CONTRIBUTIONS OF CRYPTO CURRENCIES TO COUNTRY ECONOMIES

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1.1 Definition and Historical Development of Cryptocurrencies:

Cryptocurrencies are assets that are bought and sold completely digitally, without being dependent on a central authority. Developed by Satoshi Nakamoto in 2008, Bitcoin introduced the concept of cryptocurrency and opened the door to a decentralized financial system. When combined with blockchain technology, Bitcoin provides transaction verification, allowing users to transact securely without the need for a central authority. Satoshi Nakamoto's innovations in Bitcoin brought a new direction to the digital economy and formed the basis of cryptocurrency.

Unlike traditional currencies, these digital assets are based on encryption and distributed ledger technology rather than centralized banks, creating a new era in economic transactions. The emergence of Bitcoin paved the way for the development of other digital currencies such as Ethereum and Ripple. Litecoin. These altcoins increase the potential of digital assets by introducing new features and use cases to blockchain technology. Ethereum, in particular, offers different financial services to investors through smart contracts, decentralized finance (DeFi) and other applications. Rotman (2014) stated in his study that these digital assets can have a significant impact on the banking sector and that users have begun to show interest in the cryptocurrency ecosystem as an alternative to traditional financial services (Fırat and Daşdemir, 2021).

The impact of crypto currencies on the financial system is examined within the framework of the efficient market hypothesis. In their study, Sabkha

et al. (2019) analyzed the price movements of different cryptocurrencies and revealed the volatility structure and market efficiency of these digital assets. By examining the static structure of crypto currencies, it has been revealed that these digital assets are not suitable for random walk processes in terms of market efficiency. Other academic research has also shown that cryptocurrency markets have different characteristics than traditional financial instruments and affect investor behavior.

In the context of economic theory, cryptocurrencies add a new perspective to the monetary theory of economists such as Fisher and Keynes. In particular, Fisher (1911) and Friedman (1969) considered the role that digital assets play in the balance between money supply and demand. These studies have shown that cryptocurrencies can provide a hedge against financial crises as an alternative to traditional currencies.

The limited supply of cryptocurrencies, their security integrated with blockchain technology and the ability to perform transactions without being dependent on central authorities make them an important part of the digital economy (Fırat and Daşdemir, 2021) and (Münyas and Aydın, 2023)

1.2 Reasons for the Emergence of Cryptocurrencies:

One of the main reasons for the emergence of cryptocurrencies is the lack of trust in central banks and traditional financial institutions. After the 2008 financial crisis, people accelerated their search for a currency that is not centrally controlled, and Bitcoin was developed to meet this need. Cryptocurrencies enable secure transactions based on encryption, without adhering to the monetary policies of central banks and financial systems. These digital assets, which emerged after the global crisis, are preferred by investors, especially in markets with high volatility (Altunöz, 2023).

Another important factor in the rise of cryptocurrencies is technological development. Blockchain technology provides a reliable and transparent accounting mechanism that allows transactions to be carried out without the need for a central authority. This makes cryptocurrencies popular among users who

support financial freedom. These digital assets distributed over the internet offer an alternative to physical currencies and are not subject to central control (Çetinkaya, 2018).

The lack of regulation of crypto assets presents both risks and opportunities for investors. Some users prefer these assets because they offer trading opportunities that are not controlled by governments. However, this may lead to the formation of speculative bubbles. When the volatility dynamics and price movements of the leading cryptocurrencies in terms of market value are examined, investors react differently, especially to market shocks (Şak, 2021).

Finally, the lack of accounting and tax standards is another factor that increases the attractiveness of cryptocurrencies. Investors can take advantage of this uncertainty to develop more flexible investment strategies. The lack of clarity in many national laws and regulations causes cryptocurrencies to be evaluated in different ways and provides flexibility to investors (Kılıç and Alataş, 2023).

Purpose and Scope of the Research:

The main purpose of this study is to provide a comprehensive analysis of the impact of cryptocurrencies on the economy. Issues such as the decentralized structure of cryptocurrencies, security measures provided by blockchain technology and regulatory deficiencies create opportunities and risks for economies. This study aims to determine the impact of cryptocurrencies compared to traditional financial markets. In particular, we will analyze issues such as volatility dynamics, speculative bubble formation and investor behavior to reveal how cryptocurrencies affect economic stability and the financial system.

The research also provides insight into regulatory issues such as cryptocurrency accounting and taxation, examining how governments and financial institutions should handle these digital assets. The advantages and disadvantages of these assets, which are increasingly adopted globally, will be evaluated and the compatibility of their technical infrastructures with the

economic system will be analyzed. The research will explore the impact of cryptocurrencies on financial inclusion, global trade, decentralized finance and regulatory policy.

