates of cryptocurrency adoption. Countries such as Spain, Ireland (10%) and Greece (11%) have the highest acceptance rates in Europe. Asian and African countries, on the other hand, remain at lower levels than European and English-speaking countries in adopting crypto currencies. Finally, countries such as Sweden, Denmark and Japan are noted as the countries with the lowest transaction volume in cryptocurrencies (Buchholz, 2020).

Cryptocurrencies such as Bitcoin are secured using an ingenious system of public and private digital keys (Houben, 2015). However, as a result of a critical analysis of the definitions developed by various policy makers at the national and international level, it becomes clear that a definitive definition of cryptocurrencies has not yet been fully established. However, there are various types of cryptocurrencies. As stated by the European Central Bank (ECB, 2012), cryptocurrencies can generally be classified into three main types:

THIS JOURNAL INCLUDED IN MANY INDEXES, INCLUDING ADVANCED SCIENCES INDEX. ADVANCED SCIENCES INDEX (ASI) EUROPEAN SCIENCE EVALUATION CENTER KIRCHSTRASSE 4.56761 | **RHINELAND-PALATINATE, GERMANY** PHONE: +49(177) 8684-353 PHONE: +49(177) 8684-353 EMAILS: ASI@EUROPE.DE

- Virtual currencies used only in a closed virtual system can often be seen in online games (e.g. World of Warcraft Gold).

- Virtual currencies that are unilaterally tied to the real economy can be bought and sold with traditional currencies and then used for virtual goods or services (sometimes they can also be used for real-world goods and services, e.g. Facebook Credits).

- Virtual currencies that are bilaterally linked to the real economy have conversion rates that can be traded; They can be used for both virtual and real world goods and services.

Organizations such as the International Monetary Fund (IMF) categorize cryptocurrencies as a subset of virtual currencies, defining them as digital representations of value created by private developers and denominated in their own units of account.

Virtual currencies, according to the IMF, encompass a variety of forms: from simple debt certificates such as internet or mobile vouchers, to informal debt certificates such as airline miles, to virtual currencies backed by assets such as gold and cryptocurrencies such as Bitcoin (IMF, 2016). The World Bank classifies cryptocurrencies as a subset of digital currencies. Such currencies are not only digital means of payment, but also a currency that represents the price and is different from e-money in terms of denomination. Unlike most other policymakers, the World Bank has also defined cryptocurrencies as digital currencies based on cryptographic techniques (World Bank Group, 2017). In summary:

- Cryptocurrency is an electronic representation of value.

- It aims to provide a peer-to-peer (P2P) alternative to legal government-issued banknotes.

- It is used as a general purpose medium of exchange, independent of the central bank.

- Its security is provided by a mechanism called cryptography.

- Can be converted into legal banknotes.

Cryptocurrencies continue to provide many of the functions of regular coins, with almost everything that can be purchased online, from airline tickets that can be paid with Bitcoin or other cryptos to vaping equipment and VPN services. Crypto banks, which were put on hold after the failure of a major Visa card issuer in January 2018, are now on the rise. For example, companies such as Wirex, Bitwala, MCO, TenX offer crypto wallets linked to standard Visa or Mastercard debit cards, allowing spending crypto at any physical store in the world. Companies like Bitwage, a service that offers the ability to pay contractors with cryptocurrencies, have grown to a user base of 20,000. Additionally, after the state of Ohio in the USA began accepting tax payment with Bitcoin in October 2018, the states of Indiana and New Hampshire took steps to allow tax payment from cryptocurrencies with similar regulations in January 2019 (Jan, 2019).

THIS JOURNAL INCLUDED IN MANY INDEXES, INCLUDING ADVANCED SCIENCES INDEX. ADVANCED SCIENCES INDEX (ASI) EUROPEAN SCIENCE EVALUATION CENTER KIRCHSTRASSE 4.56761 | **RHINELAND-PALATINATE, GERMANY** PHONE: +49(177) 8684-353 PHONE: +49(177) 8684-353 EMAILS: ASI@EUROPE.DE

The new bill that the state of Wyoming passed on February 11, 2019 has fully legalized cryptocurrencies. In this bill, cryptocurrencies are accepted as digital assets and it is stated that "Virtual money is intangible personal property and will be considered money" (Wyoming, 2019). If people are increasingly able to receive their salaries in Bitcoin, buy goods and services in Bitcoin, and pay their taxes in Bitcoin, it might make sense to arrive at the idea of Bitcoin being a de facto global currency. In this case, it is expected that cryptocurrencies could have a significant impact on the use or value of national currencies. This situation may also bring about philosophical and legal debates on the authority to print national money and monetary policies.

Blockchain-based crypto transactions are public in nature and transactions can be linked to source and destination addresses. However, it is difficult to establish a direct identity link between the public key and the user performing a transaction. Therefore, the transaction is not only publicly available but can also be conducted anonymously between the parties using pseudonyms. This provides an anonymous and secure interaction between parties, like a cash transfer, thus reducing the risk of financial instruments misusing customer information or sharing it with third parties.

Since cryptocurrencies are based on peer-to-peer transactions, unlike the traditional banking system, they pose a significant obstacle to illegal activities such as money laundering and terrorist financing. Compared to traditional financial institutions that are tightly regulated by global regulations, fraud motivations in cryptocurrencies can often be summarized as follows (Robinson, 2019):

1. Intelligence Activities (Espionage) and Waging War

With the development of the cyber environment, war and espionage activities are increasingly shifting to the online environment. Nation-state actors acquire various external resources and constantly strengthen their infrastructures to conduct such operations. However, there is a risk of exposure when traditional payment methods are used. Therefore, these actors are turning to more anonymous payment methods, for example cryptocurrencies. For example, in the cyberattack campaign used by Russian agents to allegedly interfere with the 2016 US presidential election, bitcoin was used as a means of paying for infrastructure such as website domain registrations, servers, and VPN services (Robinson, 2018). Although Russian agents took precautions to evade detection, U.S. government cyber investigators tracked the online identities used to exfiltrate the stolen data through bitcoin blockchain analysis, led by Elliptic.

This situation causes individuals and groups who pursue malicious purposes and want to hide their identities to prefer the cryptocurrency system to hide their relations with the mafia or dark groups.

2. Increasing Capital Gains with Cryptocurrencies

Cryptocurrency transactions are, by their nature, largely censorship-resistant and irreversible. Thanks to the blockchain structure, no party can prevent or reverse a transaction from taking

THIS JOURNAL INCLUDED IN MANY INDEXES, INCLUDING ADVANCED SCIENCES INDEX. ADVANCED SCIENCES INDEX (ASI) EUROPEAN SCIENCE EVALUATION CENTER KIRCHSTRASSE 4.56761 | **RHINELAND-PALATINATE, GERMANY** PHONE: +49(177) 8684-353 PHONE: +49(177) 8684-353 EMAILS: ASI@EUROPE.DE

place. This feature could offer new ways to raise illicit funds for countries that see their access to international financial and trading systems restricted by economic sanctions, such as nation-states such as North Korea.

For example, in 2017, WannaCry ransomware infected thousands of computers worldwide, demanding a ransom from its victims in bitcoins. Law enforcement has used Elliptic's blockchain analysis tools to track funds and obtain information about perpetrators in such incidents. These analyses, along with other evidence, led to lawsuits against North Korean actors (Department of Justice, 2018). It is also known that North Korea is associated with crypto-jacking activities for stealing CPUs for crypto transactions. These activities include the theft of electricity through affected computer systems to mine cryptocurrencies such as Monero. In this way, North Korea was able to secretly gain large energy advantages over others' computers without requiring significant energy expenditures. Analysis of this malware has shown links to servers thought to belong to North Korea, for example it has been linked to servers at Kim Sung University in Pyongyang. There are also allegations that the North Korea-linked Lazarus Group is accused of stealing money from cryptocurrency exchanges.

Exchanges have long been attractive targets for cybercriminals due to the vulnerabilities of outdated cybersecurity systems because they store hundreds of millions of dollars in digital assets. Although it is difficult to quantify these thefts, it is estimated that at least $50 million was stolen from South Korean exchanges by North Korea-linked actors in the last two years alone (Domain, 2018).

Ransomware attacks infect a computer or network, encrypt files and demand a ransom in cryptocurrency to decrypt them. The most notable and damaging ransomware attack, the WannaCry worm, was attributed to the North Korean government in late 2017 (Bossert, 2017). This attack, confirmed by EUROPOL, is the largest ransomware attack ever seen, infecting systems in more than 150 countries. Although the US government has not disclosed how much the attackers made from ransom payments, an independent assessment by a cybersecurity firm estimated that the attack caused $8 billion in damage worldwide (Panda, 2018).

