

Cryptocurrency regulation in post-Soviet countries: Balancing global practices and local specifics

Avtandil Silagadze*

Doctor of Economics, Professor

Tbilisi State University

0179, 1 Ilia Tchavtchavadze Ave., Tbilisi, Georgia

<https://orcid.org/0000-0001-7782-9827>

Giorgi Gaganidze

PhD in Economics, Professor

Tbilisi State University

0179, 1 Ilia Tchavtchavadze Ave., Tbilisi, Georgia

<https://orcid.org/0000-0002-6530-1600>

Tamaz Zubiashvili

Doctor of Economics, Associate Professor

Tbilisi State University

0179, 1 Ilia Tchavtchavadze Ave., Tbilisi, Georgia

<https://orcid.org/0009-0002-7215-0780>

Tamar Atanelishvili

Doctor of Economics, Associate Professor

Tbilisi State University

0179, 1 Ilia Tchavtchavadze Ave., Tbilisi, Georgia

<https://orcid.org/0000-0003-2567-0337>

Abstract. This study examined cryptocurrency regulation in post-Soviet countries and identifies potential areas for improvement. It was analysed the varying regulatory approaches among these countries, ranging from restrictive policies (Ukraine and Georgia) to more liberal ones (Moldova). Armenia and Azerbaijan, while not implementing specific regulatory measures, had expressed concerns regarding cryptocurrency adoption, positioning them in an intermediate stance. It was

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*Corresponding author

found that the technological and political foundations of the cryptocurrency markets in five post-Soviet countries are similar, forming the most comparable group. However, they lag significantly behind the European Union and the United States. Although political freedom in these countries remained within the range of 55-72 points in 2024, the trend from 2020 to 2024 showed a decline. The disparity in information and communication technology (ICT) development among post-Soviet countries ranged from 70 to 88 points, whereas in the United States, Germany, and France, this indicator varied between 87 and 97 points. However, the overall trend for ICT development in post-Soviet countries remains positive. The study concluded that adopting regulatory practices from the United States, Germany, and France – by analysing their experiences, challenges, and mistakes – would be beneficial for Georgia and Ukraine. Specifically, Georgia should enhance its legislation and the legal status of cryptocurrencies based on the European Union and U.S. experience, while Ukraine should focus on improving tax policy, drawing from Germany's approach. Furthermore, both countries need to strengthen measures to combat financial crimes involving cryptocurrencies, following France's example. For Moldova, Armenia, and Azerbaijan, rather than addressing cryptocurrency-related challenges directly, an alternative approach was recommended: the development and implementation of central bank digital currencies

Keywords: security; double spending; digital currency; virtual currency; central bank

Introduction

The scale of the modern global economy continues to reach new heights, fostering intensified competition. Competition between countries is intensifying. In this competition, those countries that more actively use new financial instruments are achieving success. Against this background various types of cryptocurrencies are widely discussed by researchers, entrepreneurs, investors, governments, and the general public on an international scale, attracting increasing attention. As of 2024, the global number of cryptocurrency users exceeded 425 million, with 0.02% of them (88,200 individuals) being crypto millionaires and 22 classified as crypto billionaires. The total market value of cryptocurrencies reached USD 1.2 trillion in 2024, while the number of different cryptocurrencies approached 5,000 (Feinstein & Werbach, 2021; Henley & Partners Holdings Ltd, 2023).

The scale of the modern global economy continues to reach new heights, fostering intensified competition among countries. In this competition, those countries that proactively adopt innovative financial instruments are achieving notable success (Silagadze, 2022). Amid such dynamics, cryptocurrencies have become a focal point of discussion on an international scale, engaging researches, entrepreneurs, investors, governments, and general public alike. As of 2024, the global number of cryptocurrency users had surpassed 425 million, with a remarkable 0.02% (88,200 individuals) identified as crypto millionaires and 22 classified as crypto billionaires. The total market value of cryptocurrencies reached USD 1.2 trillion in 2024, while the number of distinct cryptocurrencies approached 5,000 (Feinstein & Werbach, 2021; Henley & Partners Holdings Ltd, 2023).

Given the growing global popularity of cryptocurrencies, numerous international researchers have examined the regulatory aspects of these digital assets across different regions. In analysing the characteristics of cryptocurrencies, J. Lee & F. L'Heureux (2020) argued that their primary feature is decentralisation, which allows them to bypass government regulation. The regulation of cryptocurrencies remains one of the major challenges in the current crypto

market. Examining the control and management of cryptocurrencies by national governments, B. Feinstein & K. Werbach (2021) stated that the rapid expansion of this market, combined with the absence of global regulatory improvements, has led to issues such as money laundering, fraud, and capital outflow. However, national approaches to cryptocurrency regulation vary significantly. Studying cryptocurrency policies in over 200 countries, D. Weaver (2022) concluded that the adoption and regulation of cryptocurrencies depend on factors such as civil liberties, political rights, gross domestic product (GDP) per capita, investment levels, and regional location. According to D. Weaver, cryptocurrency adoption is notably higher in the Western Hemisphere than in the Eastern Hemisphere. Conversely, some researchers, such as C. Sonksen (2021), argued that the best regulatory models as of 2021 were found in the Asian region. Cryptocurrency regulation in the European Union (EU) is not without flaws.

