# SMART JUDICIARY AND BLOCKCHAIN: LEGAL REGULATION OF CRYPTOCURRENCIES

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**Abstract.** *Since their emergence, cryptocurrencies have become widespread, changing the way values are exchanged and the structure of the global financial system. However, the anonymity and lack of regulation of cryptocurrencies attract cybercrime, create potential risks for the growth of the criminal economy, and pose dangers to all participants in the crypto industry. The proliferation of cryptocurrencies has prompted governments worldwide to develop legal frameworks addressing this new technology. However, regulatory approaches remain heterogeneous across jurisdictions. Most developed countries have recognized digital assets as a legitimate means of payment or form of property, yet so far lack comprehensive legislation regulating all aspects of the crypto industry. Some states attempt to regulate the cryptocurrency market through licensing crypto exchanges, tax accounting of income, and other norms. There is still no global consensus on the legalization of cryptocurrencies, with each country choosing its path.*

*The article examines the legal regulation of cryptocurrencies and blockchain in the context of implementing smart judiciary. It addresses the problem of legal norms lagging behind the rapid development of technologies, particularly the anonymity and unregulated nature of cryptocurrencies, which attract cybercrime. The article provides an overview of legislative initiatives for regulating cryptocurrencies in leading countries with a high level of their use, such as the United States, Ukraine, Nigeria, Vietnam, and India. It considers the legal status of cryptocurrencies, licensing and taxation requirements, as well as measures for consumer protection and anti-money laundering efforts. The article highlights the prospects of implementing smart judiciary based on blockchain technology and smart contracts for resolving disputes in the digital environment. It discusses the need to develop a comprehensive legal and regulatory framework for the effective regulation of the cryptocurrency market on a global scale.*

**Key words:** *digitalization of judiciary, smart technologies, blockchain, cryptocurrency, legislation, digital assets regulation, regulatory framework, data protection.*

**Statement of the problem.** The revolutionary technologies of blockchain and cryptocurrencies are rapidly evolving, becoming an integral part of our lives. From financial transactions to ensuring transparency of processes – they challenge traditional systems and demand new approaches to legal regulation. The anonymity and unregulated nature of cryptocurrencies attract cybercrime, creating potential risks for the growth of the criminal economy, and posing dangers for all participants in the crypto industry [1]. This has prompted governments around the world to develop legislative frameworks for this new technology. However, regulatory approaches remain heterogeneous across different jurisdictions [2]. Most developed countries have recognized digital assets as a legitimate means of payment or form of property, but so far do not have comprehensive legislation regulating all aspects of the crypto industry. Some states are attempting to regulate the cryptocurrency market through licensing crypto exchanges, tax accounting of income, and other norms. There is still no global consensus on the legalization of cryptocurrencies, with each country choosing its path. The legal regulation of social relations related to the cryptocurrency market is a relatively new scientific and legal issue. Smart judiciary, based on the principles of decentralization and autonomy, can become the latest tool for effective dispute resolution in the digital world.

**The state of research of the problem.** The rapid rise and mainstream adoption of cryptocurrencies and blockchain technology has outpaced legal and regulatory frameworks around the world. As a result, there is still relatively limited comprehensive research and analysis from legal scholars on how to properly regulate this new digital asset class and its related applications like smart contracts. However, some key areas of research have emerged: classification of cryptocurrencies researchers [3, 4], regulatory approaches studies [2], smart contracts and judiciary [5–7], anti-money laundering and consumer protection [8]. While cryptocurrency and blockchain regulation is still an evolving research area, legal scholars have made inroads in analyzing existing policies, risks, and opportunities of this transformative technology through a legal lens. However, much more remains to be studied as blockchain applications continue to develop rapidly around the world.

**Presentation of the main research material.** The regulatory framework for digital assets is dynamic worldwide. Most countries consider cryptocurrencies and tokens to be digital assets, property, or chattels. This allows civil and tax laws to be applied to them. More and more countries are developing specific laws that define the legal status of cryptocurrencies, and the procedure for their issuance and circulation. Legislation regulates transactions, settlements, and taxation of digital assets, and requires financial reporting. To prevent money laundering, most countries are introducing mandatory user verification on cryptocurrency exchanges. The legal regime of smart contracts, NFTs, and other crypto instruments is being defined to ensure the security of the crypto environment. However, there are still no unified internationally accepted standards for regulating the cryptocurrency market. Many countries are developing specific legislation regarding cryptocurrency markets. The largest economies in the world and countries with high levels of cryptocurrency activity already regulate cryptocurrencies within their jurisdictions. However, the regulation of the crypto environment is still imperfect in both developing and economically advanced countries.