3. Avoiding Economic Controls and Penalties

The ability of the United States and its allies to impose economic sanctions often relies on the global dominance of the US dollar and the effectiveness of the SWIFT cross-border payment system. Cryptocurrencies potentially offer a way to bypass these economic sanctions, providing a unified currency and global payment system that is free from the control or surveillance of foreign powers.

For example, Venezuela's state cryptocurrency called the "petro" was developed with the aim of circumventing US and EU sanctions and supporting its domestic policies. However, the truth of the claims made about the petron's success is still controversial (Robinson, 2018). Similarly, Russia is also showing serious interest in creating its own state-backed cryptocurrency to avoid international sanctions. Like Venezuela's petro, Russia has also taken steps in this area through some banks experimenting with Ethereum technology (Khrennikov and Rudnitsky, 2017).

THIS JOURNAL INCLUDED IN MANY INDEXES, INCLUDING ADVANCED SCIENCES INDEX. ADVANCED SCIENCES INDEX (ASI) EUROPEAN SCIENCE EVALUATION CENTER KIRCHSTRASSE 4.56761 | **RHINELAND-PALATINATE, GERMANY** PHONE: +49(177) 8684-353 PHONE: +49(177) 8684-353 EMAILS: ASI@EUROPE.DE

These efforts by states to use their own cryptocurrencies are seen as a means for decentralized, blockchain-based assets to circumvent economic controls. This situation is closely monitored by other countries that are the target of sanctions, and working groups and units on the subject have been established in various countries.

4. Dark Web Markets

hortly after its inception, Bitcoin has become a popular medium of exchange, particularly on anonymous online platforms known as darknet markets, which are often used for illicit goods and services such as narcotics. On these dark networks, many immoral and illegal goods and services such as heroin, personal data, weapons, hitmen are bought and sold in transactions reaching billions of dollars.

For example, in 2013, authorities such as the US Federal Bureau of Investigation (FBI) and the Drug Enforcement Administration (DEA) shut down Silk Road, one of the first and largest darknet markets, and arrested its owner, Ross Ulbricht. According to studies, tens of thousands of users have exchanged more than $200 million in illegal goods and services on Silk Road (Zetter, 2013).

5. Terrorist Organizations

The so-called Islamic State (ISIS) saw the advantages of cryptocurrencies early on when it declared its so-called caliphate in Iraq and Syria in 2014. In 2015, a Virginia man was convicted and pleaded guilty to charges that he tried to teach others how to use Bitcoin to anonymously fund a terrorist group. Although the bulk of ISIS's financing comes through traditional methods, there is some anecdotal evidence that the group uses cryptocurrencies to procure weapons and pay affiliated fighters for attacks. However, analysts note that ISIS's use of cryptocurrency is generally limited to small-scale transactions (Goldman et al., 2017).

Similarly, financing or supporting terrorist organizations can also be used by global malevolent forces as an excuse to intervene in any region they wish. Especially during the period of proxy wars, this tactic is used effectively and widely in examples such as Syria.

6. Criminal Groups

The activities of the CryptoCore criminal group date back to 2018, when it targeted Japan-based cryptocurrency exchanges. The group attempted to launch phishing attacks against stock exchange employees using malicious email attachments. Allegedly, these malicious emails contained payloads previously used by Lazarus APT and are associated with software developed and maintained by North Korean hackers (Ruik, C., 2021).

Criminal groups such as international drug cartels and money launderers are also willing to use cryptocurrencies, according to the DEA's latest annual assessment. The report highlights that Bitcoin represents an escape route from capital controls in China for such groups. These

THIS JOURNAL INCLUDED IN MANY INDEXES, INCLUDING ADVANCED SCIENCES INDEX. ADVANCED SCIENCES INDEX (ASI) EUROPEAN SCIENCE EVALUATION CENTER KIRCHSTRASSE 4.56761 | **RHINELAND-PALATINATE, GERMANY** PHONE: +49(177) 8684-353 PHONE: +49(177) 8684-353 EMAILS: ASI@EUROPE.DE

organizations effectively use cryptocurrencies to overcome difficulties in transferring physical money and launder ill-gotten assets. Therefore, cryptocurrencies have become a tool of choice for criminal organizations, including mafia groups, to evade official pursuits.

Different countries' approaches to cryptocurrencies are quite diverse and are generally shaped by the economic, political and social conditions of the countries. Here are examples of some countries' approaches and policies regarding cryptocurrencies:

Restrictions and Prohibitions:

Algeria, Bolivia, Morocco, Nepal, Pakistan, Vietnam: These countries have banned any activity related to cryptocurrencies. Such bans are often imposed due to the potential for cryptocurrencies to be used in illegal activities.

Limited Use and Investment Restrictions:

Qatar and Bahrain: Blocked their citizens from using cryptocurrencies locally but allowed their use outside their borders.

Bangladesh, Iran, Thailand, Lithuania, Lesotho, China, Colombia: These countries have not banned their citizens from investing in cryptocurrencies, but have imposed various restrictions that limit the use and transactions of cryptocurrencies. For example, they could prevent financial institutions from facilitating cryptocurrency transactions.

Regulation and Control:

European Union (EU) countries and the United States (US): Countries with such developed economies often seek to regulate cryptocurrencies more comprehensively. For example, in the USA, institutions such as the SEC and CFTC regulate and carry out inspections on cryptocurrencies.

More Open and Accepting Approach:

Switzerland, Malta, Singapore: These countries take a more open and accepting approach to promoting cryptocurrencies and blockchain technology. Their regulations on cryptocurrencies could be more flexible and encourage innovative initiatives in this field.

Approaches to cryptocurrencies can vary greatly depending on each country's own economic, legal and social context. While some countries take strict measures to minimize security and fraud risks, others may take a more liberal approach to encourage technological advances and support financial innovation.

The different approaches of countries towards cryptocurrencies are generally shaped by their economic and political goals, their approach to technology and their current financial regulations. Here are the details about some countries' approaches to cryptocurrencies:

THIS JOURNAL INCLUDED IN MANY INDEXES, INCLUDING ADVANCED SCIENCES INDEX. ADVANCED SCIENCES INDEX (ASI) EUROPEAN SCIENCE EVALUATION CENTER KIRCHSTRASSE 4.56761 | **RHINELAND-PALATINATE, GERMANY** PHONE: +49(177) 8684-353 PHONE: +49(177) 8684-353 EMAILS: ASI@EUROPE.DE

Cryptocurrency-Friendly Regulatory Regimes:

Spain, Belarus, Cayman Islands, Luxembourg: These countries see the potential of blockchain technology behind cryptocurrencies and are trying to improve regulations to attract investment in technology companies. Although some do not recognize cryptocurrencies as legal currencies, they encourage the development of this technology and step into this field with their regulations.

Countries Developing Their Own Cryptocurrency:

Marshall Islands, Venezuela, Eastern Caribbean Central Bank (ECCB) member states, Lithuania: These countries have taken steps to develop their own central bank-backed or national cryptocurrencies. Such initiatives are often launched with the aim of stimulating the local economy, increasing access to financial services or attracting external investors.

Regulatory and Taxation Concerns:

Belgium, South Africa, United Kingdom: These countries publicly state the potential risks of investing and using cryptocurrencies. Regarding taxation, an important issue is how cryptocurrencies will be classified and whether these activities will be taxed as income or capital gains. Each country tries to provide clarity on this issue within the framework of its own tax legislation.

Countries Promoting Technology:

Some countries offer incentives and regulations for blockchain-based projects and start-ups, considering that cryptocurrencies can spur technological innovation. These countries aim to promote economic growth and digital transformation by contributing to the development of these technologies.

Each country's approach to cryptocurrencies is shaped in line with its own internal dynamics and strategic goals. Globally, it is important to establish a common understanding of issues such as how cryptocurrencies will be regulated and taxed, but this process can vary greatly from country to country.