In this context, the risks and opportunities offered by crypto currencies within the current economic system will be analyzed in detail and their effects on the economy will be clarified. The findings are intended to provide comprehensive guidance to investors and policymakers.

2) Cryptocurrencies and Economy

2.1 Integration of Cryptocurrencies into Economic Systems:

The integration of cryptocurrencies into economic systems has triggered a revolution in the financial system due to the decentralized and transparent structure provided by blockchain technology. Cryptocurrencies, especially Bitcoin and Ethereum, compete directly with central banks and traditional financial structures by offering the security and speed of financial transactions. The emergence of Bitcoin has led to its acceptance as an alternative way of transferring value in the economic system. Münyas and Aydın (2023) stated that the integration of Bitcoin and other major cryptocurrencies into decentralized finance (DeFi) applications provides new opportunities for investors.

However, cryptocurrencies have significant advantages in the global economic system in areas such as cross-border transactions, investment diversification, and portfolio management. It is believed that various blockchain-based financial services can transform banking and traditional financial services. Integrating cryptocurrencies into the economic system can facilitate access to financial services for individuals without bank accounts and support financial inclusion (Fırat and Daşdemir, 2021).

The unregulated nature of cryptocurrencies is a factor that creates both advantages and risks in the integration process. Issues such as speculation and illegal transactions due to lack of supervision need to be taken seriously. It is also important to understand volatility dynamics and investor reactions. In order to successfully integrate these digital assets, technical infrastructure must be

developed and user trust must be ensured. Financial regulations and policies need to be developed to ensure the integration of crypto currencies into the economic system (Şahin and Ekim, 2016).

2.2 Potential Effects of Cryptocurrencies on Countries' Economies:

The potential impact of cryptocurrencies on the economies of various countries includes both positive and negative effects. First, cryptocurrencies accelerate international trade and investment by facilitating cross-border transactions. Additionally, the participation of individuals who do not have access to traditional banking services in the financial system through crypto assets can increase the financial inclusion of the country. Tan and Zhang (2021) stated in their study that crypto currencies can make a positive contribution to the financial structure of the country by enabling low-cost and fast transactions between businesses and individuals.

On the other hand, cryptocurrencies may also have a negative impact on economic stability due to lack of regulation. Rapid losses or gains in value, especially in volatile cryptocurrencies, can lead to the formation of speculative bubbles and financial risks. At the same time, problems such as money laundering or illegal activities may arise. Tarasova et al. (2020) stated that regulatory policies should be established and control mechanisms should be developed to prevent these negative effects of cryptocurrencies.

Additionally, the decentralized nature of cryptocurrencies can make it difficult for countries to implement traditional monetary policies. The increase in digital assets could lead to a decrease in demand for traditional currencies, affecting the money supply and foreign exchange markets. This may increase the difficulties faced by governments in controlling inflation and ensuring financial stability. Temelli (2019) emphasizes that cryptocurrencies can interfere with monetary policy and weaken traditional financial regulations.

2.3 Advantages and Disadvantages of Cryptocurrencies:

While cryptocurrencies offer innovative solutions to the financial system, their pros and cons should be evaluated from different perspectives. Its

advantages include the ability to make transactions without being dependent on a central authority and the transparency provided by blockchain technology. These features provide benefits such as low-cost cross-border transactions and speed. For example, Ültay et al. (2021) stated in their study that decentralized financial structures provide investors with the advantage of diversity and fast transactions.

Cryptocurrencies also have great potential for financial inclusion. Cryptoassets make it easier for individuals who do not have bank accounts or access to traditional financial services to participate in the financial system. Yalçın (2019) emphasized that crypto assets offer opportunities for individuals who do not have access to traditional financial structures.

On the other hand, the disadvantages of cryptocurrencies also attract attention. Their high volatility can lead to the formation of speculative bubbles and financial risks for investors. Additionally, due to lack of control, problems such as money laundering and illegal transactions may arise. Şahin (2018) noted that the lack of legal definition and audit processes of crypto assets pose serious risks for investors.

Another disadvantage is energy consumption. Mining operations, especially for cryptocurrencies such as Bitcoin, are based on complex mathematical algorithms and require significant energy consumption. This could put cryptoassets at a disadvantage in terms of environmental sustainability. Tarasova et al (2020) discuss the environmental impacts of cryptocurrencies and highlight the need for improvement in this area.