According to the report "The Chainalysis 2022 Geography of Cryptocurrency Report" by TripleA, a weighted assessment was conducted of the number of cryptocurrency users in each of the 204 countries in the world [9]. The Atlantic Council examined the legal regulation of the crypto industry in 60 countries with the highest rates of cryptocurrency adoption and countries with a high level of economic development [10]. Today, governments regulate the actions of crypto environment participants through tax policies (Taxation), anti-money laundering and counter-terrorist financing requirements (AML/CF), consumer protection rules (Consumer Protection), as well as licensing and disclosure obligations (Licensing). For each country, one of the following three regulatory statuses has been defined: legal (no bans on activities with digital assets); partial ban (certain activities with digital assets are prohibited); general ban (any activity with digital assets is prohibited).

In more than half of the analyzed countries (32), digital assets are legal. In almost a third of countries (19), cryptocurrency is partially banned. Cryptocurrency transactions are completely banned in 8 countries [10]. Nearly 40 out of 60 countries are developing specific legislation to regulate the crypto market and improve the existing legal framework. All countries, regardless of their level of economic development, lack comprehensive cryptocurrency regulations. Only 15 out of 60 countries have implemented rules for taxing transactions with digital assets, countering money laundering from crypto assets, protecting the rights of crypto market participants, and licensing requirements. The consumer protection rules adopted in less than 20 of the analyzed countries are extremely imperfect, which leads to widespread fraud [10].

The level of digital asset usage varies across different countries and does not depend on a country's development level. Of particular interest is the legal regulation of the crypto market in countries with the highest crypto adoption rates. Table 1 provides data on the status of the following regulatory tools for crypto market participants: taxation, anti-money laundering and counter-terrorist financing requirements, consumer protection, and licensing [10] for the top 10 countries with the highest crypto adoption rates [9].

Only in three out of the ten countries where cryptocurrencies are most widespread (USA, Ukraine, Philippines, and Brazil) are digital assets fully legalized. In five countries, there is a partial ban on the use of cryptocurrencies, and in Pakistan, it is completely banned [10]. The unregulated use of digital assets, especially in developing economies, poses risks of crypto crime and threats to the cybersecurity of countries worldwide. Today, it is necessary to research effective legal instruments used by governments to regulate the crypto environment.

**Cryptocurrency Laws and Regulations in the Top 5 Countries with the Highest Cryptocurrency Adoption**

*Cryptocurrency Laws and Regulations in India.* In November 2022, the Indian government proposed a draft bill for a complete ban on private cryptocurrencies while allowing an official digital currency by the Reserve Bank of India. The bill termed cryptocurrencies as a "risk to financial stability" and proposed Cryptocurrency holders declare and dispose of holdings before the ban [11]. It also suggested penalties for mining, holding, buying, selling, or issuing cryptocurrencies. This faced backlash from the crypto industry arguing it would stifle innovation. The government is likely to introduce a revised bill with moderated provisions. Currently, crypto-assets remain legally unregulated in India, with the industry seeking a balanced approach compared to the government's aim for firm regulation. However, section 194S was introduced in the 2022 Finance Act and pertains to tax deductions on the transfer of virtual digital assets like cryptocurrencies and NFTs [12].

Table 1. The status of the regulatory crypto market tools for the top 10 countries with the highest crypto adoption rates

| | Country | Regulatory Status | Taxation | AML/CF | Consumer Protection | Licensing |
|---|---|---|---|---|---|---|
| 1 | India | partial ban | + | – | + | + |
| 2 | Nigeria | partial ban | – | – | – | – |
| 3 | Vietnam | partial ban | – | – | – | – |
| 4 | USA | legal | + | + | + | + |
| 5 | Ukraine | legal | – | | | + |
| 6 | Philippines | legal | + | + | + | + |
| 7 | Indonesia | partial ban | + | + | – | + |
| 8 | Pakistan | general ban | – | – | – | – |
| 9 | Brazil | legal | + | + | + | + |
| 10 | Thailand | partial ban | + | + | + | + |

*Cryptocurrency Laws and Regulations in Nigeria.* The Securities and Exchange Commission of Nigeria (SEC) recognized cryptocurrencies as securities and classified them as digital assets in September 2020. The SEC published guidelines and regulations for digital asset token offerings and crypto trading platforms, requiring them to register with the SEC and meet operational, cybersecurity, and anti-money laundering requirements. While warning investors about cryptocurrency risks, the SEC has taken a regulatory rather than prohibitive approach, allowing crypto exchanges to operate in the country. However, banks are prohibited from cryptocurrency dealings [13]. In February 2021, the Central Bank of Nigeria (CBN) temporarily banned banks from facilitating crypto transactions but overturned it in May 2022. A joint committee of the SEC and CBN has been formed to develop a legislative framework for digital asset regulation and licensing of crypto firms [14]. For now, existing securities laws enforced by the SEC provide oversight of cryptocurrencies in the absence of specialized legislation. The SEC and CBN's progressive regulatory stance cautions about risks while moving towards a tailored legal framework for crypto-assets [15].