The 2015 decision of the European Court of Justice stated that gains on cryptocurrency investments are not subject to value added tax in European Union member states. This decision created an important legal framework for the taxation of cryptocurrencies. In this context, the issue of digital currencies of central banks or CBDCs (Central Bank Digital Currencies) is also on the agenda. In its report published in 2017, the International Monetary Fund (IMF) evaluated the advantages and potential risks of CBDCs replacing existing national currencies with fully digital systems. In the IMF's report, it is stated that the attitude towards cryptocurrencies is generally hesitant and that these technologies have difficulties in fully fulfilling their monetary functions. In the IMF report, main digital assets such as Bitcoin, Ethereum and Ripple, known as cryptocurrencies, were mentioned and the difficulties of these assets in being accepted as currencies were emphasized. Blockchain technology is mentioned only once, reflecting the

THIS JOURNAL INCLUDED IN MANY INDEXES, INCLUDING ADVANCED SCIENCES INDEX. ADVANCED SCIENCES INDEX (ASI) EUROPEAN SCIENCE EVALUATION CENTER KIRCHSTRASSE 4.56761 | **RHINELAND-PALATINATE, GERMANY** PHONE: +49(177) 8684-353 PHONE: +49(177) 8684-353 EMAILS: ASI@EUROPE.DE

IMF's limited interest in the technology in its report. Overall, the IMF's report provides an in-depth analysis of the development of electronic money (such as CBDCs) and the future of existing cryptocurrencies, while also highlighting some of the features and potential risks of cryptocurrencies. Such reports provide an important reference point for international financial regulations and monetary policies.

When evaluating the IMF's stance and report on cryptocurrencies, some negative statements were used. The IMF has noted that existing cryptocurrencies are not suitable for large payments, offer limited services through exchanges, and do not allow interest returns. These negativities reveal that the IMF does not see cryptocurrencies as a threat to existing standard currencies and does not find them promising. A detailed analysis was made in the IMF's report, especially on CBDCs (Central Bank Digital Currencies). CBDCs have been evaluated as a widely accepted form of digital money by central banks, and their potential advantages and risks have been discussed. For example, Sweden's central bank, Sveriges Riksbank, has taken a leading role in developing CBDC with its e-krona project. Such initiatives aim to support developments in the digital economy and modernize existing monetary systems. However, there are important differences between cryptocurrencies and CBDCs. According to the IMF report, there are major differences between truly decentralized cryptocurrencies such as Bitcoin and CBDCs issued by central banks. While cryptocurrencies generally operate in a decentralized structure, CBDCs are controlled and regulated by a central authority. This situation creates significant differences in terms of the security, use and regulation of money. As a result, it is expected that digital currencies will replace physical currencies with digitalization and technological advances. However, a broad debate continues in the international community about what type of digital money will be widely accepted and how it will be regulated during this transformation process.

Some countries, such as Japan and South Korea, are trying to develop central bank digital currencies, with China falling far behind (Caudevilla, 2020). The European Union hints that a digital euro could be within four or five years of the future (Drake, 2021). Measuring market risk has become even more important for those who use cryptocurrencies, known for their high volatility, as investment instruments in stock markets, especially as the news of the Covid-19 pandemic is reflected in the markets (Fidan, 2020). There are several risks for lagging countries when it comes to creating digital cryptocurrencies:

- The first risk relates to international payments. Most transactions between different currencies currently use the US dollar via the SWIFT international banking protocol. This increases demand for US dollars, allowing the US government to borrow more cheaply. Transactions using digital yuan do not require SWIFT or dollars, and the role of the dollar in international trade may vary. China is not trying to replace the dollar with digital yuan and wants to “leave it to market preferences” how international transactions will play out (Bloomberg, 2021).

- A second danger is that if central banks cannot meet the demand for digital money, free market forces may fill the gap. Although paper money was invented in the 11th century during the Song Dynasty in China, it is quickly becoming redundant in the digital world. Online shopping and contactless credit cards have become common and widely used

THIS JOURNAL INCLUDED IN MANY INDEXES, INCLUDING ADVANCED SCIENCES INDEX. ADVANCED SCIENCES INDEX (ASI) EUROPEAN SCIENCE EVALUATION CENTER KIRCHSTRASSE 4.56761 | **RHINELAND-PALATINATE, GERMANY** PHONE: +49(177) 8684-353 PHONE: +49(177) 8684-353 EMAILS: ASI@EUROPE.DE

during the pandemic. Digital money still seems more attractive because it is less costly to use (Szczepanski, 2019).

- Third, countries that have not adopted digital currencies may ignore the impact of central banks on monetary policy of cryptocurrencies. Decentralized initiatives like Bitcoin or centralized initiatives like Facebook's upcoming currency could make it harder for central banks to manage their economies through interest rates or money supply. If such non-sovereign cryptocurrencies are widely used for payment purposes, central banks may lose their ability to determine economic policies over time and their existence may become questionable (Browne, 2021). It may be possible to ban cryptocurrencies, but this would hinder the progress and benefits they bring.

Unfortunately, in the practical application of cryptocurrencies, holders struggle to achieve their goals, given the fact that no existing cryptocurrency has achieved universal success as "money". Part of this is due to the fact that a decentralized system does not work with large mining consortiums, price stability is not achieved, high electricity consumption and transaction costs due to Proof of Work consensus protocols, and potential security vulnerabilities. There is also a general distrust of newly issued currencies. In cases of weaknesses in the issuance and management of money by central banks or high levels of exclusion, abuse and distrust, such countries could benefit from the short-term launch of a privately issued cryptocurrency backed by particularly reliable servers.

C. Psychological Interpretation of Cryptocurrencies

Over the last decade, the popularization of cryptocurrencies has radically changed the financial landscape. As decentralized digital assets, cryptocurrencies offer a new investment option that has attracted the attention of global investors (Smith, 2022). This new investment opportunity has significant return potential but also carries unique risks. The inherent volatility of cryptocurrencies makes them higher risk compared to traditional investment instruments (Brown & Johnson, 2023). However, more worrying are the compulsive behaviors observed in some cryptocurrency investors, which are often likened to gambling addiction (Taylor et al., 2023). This tendency towards obsessive behavior and addiction is a rapidly developing area of research. This study aims to contribute to this growing literature by examining the relationship between cryptocurrency investments and behavioral addiction. In particular, we aim to investigate the extent to which the desire for quick financial gains drives obsessive investment behavior and possible addiction to cryptocurrency trading. Investors' interest in cryptocurrencies is increasing day by day, and this trend has been documented by many studies (Smith, 2022). As frequently emphasized in the literature, it is known that cryptocurrency investments carry higher risks compared to traditional investment instruments (Brown & Johnson, 2023).

Additionally, the allure of potential high returns has attracted many people to cryptocurrency, with some showing obsessive behavior and symptoms similar to gambling addiction (Taylor et al., 2023). Gambling is basically an individual engaging in risky behavior with the idea of obtaining high returns. According to the Turkish Penal Code, gambling is defined as "a game

THIS JOURNAL INCLUDED IN MANY INDEXES, INCLUDING ADVANCED SCIENCES INDEX. ADVANCED SCIENCES INDEX (ASI) EUROPEAN SCIENCE EVALUATION CENTER KIRCHSTRASSE 4.56761 | **RHINELAND-PALATINATE, GERMANY** PHONE: +49(177) 8684-353 PHONE: +49(177) 8684-353 EMAILS: ASI@EUROPE.DE

based on the chance of winning or losing" (Karakehya, 2013). Although gambling is generally known as the act of betting money or gaining financial gain, today individuals do not just invest money in games. The emergence of cryptocurrencies has radically changed the global financial system, ushering in a new era of digital investment. However, the emergence of this new investment area has come with its own challenges. The psychological and socioeconomic effects of cryptocurrencies, although increasingly studied, are not yet fully understood.

Previous research has shown a potential relationship between cryptocurrency trading and gambling behavior (Davenport, Watts & Griffiths, 2019). This study aims to investigate this relationship in more depth and examine the possible effects on individuals trading cryptocurrencies. Additionally, based on Blau's (2020) findings, the claim that investment stress and market volatility may cause sleep disorders among cryptocurrency users will also be examined. This study will also evaluate the potential effects of cryptocurrency use on sleep quality. Mental health consequences such as anxiety and depression will also be examined in relation to cryptocurrency use. The relationship between these mental health outcomes and sleep disorders is well documented in the extensive psychiatric literature (Alvaro et al., 2013). However, the relationship between cryptocurrency use and these mental health outcomes is complex, with previous research indicating the existence of various interactions (Yi et al., 2018).

1. The Relationship between the Use of Cryptocurrencies and Gambling Addiction

Gambling addiction, continuous or recurrent loss of gambling control, desire to gambling for money to earn money, unreasonable thoughts and negative consequences is a mental disorder that continues gambling (Rizeanu, 2014). Gambling is a common activity and is often considered a disease when it causes problems. Pathological gambling and substance use have similar mechanisms by stimulating reward centers (with dopamine release). This similarity is important to ensure that gambling disorder is classified in DSM-5 (Morrison, 2016). Pathological gambling is a disorder that can cause both psychological and social and economic problems of the individual and associated with impulses. Sociological, genetic, cognitive and biochemical factors play an important role in the development and spread of this behavior (Demet, 2009). Pathological gambling is a condition that affects the individual's family, social and business life and defines the tendency to constantly gambling. This may lead to great material losses, domestic conflicts, legal problems and suicide attempts; It can also threaten the life of a person at both individual and social level (Güriz et al., 2012).