2.4 Role of Regulations and Country Policies:

The role of regulations in integrating cryptocurrencies into the economic system is very important. Countries need to develop regulatory policies to maintain financial stability and prevent illegal transactions. Regulations can increase investor confidence by providing clear rules in areas such as taxation, identification and auditing of cryptocurrencies. Tan and Zhang (2021)

emphasize that regulatory frameworks must be compatible to support the sustainable growth of the cryptocurrency ecosystem.

Different countries apply different policies towards cryptocurrencies. While some countries ban or restrict the use of cryptocurrencies, others have taken a more flexible approach to attract innovation and investment. The European Union is trying to standardize regulations regarding crypto assets with common standards. On the other hand, countries such as China and India impose strict regulations on cryptocurrency mining and trading. Ţegledi and Straoanu (2021) stated that these different approaches have implications for the future of crypto assets in the global economy.

Another important area of regulation includes policies to reduce the risks of money laundering and terrorist financing. Some countries are trying to protect against these risks by imposing strict controls on cryptocurrency exchanges. Özgreen (2019) believes that as cryptocurrencies grow in popularity, regulators need to monitor these assets more closely. To ensure investor confidence and market stability, countries need to introduce protective regulations that will prevent risks while supporting the use of crypto assets.

To fully leverage the potential advantages of crypto assets, cooperation between countries is important. International organizations are working to harmonize standards and create a common regulatory framework. Tarasova et al (2020) stated that the establishment of international standards will allow crypto assets to be more effectively integrated into the economic system.

2.5 Comparison of Cryptocurrency Use in Developed and Developing Countries:

The use of cryptocurrencies varies depending on the economic structure and development level of the country. In developed countries, cryptocurrency use is often associated with encouraging financial innovation, finding alternative investment opportunities, and using decentralized finance (DeFi) applications. Tan and Zhang (2021) stated that cryptocurrency users in developed countries prefer these assets to diversify their investment portfolios. Additionally,

countries such as the United States, Japan, and Germany promote financial stability by creating regulatory frameworks that define the role of cryptocurrencies in the economic system.

Cryptocurrencies are more popular in developing countries to increase financial inclusion and prevent devaluation of local currencies. Especially in Latin America, Africa and South Asia, international payments can be made faster and more cost-effectively through crypto assets. Tarasova et al. (2020) stated in their studies that individuals in countries struggling with hyperinflation, such as Venezuela and Nigeria, use crypto assets as a means of hedging against local currencies. The lack of access to banking services for a large portion of the population in developing countries has also led to greater adoption of cryptocurrencies in these regions.

However, a lack of regulatory policies and infrastructure may hinder the proliferation of cryptocurrencies in developing countries. Ţegledi and Straoanu (2021) emphasize that developing countries need to better regulate cryptocurrencies and develop technological infrastructure. In developed countries, these risks are better managed thanks to better financial regulation and investor education.

For this reason, the use of cryptocurrencies in developed and developing countries is determined by different motivations. While innovation, investment and financial diversification come to the fore in developed countries, financial inclusion, protection and low-cost transactions become more important in developing countries. In both cases, cryptocurrencies occupy an important place in the global financial system.

2.6 Taxation and Control of Cryptocurrencies:

Taxation and oversight of cryptocurrencies are important regulatory issues facing countries. When it comes to taxation, cryptocurrencies are divided into different tax categories as they are used both as investment and payment instruments. While some countries treat cryptocurrencies as assets and charge capital gains tax, others impose income tax or value added tax (VAT). Yatsyk

and Shvets (2020) emphasize the importance of countries creating clear definitions in their tax policies and informing investors about their tax obligations.

In terms of controls, the decentralized nature of cryptocurrencies can increase the risk of money laundering and terrorist financing. For this reason, many countries aim to reduce these risks by imposing strict regulations on cryptocurrency exchanges. Cryptocurrency exchanges must comply with identity verification (KYC) and anti-money laundering (AML) rules. In their research, Sun and Yu (2020) pointed out that even blockchain-based smart contracts may contain security vulnerabilities and that audit mechanisms should cover this area.

While some countries strictly regulate cryptocurrency trading and mining, others are committed to supporting innovation in this field. These different approaches demonstrate the difficulty of harmonizing taxation and auditing at a global level. Zhang and Li (2021) stated that regulatory frameworks should be harmonized through international cooperation in the taxation and supervision of crypto assets.

Therefore, developing comprehensive cryptocurrency tax and regulatory policies is critical to maintaining financial stability and increasing investor confidence. Clarifying tax standards and audit processes will make the role of these digital assets in the economic system more sustainable.