*Cryptocurrency Laws and Regulations in Vietnam.* Cryptocurrencies are not legally recognized as a means of payment in Vietnam. The State Bank of Vietnam has banned their use for payments. In 2018, the government issued a directive to strengthen the management of activities related to Bitcoin and other cryptocurrencies. Banks were prohibited from conducting transactions related to cryptocurrencies. However, cryptocurrency trading is not banned [16]. The Ministry of Justice in 2017 stated that cryptocurrency trading is legal and subject to taxation. In October 2021, the government issued Decree No. 155/2020 providing a legal framework for regulating cryptocurrencies [17]. It defines rules for crypto businesses and investors. Entities wanting to conduct crypto-related activities must obtain a license from the Ministry of Finance. Cryptocurrency service providers are classified as financial institutions. There are Know Your Customer (KYC) and anti-money laundering (AML) requirements for crypto traders and exchanges. Businesses cannot issue their cryptocurrencies. Cryptocurrency investors must pay personal income tax if annual gains exceed a threshold. Citizen holdings are limited to prevent risks. Vietnam aims to pilot a regulatory sandbox for crypto pilot projects [18]. The State Bank is researching a potential CBDC issuance. Vietnam has taken a cautious approach with regulations to limit risks and prohibit illicit activities, while still allowing and taxing legal crypto business and trading [19].

*Cryptocurrency Laws and Regulations in the US.* The US does not have a comprehensive federal law specific to cryptocurrencies and crypto-assets so far. Regulation is still evolving. The Securities and Exchange Commission (SEC) has claimed jurisdiction over crypto-assets that qualify as securities, like certain digital tokens [20]. It applies existing securities laws. The SEC requires crypto exchanges/platforms selling securities tokens to register with the agency and comply with disclosure requirements. The Commodity Futures Trading Commission (CFTC) considers cryptocurrencies like Bitcoin as commodities and has oversight over crypto futures/derivatives trading [21]. The Financial Crimes Enforcement Network (FinCEN) requires crypto exchanges, wallets, and other businesses to register as Money Service Businesses and comply with anti-money laundering laws. At the state level, New York introduced the BitLicense system in 2015 mandating registration for virtual currency businesses doing business with New York residents. In 2021, the Infrastructure Investment and Jobs Act was passed which expands reporting requirements for crypto transactions for tax purposes. There have been several proposals for comprehensive legislation on crypto-assets, but nothing has been enacted yet. Regulation remains fragmented among various agencies applying existing laws to crypto. Lawmakers continue to debate proposed crypto legislation to establish clearer regulatory guardrails.

*Cryptocurrency Laws and Regulations in Ukraine.* On September 8, 2021, the Verkhovna Rada legalized virtual assets, which allowed owners of virtual assets to legally exchange and declare them. The law was also supposed to allow foreign cryptocurrency companies to register blockchain businesses in the country. The law was passed by the Ukrainian parliament on February 17, 2022 [22], and came into force on March 19, 2022. It provides a legal framework for regulating virtual assets like cryptocurrencies in Ukraine. Virtual assets are defined as objects of civil rights in the form of digital representation of value that can be traded electronically and transferred.

In 2021 Ukrainian parliament passed the law "On preventing and countering the legalization (laundering) of proceeds from crime, the financing of terrorism and the financing of the proliferation of weapons of mass destruction" [23]. The law aims to regulate cryptocurrencies and virtual assets in Ukraine. It legalizes and defines cryptocurrencies under Ukrainian law. Cryptocurrencies are now treated as virtual assets. The law establishes regulations for crypto exchanges, wallet providers, and other entities dealing with virtual assets. These entities must comply with anti-money laundering and know-your-customer rules. This is meant to prevent illicit use of cryptocurrencies. Overall, the law provides a legal framework for cryptocurrencies to operate legitimately in Ukraine's financial system. It represents an important step towards regulating and integrating cryptocurrencies in Ukraine. In Ukraine, despite the adoption of the law on virtual assets that legalizes the cryptocurrency market, the hryvnia remains the only legal tender. However, Ukrainians have proven to be among the biggest fans of crypto.

**Conclusion.** Cryptocurrency usage has expanded globally, with some nations seeing more widespread adoption than others. Looking at the top 5 countries by cryptocurrency adoption rates provides insights into how different governments are regulating digital assets. By analyzing the legal environment for cryptocurrencies like Bitcoin in jurisdictions with the highest prevalence, we can understand the various regulatory approaches emerging globally.

Countries with large crypto communities serve as important test cases for balancing innovation and control in this new financial sphere. They act as guides for regulatory trends and provide models of key considerations around consumer protection, taxation, financial stability, and anti-money laundering rules. As pioneers in applying laws to boundless cryptocurrencies, these countries exemplify the ongoing evolution of cryptocurrency oversight and its impact on the technology's development.

While the process of legalizing cryptocurrencies has been quite contentious, with states seeking to balance innovation and risks. Legislation is gradually encompassing all aspects of the cryptocurrency market's functioning, yet there is no global unification of approaches to regulating cryptocurrencies so far. An important step is the adoption of laws that define the legal status of crypto assets, and the procedure for their issuance and circulation. For full legalization, comprehensive regulation of all aspects is required – from taxation to accounting standards.

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