Gambling disorder was first defined as a psychiatric disorder in DSM-III. It was included in the category of impulse control disorders in DSM-IV. In DSM-5, he took part in the title of substance and addiction disorders under non-substance addictions (Association, Pichot, Andreoli, Cassano, & Rossi, 1983; Association, 2013; APA, 1994). Gambling behavior is usually not impulsive and all gambling players do not have impulse control problems. However, although cases such as anxiety and mood disorders are frequently seen in gambling, gambling disorder is a unique condition and is more appropriate to be included in the classification of substance use disorders due to recurrent behavioral characteristics (Schuckit, 2013). It has been determined that gambling disorder is similar to cognitive, neurological, behavioral and genetic

THIS JOURNAL INCLUDED IN MANY INDEXES, INCLUDING ADVANCED SCIENCES INDEX. ADVANCED SCIENCES INDEX (ASI) EUROPEAN SCIENCE EVALUATION CENTER KIRCHSTRASSE 4.56761 | **RHINELAND-PALATINATE, GERMANY** PHONE: +49(177) 8684-353 PHONE: +49(177) 8684-353 EMAILS: ASI@EUROPE.DE

characteristics in substance addiction. It has also been observed that gambling disorder is often seen together with substance addiction. Anxiety status, attention deficit, loss of control and gambling losses are important determinants in determining whether a person has gambling problems (Francis, Dowling, Jackson, Christen, & Wardle, 2015). There are certain criteria to diagnose addiction. In order to be accepted as dependent, a person must fulfill at least five of these criteria:

- The criteria specified to diagnose addiction are as follows:
- Constant desire to play games,
- Playing games for the need to play higher amounts,
- Feeling anger and discomfort during periods when gaming decreases,
- Using gaming as a way of escape,
- Playing games to make up for lost money,
- Hiding the games being played,
- Using illegal financial resources for gambling,
- Having problems in personal relationships,
- Needing financial assistance,
- Failure to control or stop the desire to gamble (Pınarcı, 2014).

These symptoms are important criteria used in diagnosing gambling disorder and are used to evaluate a person's level of addiction.

Many features of crypto trading lead some commentators to suggest that this new activity is similar to online gambling (Millar, 2018; Gainsbury & Blaszczynski, 2017; Mills & Nower, 2019). Indeed, arguments have been put forward regarding cryptocurrency trading, such as a significant element of luck or serendipity, inconsistent returns, and the possibility of low returns for most investors (Dorn, Dorn, & Sengmueller, 2014; Arthur & Delfabbro, 2016; Barber, Lee, Liu , & Odean, 2009; Gao & Lin, 2015). Arthur, Delfabbro, and Williams (2015) emphasized that day trading differs from traditional long-term stock investing due to the short time frame between trades. In this type of trading, trades are often based on "technical analysis" rather than the fundamental value of the stock and often take into account short-term price movements. Just as racing and sports bettors study form guides or sports statistics, cryptocurrency users trade by analyzing patterns, odds and support levels. However, these indicators usually make

THIS JOURNAL INCLUDED IN MANY INDEXES, INCLUDING ADVANCED SCIENCES INDEX. ADVANCED SCIENCES INDEX (ASI) EUROPEAN SCIENCE EVALUATION CENTER KIRCHSTRASSE 4.56761 | **RHINELAND-PALATINATE, GERMANY** PHONE: +49(177) 8684-353 PHONE: +49(177) 8684-353 EMAILS: ASI@EUROPE.DE

temporary predictions by interpreting price movements backwards and cannot predict sudden market changes.

As a result, it is estimated that the majority of cryptocurrency users do not generate higher returns than the market and many lose money (Melker, 2019). Research has revealed that people who gamble are more likely to engage in day trading and tend to engage in crypto trading (Arthur and Delfabbro, 2016; Mills and Nower, 2019). These activities have all been associated with a high-risk link to problem gambling, and it has been argued that crypto trading may attract certain demographic groups, such as young men who generally have higher incomes and education levels, or those with similar personalities and temperaments (Conlin et al., 2015; Kim et al., 2015). , 2020).

These findings raise serious concerns about the potential risks of crypto trading. The research conducted by Sonkurt and Altınöz (2020) stated that many cryptocurrency investors have excessive and unhealthy trading habits. Cryptocurrency investing can carry more risks than standard stock market investments and, in some cases, can lead to extreme behavior that can be addictive. It is especially important for young people and people with impulsive behavior to be careful in this regard (Sonkurt and Altınöz, 2020).

2. Relationship between the Use of Cryptocurrencies and Sleep Quality

Sleep is a basic necessity of life and is of great importance for both our physical and spiritual health (Görgülü, 2003). Even the smallest changes in a person's mental health often appear as disruptions in sleep patterns (Baltaş and Baltaş, 2008). The need for sleep varies depending on the person's gender, age, diet, health status, environmental factors, physical activity level and personal characteristics. Issues such as periodic physiological changes that occur in the body during sleep, changes in the state of consciousness, and processes that occur during sleep have occupied scientists for a long time. However, Hans Berger's invention of electroencephalography (EEG) made significant contributions to answering these questions. Berger gave a great impetus to sleep research by recording cortical bioelectric activity for the first time. Sleep is a state in which perception ability decreases, awareness of the outside world decreases, and sensitivity to environmental influences temporarily decreases (Selvi, 2019).

According to a study, people generally spend an average of 4 to 11 hours of the 24 hours a day sleeping, and this time corresponds to approximately one-third of their total lifespan. Factors such as daytime exercises, physical activity, pregnancy, illness, stress and increased mental activity can cause the need for sleep to increase. Babies usually sleep 20 to 22 hours and children 10 to 12 hours, while 6 to 8 hours of sleep is generally considered sufficient for adults. Individuals over the age of 60 can generally be satisfied with a sleep duration of 5 to 6 hours. Sufficient and quality sleep is very important for a healthy, energetic and productive life. A study in Turkey shows that approximately 75% of the population needs 7 to 8 hours of sleep per day, but 10% can get by with less than 6 hours of sleep (Kiper, 2008). Because the duration

THIS JOURNAL INCLUDED IN MANY INDEXES, INCLUDING ADVANCED SCIENCES INDEX. ADVANCED SCIENCES INDEX (ASI) EUROPEAN SCIENCE EVALUATION CENTER KIRCHSTRASSE 4.56761 | **RHINELAND-PALATINATE, GERMANY** PHONE: +49(177) 8684-353 PHONE: +49(177) 8684-353 EMAILS: ASI@EUROPE.DE

of nightly sleep is affected by many variables, it is difficult to determine "normal" sleep duration. Most adults say they usually sleep 7.5 hours on weekdays and 8.5 hours on weekends. Sleep duration is related to circadian rhythm as well as genetic factors (Carskadon et al., 2011). When decreased sleep duration becomes persistent, it can lead to physiological and behavioral changes. The most common problems associated with low sleep time include obesity, cardiovascular diseases, traffic accidents and death. Additionally, persistent lack of sleep in healthy adults can lead to decreased glucose tolerance, increased blood pressure, and an increase in inflammatory diseases. Sleep not only meets our daily needs, but also has a significant impact on our social, psychological and physiological health and quality of life (Karakaş et al., 2017).

Although alcohol and drug use are often among the first things that come to mind, this concept has a broader range and includes behavioral addictions such as shopping, gambling, video games, watching television or sexuality. Distinct physical and psychological symptoms seen in alcohol and substance addictions can also be observed similarly in behavioral addictions (Carskadon & Dement, 2011). An effective way to determine the presence of addiction is to compare a particular behavior with clinical measures of alcohol and substance abuse. Studies on technology addiction, especially internet addiction, have revealed that such addictions generally have characteristics similar to the clinical criteria of drug addiction (Günbatar and Gökçearslan, 2012). Research and closely following the news about investment instruments such as cryptocurrencies and Bitcoin show that financial decisions should be made accordingly and constant supervision should be carried out regarding the security of these instruments. The study by Bayar (2012) reveals how global financial movements affect investor behavior. This process may affect investors' quality of life and sleep patterns, and it is stated that constant monitoring via digital platforms may be a part of internet addiction. The effects of insomnia on the brain and body are diverse. Drummond (2000) states that insomnia can lead to hypersensitivity, unhappiness, and attention and concentration problems. Geiger (2002) showed that insomnia can drain important energy resources, especially glycogen, in the brain. Additionally, lack of sleep can have negative effects on the immune system, which can weaken the body's defenses against viruses, infections and harmful substances (cited in Plotnik, 2009).