3.General Evaluation

3.1 Evaluation on the General Effects of Cryptocurrencies on the Economies of Countries:

The impact of cryptocurrencies on the economies of various countries and their direct and indirect effects on the financial system need to be examined. First, cryptocurrencies have the potential to change the structure of the economy by supporting financial innovation. Innovations such as blockchain technology, smart contracts and decentralized finance (DeFi) are expected to transform the banking industry in various countries. Popular cryptocurrencies such as Bitcoin

and Ethereum contribute to the expansion of capital markets and acceleration of global trade by diversifying investment opportunities (Latif et al., 2017).

However, the high volatility and lack of regulation of cryptocurrencies can threaten the economic stability of countries. Speculative bubbles and sudden losses in value can cause investors to suffer serious losses. While developed countries are stepping up regulations to manage the potential risks of cryptocurrencies, the spread of cryptocurrencies in developing countries could lead to greater economic volatility. Özdemir and Kayhan (2019) emphasize that the unregulated structure of crypto assets can weaken exchange rate stability and inflation control.

Additionally, in some economies the use of cryptocurrencies may result in loss of tax revenue. Transactions made outside the traditional financial system reduce the tax revenues of states. Yavaşer (2019) noted in his study that the use of crypto assets in illegal transactions may also have a negative impact on the government's supervision and control ability.

Therefore, cryptocurrencies bring opportunities and risks to the economies of various countries. While financial inclusion provides benefits such as low-cost transactions and innovation, it can also have negative effects such as volatility, lack of regulation and loss of tax revenue. Therefore, it is important to manage the impact of cryptocurrencies on the economic system with comprehensive policies.

3.2 The Role of Cryptocurrencies in the Future and Possible Scenarios:

The future of cryptocurrencies depends on many factors, including technological advances, regulatory policies and investor interest. On the one hand, as blockchain-based financial services grow in popularity, decentralized finance (DeFi) applications and smart contracts can transform traditional banking systems. Sun and Yu (2020) state that smart contracts will increase the efficiency of financial transactions by increasing security in the cryptocurrency ecosystem.

With the development of regulatory policies and cooperation between countries, crypto assets are likely to be increasingly adopted in global trade. Cryptocurrencies can be widely used, especially for cross-border transactions, low-cost transfers and financial inclusion. However, the lack of regulation and the risks associated with illegal transactions will lead states to develop strict policies towards these assets. Zhang and Li (2021) state that international cooperation on the taxation and regulation of cryptocurrencies is critical to manage potential risks.

Central banks' development of their own digital currencies (CBDC) is another important element regarding the future of cryptocurrencies. Central bank digital currencies can compete with cryptocurrencies as reliable alternatives backed by governments. Xu et al. (2016) emphasize that government-backed digital currencies may limit the role of cryptocurrencies, highlighting their financial stability and control advantages.

Ultimately, the future role of cryptocurrencies depends on regulatory policies, technological innovations and global economic developments. Evaluating possible scenarios for cryptocurrencies to take a sustainable place in economic systems is of critical importance for policy makers and investors.

3.3 Recommendations and Conclusion:

The impact of cryptocurrencies on the economies of various countries is determined by regulatory policies, technological innovations and user needs. Against this background, various recommendations can be made to ensure sustainable and secure integration of crypto assets into the economic system. First of all, cooperation between countries should be strengthened and globally compatible regulatory policies should be developed. Establishing common standards on issues such as taxation, auditing and money laundering will increase investor confidence and prevent cryptocurrencies from being associated with illegal transactions (Zhang and Li, 2021).

Additionally, improving technological infrastructure and securing blockchain-based smart contracts can increase the efficiency of financial

transactions. This will help decentralized finance (DeFi) applications reach a wider audience and gain users' trust. At the same time, governments developing central bank digital currencies (CBDCs) can enable cryptoassets to contribute to the economy as a regulated, controllable alternative (Xu et al., 2016).

Investor education and awareness of the risks of cryptocurrency volatility should also be increased. Financial education programs help investors use crypto assets responsibly and better manage risk. These trainings are very important to evaluate the opportunities offered by cryptocurrencies and minimize possible risks (Sun and Yu, 2020).

As a result, cryptocurrencies can change the financial structure and pave the way for innovation by integrating into the global economic system. However, this transformation requires issues such as compatible regulatory policies, secure technology infrastructure and investor education. Therefore, cryptocurrencies will have the potential to contribute positively to the economy and manage its risks.

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