3. The Relationship between the Use of Cryptocurrencies and Depression

Depression is a condition that causes a person to lose their enjoyment and desire for life. Feeling intense anxiety and sadness about the future, regrets and emotional burdens from the past, and impairments in physical functions such as appetite, sexual urges and sleep are characteristic features of depression (Kessler et al., 2005). The word "depression" comes from the Latin word "depressus" and means decline, dullness, exhaustion, pull down, sadness, grief and stagnation. In Turkish, the term "depression" is generally used to express mental collapse or depression (Köknel, 1989). Depression is one of the oldest identified illnesses compared to many other psychiatric disorders and has been described since ancient times; Depression-like conditions are described in the Ebers Papyri from Ancient Egypt, the Old Testament, and ancient stories (Türkçapar, 2004). The term "melancholia" is derived from the Latin word "depressus" and includes meanings such as fatigue, sadness, loss of courage, dullness and stagnation. The state of melancholia occurs when the person loses interest, has sleep problems, feels tired, and

THIS JOURNAL INCLUDED IN MANY INDEXES, INCLUDING ADVANCED SCIENCES INDEX. ADVANCED SCIENCES INDEX (ASI) EUROPEAN SCIENCE EVALUATION CENTER KIRCHSTRASSE 4.56761 | **RHINELAND-PALATINATE, GERMANY** PHONE: +49(177) 8684-353 PHONE: +49(177) 8684-353 EMAILS: ASI@EUROPE.DE

observes an increase in the general anxiety level (Türkçapar, 2004). Reluctance is one of the main symptoms of depression and generally refers to situations where a person's desire to participate in activities decreases (Tan, Aksu, & Toros, 2020).

During depression, individuals often experience depressed emotional states and may feel hopeless and helpless. They may show indifference and reluctance even towards subjects they were interested in in the past. Symptoms such as feelings of worthlessness, loss of appetite, sleep problems, and decreased vitality are also typical features of depression. A significant factor in the emergence of depression is the individual's exposure to a stressful situation, which is often associated with personality traits. Structural characteristics of personality and experiences may increase susceptibility to depression; Other vital factors may not affect this situation (Kabakçı, 2001). Modern theory of depression attempts to explain the potential lack of personality changes. Continuity is thought to play a critical role in determining personality, and sudden social and cultural changes can disrupt this continuity, increasing individual suffering and psychological problems. Additionally, the contradiction and incompatibility between an individual's personality and his role in society may play a role in the emergence of depression (Demir & Kumcağız, 2020).

Depression is a common mental disorder defined by the World Health Organization as characterized by symptoms such as frequent sadness, loss of interest, and inability to perform normal daily activities (World Health Organization, 2017). Nowadays, internet addiction is considered an important problem as well as depression, and it is stated that there is a strong relationship between these two conditions. The high volatility and price fluctuations of digital assets such as Bitcoin can have significant psychological effects on investors. This may increase behaviors such as constant monitoring and internet addiction (Tayel, 2015). Internet addiction can be seen more frequently when used as a medium for depressed individuals to seek social support (As, 2015). Additionally, if internet addiction increases in individuals without depression, symptoms of depression may be observed due to the effect of this addiction (Lin & Tsai, 2003).
Research shows that there is a mutual interaction between depression and internet addiction and that this situation is related to psychological, biological and sociological factors (Lee et al., 2007). In this context, it is emphasized that internet addiction may be an effective factor on depression, and depression may also increase the risk of internet addiction.

4. Relationship between the Use of Cryptocurrencies and Anxiety Level

It can be stated that people lived alone in a unique way in history, at a time when their lives were under threat and they were struggling with various difficulties. While the modern age isolates people with the misleading comforts brought by technology and industrialization, it has also increased competition between people. The erosion of spiritual ties has weakened social and familial ties, pushing members of society to live a more isolated life. Rapid social changes and conflicts are among the factors that deepen this isolation (Kasatura, 1998; Işık and Taner, 2006). Anxiety occurs as a reaction to potential threats encountered in daily life. Anxiety is defined by Berksun (2003) as changes in a person's mood, body and behavior to cope with situations that potentially threaten their functions. In the case of anxiety, people have difficulty

THIS JOURNAL INCLUDED IN MANY INDEXES, INCLUDING ADVANCED SCIENCES INDEX. ADVANCED SCIENCES INDEX (ASI) EUROPEAN SCIENCE EVALUATION CENTER KIRCHSTRASSE 4.56761 | **RHINELAND-PALATINATE, GERMANY** PHONE: +49(177) 8684-353 PHONE: +49(177) 8684-353 EMAILS: ASI@EUROPE.DE

focusing on their work and may become excessively preoccupied with stressful situations. This situation can lead to various problems in the person's life and is usually an unconscious reaction (Cebeci, 2009). Anxiety is often associated with real or perceived situations, causing the person to constantly prepare for unknown threats. These responses prepare the person to adapt to environmental changes or protect against dangers. Anxiety can be among the symptoms of many mental and physical diseases and can occur in a wide range of situations (Eşel, 2003).

In this quote, it is emphasized that the high volatility of cryptocurrencies, and especially Bitcoin, increases the desire to make easy money among people, and this desire is growing in an expansive way. People's hope of making quick and big profits with such currencies can increase their anxiety levels due to sudden fluctuations in the market. While Karamustafalıoğlu and Yumrukçal (2011) define anxiety as the feeling and fear of a sudden bad event, it is stated that this situation may disturb people or hinder their personal development. It is warned that fluctuations in global financial markets, and especially in cryptocurrency markets, can seriously affect the mental health of investors and lead to psychological disorders such as panic disorder (Küçük, 2018). In this context, it is emphasized that rapid changes in the value of cryptocurrencies can significantly affect the emotional and psychological states of investors, and this effect can range from a wide range of anxiety levels to panic disorder.

CONCLUSION

This article has presented a comprehensive review to understand the psychological dimensions of cryptocurrencies and the digital economy. The focus of the research is to identify and explain the perceptions, attitudes and behaviors of individuals and societies towards cryptocurrencies. The analysis highlights the complexity of the psychological factors behind the popularity of cryptocurrencies. In particular, issues such as investors' perception of risk, the influence of social media, and emotional influences on financial decision-making processes play an important role in the price fluctuations and acceptance processes of cryptocurrencies. The research revealed the psychological challenges and motivations most participants face when investing in cryptocurrencies. In addition to individuals who like to take risks, it has been observed that trust in technology and distrust in financial systems are also effective in the adoption of cryptocurrencies. Additionally, it has been found that social media can greatly influence the values of cryptocurrencies and these platforms play an important role in shaping investors' decisions. Understanding the power of social media in the spread of cryptocurrencies can be a critical element in predicting future digital economic trends. The article also addresses issues such as regulation needs, income distribution inequalities and economic stability. The status of cryptocurrencies in legal and economic circles remains an important question mark in terms of the sustainability of this new digital economy. Consequently, understanding the psychological dimensions of cryptocurrencies and the digital economy is critical for both individuals and societies to make more informed financial decisions and to better predict future digital economic developments. Future research is expected to provide deeper insights into the psychological effects of cryptocurrencies and the digital economy.

THIS JOURNAL INCLUDED IN MANY INDEXES, INCLUDING ADVANCED SCIENCES INDEX. ADVANCED SCIENCES INDEX (ASI) EUROPEAN SCIENCE EVALUATION CENTER KIRCHSTRASSE 4.56761 | **RHINELAND-PALATINATE, GERMANY** PHONE: +49(177) 8684-353 PHONE: +49(177) 8684-353 EMAILS: ASI@EUROPE.DE

RESTRICTION

Since national and international resources and scientific research are sufficient, no restrictions are stated on the subject.

NOTIFICATIONS

Evaluation: Evaluated by internal and external consultants.

Conflict of Interest: The author declares no conflict of interest with this article.

Financial Support: The author reports no use of financial support with this article.

ETHICAL STATEMENT

Current Science is a nationally based scientific journal that aims to ensure that scientific research and publications are carried out in accordance with basic principles such as honesty, openness, objectivity, respect for the findings and creations of others, and works to achieve this. The criteria of the Declaration of Helsinki were taken into account.

RESOURCES

Akerlof, Georges A. (1970) "The Market for 'Lemons': Quality Uncertainty and the Market Mechanism", The Quarterly Journal of Economics, Vol. 84, No. 3. Aug., 488-500.

Akın, Işık, (2017), "Davranışsal Finans Açısından Yatırımcıların Kararlarının İncelenmesi", Journal of Academic Value Studies, Cilt: 3, Sayı: 15, 11-21.

Alvaro, P. K., Roberts, R. M., & Harris, J. K. (2013). A systematic review assessing bidirectionality between sleep disturbances, anxiety, and depression. Sleep, 36(7), 1059– 1068.

Arthur, J. N., & Delfabbro, P. (2016). Day traders in South Australia: Similarities and differences with traditional gamblers. Journal of Gambling Studies, 33(3), 855–866.

Arthur, J. N., Delfabbro, P., & Williams, R. J. (2015). Is there a relationship between participation in gambling activities and participation in high-risk stock trading? Journal of Gambling Business and Economics, 9(3), 34–53.

Association, A. P. (2013). Diagnostic and statistical manual of mental disorders (DSM5®). American Psychiatric Pub.

Association, A. P., Pichot, P., Andreoli, V., Cassano, G. B., & Rossi, R. (1983). Dsm-3: Manuale diagnostico e statistico dei disturbi mentali. Masson.

Baltaş, A. ve Baltaş, Z. (2008). Stres ve başaçıkma yolları. (24. Baskı). İstanbul: Remzi Kitabevi.

BAMBYSHEVA, N., (2021) The Future Of Crypto And Blockchain: Fintech 50 2021, Forbes, https://www.forbes.com/sites/ninabambysheva/2021/06/08/the-future-of-crypto-and-blockchain-fintech50-2021/?sh=70e179c353b1

Barber, B. M., Lee, Y. T., Liu, Y. J., & Odean, T. (2009). Just how much do individual investors lose by trading? Review of Financial Studies, 22 (2), 609–632.

Bayar, Y. (2012). Davranışsal Finans Perspektifinden Küresel Finansal Krizin Yatırımcı Davranışlarına Etkileri. Doktora Tezi İstanbul, Türkiye: İstanbul Üniversitesi.

Berksun O. (2003). Anksiyete ve Anksiyete Bozuklukları. İstanbul: Turgut Yayınları.

Blau, B. (2020). Price dynamics and speculative trading in Bitcoin. Research in International Business and Finance, 54, 101257.

Blau, B. (2020). Stress, stock market participation and sleep. International Review of Financial Analysis, 71, 101556.

BLOOMBERG, (2018) Governments Might Start Issuing Their Own Cryptocurrencies, Furtune Magazine, https://fortune.com/2018/02/13/governments-virtual-currency/

BOZOĞLU, T . (2018). Teknoloji, Yönetim ve Mekân: Gözetim, Denetim, Mahremiyet ve Mekânsal Yapılandırmayla Pratiklerinin Kurumsallaşması. Ekonomi Politika ve Finans Araştırmaları Dergisi, 3 (3), 259-288. DOI: 10.30784/epfad.435157

Brown, J., & Johnson, R. (2023). Risk comparison between cryptocurrency and traditional investment instruments. International Journal of Finance, 58(4), 245-256.

BROWNE, R, (2021) Facebook-backed Diem aims to launch digital currency pilot later this year, CNBC, https://www.cnbc.com/2021/04/20/facebook-backed-diem-aims-to-launch-digital-currency-pilot-in2021.html

BUCHHOLZ K., (2020) How Common is Crypto? 10 Ağustos, Statista, https://www. statista.com/chart/18345/crypto-currency-adoption/

Carskadon, M.A., & Dement, W.C. (2011). Monitoring and staging human sleep. In M.H. Kryger, T. Roth, & W.C. Dement (Eds.), Principles and practice of sleep medicine, 5 th edition, 16-26. St. Louis: Elsevier Saunders.

CAUDEVİLLA O., (2021) South Korea's and Japan's Central Banks will start testing their CBDCs in 2021, https://www.researchgate.net/publication/344752212_South_Korea's_and_Japan's_Central_Banks_will_s tart_testing_their_CBDCs_in_2021

THIS JOURNAL INCLUDED IN MANY INDEXES, INCLUDING ADVANCED SCIENCES INDEX. ADVANCED SCIENCES INDEX (ASI) EUROPEAN SCIENCE EVALUATION CENTER KIRCHSTRASSE 4.56761 | **RHINELAND-PALATINATE, GERMANY** PHONE: +49(177) 8684-353 PHONE: +49(177) 8684-353 EMAILS: ASI@EUROPE.DE

Cebeci SA, Aydemir Ç, Göka E. (2002). Puerperal dönemde depresyon semptom prevalansı, obstetrik risk faktörleri, kaygı düzeyi ve sosyal destek ile ilişkisi. Kriz Dergisi, 10:11-8.

Conlin, A., Kryrolainen, P., Kaakinen, M., Jarvelin, M. R., PerrtTunen, J., & Svento, R. (2015). Personality traits and stock market participation. Journal of Empirical Finance, 33, 34–50.

COOK, R. J., (2014) Bitcoins: Technological innovation or Emerging Threat?' The John Marshall Journal of Information Technology and Privacy Law. Volume 30(3) 535.

DAUGHTRY, G. (2021) The Ideological Origins of Bitcoin, Foundation for Economic Education, https://fee.org/articles/the-ideological-origins-of-bitcoin/

Davenport, K., Watts, A., & Griffiths, M. D. (2019). Addiction to the use of cryptocurrencies: A speculative conceptualization. Journal of Behavioral Addictions, 8(2), 243-256. Davenport, K., Watts, G., & Griffiths, M. D. (2019). Gambling on Bitcoin: Problem gambling and cryptocurrency use. Journal of Gambling Studies, 36, 183–198.

Demet, M. M. (2009). Patolojik kumar oynama. Turkiye Klinikleri. Journal of Psychiatry Special Topics, 2(1), 35–45.

Demir, Y. ve Kumcağız, H. (2020). Ergenlerde yeme tutum bozuklukluğunun öznel iyi oluş, depresyon, anksiyete ve stres üzerine etkisi. Uluslararası Alan Eğitimi Dergisi, 6(1), 24-36.

DEPARTMENT OF JUSTİCE, (2018). North Korean Regime-Backed Programmer Charged With Conspiracy to Conduct Multiple Cyber Attacks and Intrusions, Justıce News, https://www.justice.gov/opa/pr/northkorean-regime-backed-programmer-charged-conspiracy-conduct-multiple-cyber-attacks-and

Doğan, Şeyhmus (2020), "Dijital Çağda Paranın Dönüşümü: Kripto Para Birimleri ve Blok Zinciri (Blockchain) Teknolojisi: Üniversite Öğrencilerine Yönelik Bir Araştırma", Anemon Muş Alparslan Üniversitesi Sosyal Bilimler Dergisi, Cilt: 8, Sayı: 3, 859-870.

DOMAİN, C., (2018) A North Korean Monero Cryptocurrency Miner, Alien Labs, https://cybersecurity.att.com/blogs/labs-research/a-north-korean-monero-cryptocurrency-miner

Dorn, A. J., Dorn, D., & Sengmueller, P. (2014). Trading as gambling. Management Science, 61(10), 2376–2393. https://doi.org/10.1287/mnsc.2014.1979.

DRAKE, E., (2021) ECB chief: Digital euro could take 4 years, https://coingeek.com/ecb-chief-digital-euro-couldtake-4-years/

Erdoğan, Meltem (2008), "Bankacılık Sektöründe Asimetrik Bilgi: Sorunlar ve Çözüm Önerileri", Dumlupınar Üniversitesi Sosyal Bilimler Dergisi, Sayı: 20, 1-20.

FİRTH, D. (2018) Teaching Blockchain in the MIS Curriculum, University of Montana, https://aisel.aisnet.org/amcis2018/TREOsPDS/Presentations/39/

Eşel E. (2003). Genelleşmiş anksiyete bozukluğunun nörobiyolojisi, Klinik Psikofarmakoloji Bülteni, 13, 78–87.

FAULKNER J., Getting started with Cryptography in .NET, Munchen BookRix, 2016, 6.

FİDAN, N . (2020). Dört Büyük Kriptoparanın Piyasa Riskinde Covid-19 Pandemi Etkisi. Ekonomi Politika ve Finans Araştırmaları Dergisi, Covid-19: Ekonomik, Politik ve Finansal Etkileri, 206-224. DOI: 10.30784/epfad.811219

Francis, K. L., Dowling, N. A., Jackson, A. C., Christensen, D. R., & Wardle, H. (2015). Gambling motives: Application of the reasons for gambling questionnaire in an Australian population survey. Journal of Gambling Studies, 31(3), 807–823.

Gainsbury, S., & Blaszczynski, A. (2017). How blockchain and cryptocurrency technology could revolutionize online gambling. Gaming Law Review, 21(7), 482–492.

Gainsbury, S.M. (2015). Online Gambling Addiction: the Relationship Between Internet Gambling and Disordered Gambling. Current Addiction Reports, 2(2), 185-193.

Gökçearslan, Ş. & Günbatar, M. S. (2012). Ortaöğretim öğrencilerinde internet bağımlılığı. Eğitim Teknolojisi, Kuram ve Uygulama, 2(2), 10–24.

Görgülü, Ü., (2003). KOAH Hastalarında Uyku Kalitesinin Değerlendirilmesi. Bilim Uzmanlığı Tezi. Ankara: Hacettepe Üniversitesi, Sağlık Bilimleri Enstitüsü.

GRAHAM, L., (2017) As China cracks down, Japan is fast becoming the powerhouse of the bitcoin market, CNBC, https://www.cnbc.com/2017/09/29/bitcoin-exchanges-officially-recognized-by-japan.html

Işık, E. ve Taner, Y. (2006). Çocuk ergen ve erişkinlerde anksiyete bozuklukları. İstanbul: Asimetrik Parelel Kitabevi.

JAMES, A., (2018) Will Cryptocurrency Replace National Currencies By 2030?, Bitcoinist, https://bitcoinist.com/will-cryptocurrency-replace-national-currencies-by-2030/

JAN, Z. S. (2019) (CoinDesk) Bitwage Now Lets Firms Pay Salaried Staff in Crypto, Bitwage, https://blog.bitwage.com/2019/01/16/coin/

Kabakçı, E. (2001). Üniversite öğrencilerinde sosyotrapik / otonomik kişilik özellikleri, Yaşam Olayları ve Depresif Belirtiler, 12(4), 273-282.

THIS JOURNAL INCLUDED IN MANY INDEXES, INCLUDING ADVANCED SCIENCES INDEX. ADVANCED SCIENCES INDEX (ASI) EUROPEAN SCIENCE EVALUATION CENTER KIRCHSTRASSE 4.56761 | **RHINELAND-PALATINATE, GERMANY** PHONE: +49(177) 8684-353 PHONE: +49(177) 8684-353 EMAILS: ASI@EUROPE.DE

Kahveci, Nuri ve Yahya Bilginer (2021), "Çağdaş İslâm Hukukçularının Kripto Paraların Meşruiyetine Dair Görüşlerinin Analizi", Şırnak Üniversitesi İlahiyat Fakültesi Dergisi, Sayı: 26, 257-285.

Karabıyık, Lale ve Adem Anbar (2007), "Volatilite ve Varyans Swapları", Muhasebe ve Finansman Dergisi, Sayı: 35, 62-77.

Karamustafalıoğlu, O., & Yumrukçal, H. (2011). Depresyon ve anksiyete bozuklukları. Şişli Eftal Hastanesi Tıp Bülteni, 45, 65-74.

Karaca, Hüseyin Sami (2018), "Türkiye'de Finansal Okuryazarlık ve Erişim 2018", Analitik İçgörü Merkezi Boğaziçi Üniversitesi, https://www.teb.com.tr/upload/PDF/TEB-FOERapor-2018_website.pdf (e.t. 01.09.2021).

Karakaş, S. A., Gönültan, N. ve Okanlı, A. (2017). Vardiyalı Çalışan Hemşirelerde Uyku Kalitesi. ERÜ Sağlık Bilimleri Fakültesi Dergisi. 4/1: 17-26.

Karakehya, H. (2013). Kumar Oynanması İçin Yer Ve İmkân Sağlama Suçu. Marmara Üniversitesi Hukuk Fakültesi Hukuk Araştırmaları Dergisi, 19(2), 699-713.

Kasatura, İ. (1998). Gençlik ve bağımlılık, İstanbul: Evrim Yayınevi.

Kessler, R. C., Berglund, P., Demler, O., Jin, R., Merikangas, K. R., & Walters, E. E. (2005). Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. Archives of general psychiatry, 62(6), 593- 602.

Kılıç, Yunus vd. (2015), "Finansal Okuryazarlık: Üniversite Öğrencilerine Yönelik Bir Araştırma", Muhasebe ve Finansman Dergisi, Nisan, 129-150.

Kiper, S. & Sunal, N. (2008). Romatoid Artritli Hastalarda Uyku Kalitesinin Değerlendirilmesi. Yüksek Lisans Tezi, Afyon Kocatepe Üniversitesi.

Korkmaz, İlknur ve Nil Esra Dal (2020), "Kıtlık Teorisi ve Bandwagon Etkisi Çerçevesinde Covid-19 Salgının Tüketici Davranışı Açısından İncelenmesi", Avrasya Sosyal ve Ekonomi Araştırmaları Dergisi, Cilt: 7, Sayı: 11, 88-125.

Köknel, Ö. (1989). Depresyon ruhsal çöküntü, İstanbul: Altın Kitaplar Basımevi.

Küçük, E. (2018). İşte depresyonun grafiği! https://www.dunya.com/finans/haberler/iste-depresyonun-grafigi-haberi-399337

LEDGERİNSİGHT, (2020) Six central banks collaborate on central bank digital currencies, https://www.ledgerinsights.com/six-central-banks-central-bank-digital-currencies-cbdc/

THIS JOURNAL INCLUDED IN MANY INDEXES, INCLUDING ADVANCED SCIENCES INDEX. ADVANCED SCIENCES INDEX (ASI) EUROPEAN SCIENCE EVALUATION CENTER KIRCHSTRASSE 4.56761 | **RHINELAND-PALATINATE, GERMANY** PHONE: +49(177) 8684-353 PHONE: +49(177) 8684-353 EMAILS: ASI@EUROPE.DE

Mergen Bayer, Yasemen (2019), Sigorta Hukukunda Riziko Ağırlaşması, Ankara: Yıldırım Beyazıt Üniversitesi Sosyal Bilimler Enstitüsü Özel Hukuk Tezli Yüksek Lisans Programı.

Metin-Orta, İrem (2020), "Fear of Mssing Out, Internet Addiction and Their Relationship to Psychological Symptoms", Jourbak of Addictions, 7 (1), 67-73.

Millar, S. I. (2018). Cryptocurrency expands online gambling. Gaming Law Review, 22(3), 174–174. https://doi.org/10.1089/ glr2.2018.2232.

Mills, D. J., & Nower, L. (2019). Preliminary findings on cryptocurrency trading among regular gamblers: A new risk for problem gambling. Addictive Behaviors, 92(5), 136–140.

Morrison, J. (2016). DSM-5'i kolaylaştıran klinisyenler için tanı rehberi (1. Baskı). H. Uğur Kural, Çev.). Ankara: Nobel Akademik Yayıncılık..

Nakamoto, Satoshi (2008), "A Peer to Peer Electronic Cash Sytem", https://bitcoin.org/bitcoin.pdf.

ÖGET, E , KANAT, E . (2018). Bıtcoin İle Türkiye Ve G7 Ülke Borsaları Arasındaki Uzun Ve Kısa Dönemli İlişkilerin İncelenmesi, Finans Ekonomi ve Sosyal Araştırmalar Dergisi, 3 (3) 601-614. DOI: 10.29106/fesa.422113

PANDA A., (2018) Cryptocurrencies and National Security, Council of Foreign Relations, https://www.cfr.org/backgrounder/cryptocurrencies-and-national-security

Pınarcı, G. (2014). Üniversite öğrencilerinde kumar oynama, patolojik kumar bağımlılığı ve ilişkili karakter özellikleri (Yüksek lisans tezi, Ege Üniversitesi, Madde Bağımlılığı Toksikoloji ve İlaç Bilimleri Enstitüsü, İzmir). Yayınlanmış Yüksek Lisans Tezi, Ege Üniversitesi,

Plotnik, R. (2009). Psikoloji 'ye giriş (1. baskı). (T.Geniş, Çev.). İstanbul: Kaknüs Yayınevi.

Rizeanu, S. (2014). The efficacy of cognitive-behavioral intervention in pathological gambling treatment. Procedia-Social and Behavioral Sciences, 127, 626–630.

ROBİNSON T., (2018) Bitcoin Blockchain Analysis & DOJ Indictment of Russian Hackers, https://www.elliptic.co/blog/doj-indictment-russian-hackers-blockchain-analysis

RODECK D., Jury B., (2021) Digital Currency: The Future Of Your Money, Forbes Magazine, https://www.forbes.com/advisor/investing/digital-currency/

RUİK, C., (2021) CryptoCore Criminal Group Has Been Targeting Cryptocurrency Exchanges for 3 Years, Cyclonis, https://www.cyclonis.com/cryptocore-criminal-group-targeting-cryptocurrency-exchanges-3- years/

THIS JOURNAL INCLUDED IN MANY INDEXES, INCLUDING ADVANCED SCIENCES INDEX. ADVANCED SCIENCES INDEX (ASI) EUROPEAN SCIENCE EVALUATION CENTER KIRCHSTRASSE 4.56761 | **RHINELAND-PALATINATE, GERMANY** PHONE: +49(177) 8684-353 PHONE: +49(177) 8684-353 EMAILS: ASI@EUROPE.DE

Schuckit, M. A. (2013). Editor's corner: DSM-5—Ready or not, here it comes. Journal of Studies on Alcohol and Drugs, 74(5), 661–663.

Sel, Ahmet (2020), "Pandemi Sürecinde Altın Fiyatları ile Kripto Para İlişkisinin Makine Öğrenme Metotları ile İncelenmesi", İstatistik ve Uygulamalı Bilimler Dergisi, Cilt: 1 Sayı: 2, 85-98.

Selvi, Y. (2019). Uyku, Neden? Nasıl? Ne Zaman? Ne Kadar? İstanbul: Selen Yayınları.

Smith, A. (2022). Trends and shifts in cryptocurrency investment: An empirical study. Journal of Cryptocurrency Economics, 7(1), 35-49.

Sonkurt H. O. & Altinöz A. E. (2020). Kriptopara yatırımcılığı ile patolojik trading, kumar bağımlılığı ve dürtüsellik ilişkisinin incelenmesi. 56. Ulusal Psikiyatri Kongresi, 18 December 2020.

SUSTER M., (2020) New and Better Money- Future Digital Currencies, G20 Digest Vol. 2, Special Issue, pp 1- 21, October, Research and Information System for Developing Countries (RIS). http://www.ris.org.in/sites/default/files/Martin%20Suster_1.pdf

SZCZEPANSKİ K., (2019) The Invention of Paper Money, ThoughtCO, https://t.ly/Wq1w

Tan, M. E., Aksu, G. G. ve Toros, F. (2020). Tik bozukluğu olan çocukların sosyal fobi, benlik saygısı, anksiyete ve depresyon düzeylerinin değerlendirilmesi. Turk J Child Adolesc Ment Health, 27(3), 140- 146. https://doi.org/10.4274/tjcamh.galenos.2020.58077

Tayel, M. (2015). Can Bitcoin be self regulatory legal tender?: a comparative analysis of United states, european union and islamic legal systems. (Yüksek Lisans Tezi), Central European University, Macaristan.

Taylor, D., & Richardson, P. (2005). The psychoanalytic/psychodynamic approach to depressive disorders. Oxford textbook of psychotherapy, 127-136.

Teker, Türker vd. (2020), "Bitcoin ve Kripto Paralar Hakkında Çıkan Haberlerin Bitcoin Fiyatları Üzerine Etkisi", Maliye ve Finans Yazıları, Sayı: 113, 65-74.

Tufan, Cenk ve Reyhan Sarıçiçek (2013), "Davranışsal Finans Modelleri Etkin Piyasa Hipotezi ve Anomalilerine İlişkin Bir Değerlendirme", Trakya Üniversitesi Sosyal Bilimler Dergisi, Cilt: 15, Sayı: 2, 159-182.

Türkçapar, H. (2004). Anksiyete bozukluğu ve depresyonun tanısal ilişkileri. Klinik Psikiyatri, 4, 12-16.

Uçkun, Nurullah ve Lokman Dal (2021), "Kripto Para Yatırımcılarında Finansal Risk Toleransı", Muhasebe ve Finansman Dergisi, Sayı: 89, 155-170.

THIS JOURNAL INCLUDED IN MANY INDEXES, INCLUDING ADVANCED SCIENCES INDEX. ADVANCED SCIENCES INDEX (ASI) EUROPEAN SCIENCE EVALUATION CENTER KIRCHSTRASSE 4.56761 | **RHINELAND-PALATINATE, GERMANY** PHONE: +49(177) 8684-353 PHONE: +49(177) 8684-353 EMAILS: ASI@EUROPE.DE

URL-1: Blockchain Times (16 Haziran 2020), "The Global Distribution of Crypto Traders", https://blockchaintimes.news/2019/05/13/the-global-distribution-of-crypto-traders/ (e.t. 27.06.2021).

URL-2: Bloomberg (16 Aralık 2017), "Dünyanın en büyük Bitcoin borsalarından biri hacklendi", https://businessht.bloomberght.com/teknoloji/haber/1757535- dunyanin-en-buyuk-bitcoin-borsalarindan-biri-hack-lendi (e.t. 02. 07. 2021).

URL-3: Bloomberg (23 Haziran 2021), "South African Brothers Vanish, and So Does $3.6 Billion in Bitcoin", https://www.bloomberg.com/news/articles/2021-06-23/s-africanbrothers-vanish-and-so-does-3-6-billion-in-bitcoin.e (e.t.02. 07. 2021).

URL-4: Euronews and AP (16 Nisan 2021), "Turkey has just banned the use of cryptocurrencies and Bitcoin is already feeling the starin", Erişim Adresi: https://www.euronews.com/2021/04/16/turkey-has-just-banned-the-use-ofcryptocurrencies-and-bitcoin-is-already-feeling-the-stra (e.t. 31.05.2021).

URL-5: Independent Türkçe (6 Kasım 2019), "Bitcoin'in 2017'deki rekor fiyat artışına tek bir kişi sebep olmuş", https://www.indyturk.com/node/88996/ekonomi%CC%87/bitcoinin-2017deki-rekorfiyat-art%C4%B1%C5%9F%C4%B1na-tek-bir-ki%C5%9Fi-sebep olmu%C5%9F#:~:text=Yeni%20bir%20%C3%A7al%C4%B1%C5%9Fmaya%20g%C3%B6re%2C%20Bitcoin,kripto%20para%20taciri%20neden%20oldu.&text=Bir%20saatten %20az%20bir%20s%C3%BCre,bin%20Bitcoin'in%20sat%C4%B1%C5%9F%C4%B1yla% 20tetiklenmi%C5%9Fti (e.t. 04.07.2021).

URL-6: İletişim ve Marka Deneyimi Grubu (27 Haziran 2018), "Türkler Dijital Paranın Geleceğine İnanıyor" İNG BANK, https://www.ing.com.tr/F/Documents/27062018_ING_IIS_BB.pdf (e.t. 25.06.2021).

URL-7: T.C. Resmî Gazete (16 Nisan 2021), "Ödemelerde Kripto Varlıkların Kullanılmamasına Dair Yönetmelik", Sayı: 31456.

WYOMİNG, (2019) SF0125- Digital assets-existing law, https://www.wyoleg.gov/Legislation/2019/ SF0125

Yılmaz, Cengiz ve Emine Sarıgöllü (1982), "Kişilerin Risk Eğilimi ve Birikimlerini Yönlendirme Kararları Üzerine Görgül Bir Çalışma", Erciyes Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi, Cilt: 2, Sayı: 3, 99-109.

ZETTER, K., (2013) How the Feds Took Down the Silk Road Drug Wonderland, SECURITY, https://www.wired.com/2013/11/silk-road/

THIS JOURNAL INCLUDED IN MANY INDEXES, INCLUDING ADVANCED SCIENCES INDEX. ADVANCED SCIENCES INDEX (ASI) EUROPEAN SCIENCE EVALUATION CENTER KIRCHSTRASSE 4.56761 | **RHINELAND-PALATINATE, GERMANY** PHONE: +49(177) 8684-353 PHONE: +49(177) 8684-353 EMAILS: ASI@EUROPE.DE

About the Author

Associate Professor Yesim Sirakaya is a Associate Professor at St Clements University Psychology Division. Address: Coast Guard Command - Ankara – Turkey. Yesim Sirakaya graduated from the Department of Business Administration. After completing her master's degree in the Department of Public Administration with a thesis “On Marine Pollution in Turkey and The Necessary Measures To Be Taken”, Yesim Sirakaya completed her doctorate in the Department of Industrial and Organizational Psychology at St. Clements University with a thesis titled "The Impact of Employee Engagement on Organizational Innovation". Associate Professor Yesim Sirakaya has scientific articles in many international and national peer-reviewed journals. Associate Professor Sirakaya works at St Clements University Department of Psychology. She may be reached at yesimsirakaya8282@gmail.com

THIS JOURNAL INCLUDED IN MANY INDEXES, INCLUDING ADVANCED SCIENCES INDEX. ADVANCED SCIENCES INDEX (ASI) EUROPEAN SCIENCE EVALUATION CENTER KIRCHSTRASSE 4.56761 | **RHINELAND-PALATINATE, GERMANY** PHONE: +49(177) 8684-353 PHONE: +49(177) 8684-353 EMAILS: ASI@EUROPE.DE