S. Daskalova & D. Kumanov (2024), after analysing the EU legal framework, concluded that while European countries aim for regulatory harmonisation, the system is not yet fully effective. Separately, C. Wronka (2024) conducted a comparative analysis of cryptocurrency regulation in Germany and the UK. The study found that regulatory approaches differ significantly: the UK promotes innovation and the growth of the industry by fostering favourable regulatory conditions, whereas Germany prioritises investor protection and market stability. However, both regulatory systems face challenges, including ambiguity in cryptocurrency classification and taxation-related issues. Comparing the influence of central banks in Asian, Oceanian, and African countries on cryptocurrencies, M. Yaneva (2020) determined that there is no unified stance among central banks regarding cryptocurrencies as a legitimate means of payment alongside fiat currencies. The lack of communication between regulators and central banks in each country is identified as a major issue in the cryptocurrency regulation system. K. Turyan (2024) examined the role of financial institutions in former

Soviet Union (USSR) member states. The analysis found that in Central Asia and the Caucasus region, cryptocurrency usage poses significant legal challenges, as the legal status of these assets remains undefined. As a result, there are no legal protections for cryptocurrency users, potentially leading to substantial financial losses. Building on the findings of previous studies, it can be concluded that former USSR member states have often not been the primary focus of cryptocurrency regulation research, and the local characteristics of post-Soviet countries have frequently been overlooked. This gap in the literature underscores the relevance of the present study.

The aim of this study was to examine cryptocurrency market regulation on a global scale, with a particular focus on the local characteristics of post-Soviet countries. To achieve this objective, the study set out the following tasks: analyse the concept of “cryptocurrency” in relation to other means of payment and financial assets; investigate the advantages and disadvantages of cryptocurrency regulation; examine the regulatory frameworks governing crypto assets in Azerbaijan, Armenia, Georgia, Ukraine, and Moldova, comparing them with the regulatory approaches of the United States, Germany, and France; and identify potential ways to enhance cryptocurrency regulation in post-Soviet countries, taking local characteristics into account.

Materials and Methods

During the analysis, the key categorical concepts of this study – “digital currency”, “virtual currency”, and “cryptocurrency” – were defined based on the following parameters: issuer, regulation, form, costs, and international usage. Additionally, the advantages and risks associated with cryptocurrencies for users and governments in different countries were examined. Following the identification of cryptocurrency features and their impact on the global financial system, the 2024 Global Adoption Index (2024) was analysed to quantitatively assess cryptocurrency adoption levels. This index facilitated the identification of the leading countries in cryptocurrency adoption in 2024. Furthermore, the index was specifically examined for post-Soviet countries as a local indicator of the unique characteristics of cryptocurrency development in each nation. Based on this indicator, a selection of countries was made for further research into cryptocurrency regulation within the post-Soviet space. The selected countries fall into three distinct categories: countries actively implementing changes and fostering cryptocurrency market development – Ukraine and Georgia; countries with a transitional adoption regime (i.e., those that do not integrate cryptocurrencies into their financial systems but acknowledge potential risks) – Armenia and Azerbaijan; and a country with a liberal stance towards cryptocurrency adoption – Moldova. This selection was based on the governmental acceptance criterion, ensuring that recommendations for cryptocurrency regulation could be developed for countries with positive, neutral, and negative stances towards cryptocurrency adoption.

Since this study also focused on the local characteristics of countries, the foundational factors influencing cryptocurrency development – namely, the political and technological environments – were analysed. The political environment was examined using the Index of Economic Freedom (EFW) for the period 2020–2024. This index, calculated based on 12 criteria, is scored on a scale from 0 to 100 points (Heritage Foundation, 2024). Additionally, the Democracy Index for 2020–2024 was analysed, which assesses five key criteria and is rated on a scale from 1 to 10 points (Economist Intelligence Unit Limited, 2024a; 2024b).

The technological environment was assessed through the Information and Communications Technology Development Index (IDI) for 2024, which measures infrastructure development. This index, calculated based on 11 criteria, is also scored on a scale from 0 to 100 points (World Population Review, n.d.). The analysis of these indices was essential for identifying the similarities and differences in the local characteristics of post-Soviet countries in their path towards cryptocurrency market development.

Following the assessment of each country's capacity for cryptocurrency adoption, the key distinguishing aspects of cryptocurrency regulation in Ukraine, Georgia, Moldova, Armenia, and Azerbaijan were identified. To improve cryptocurrency regulation in post-Soviet countries, the study examined the regulatory approaches of the United States, Germany, and France. The analysis focused on three key parameters: legislation (existence of regulatory laws and the legal status of cryptocurrencies), tax policy, protection against fraud and market manipulation. The legislative-normative acts reviewed in this analysis included: Order of the President of the National Bank of Georgia No. 94/04 “On Approval of the Rules for Registration, Deregistration and Regulation of Virtual Asset Service Providers in the National Bank of Georgia” (2023), Law of Ukraine No. 2074-IX “On Virtual Assets” (2024), Directive (EU) No. 2018/843 of the European Parliament and of the Council “Amending Directive (EU) 2015/849 on the prevention of the use of the financial system for the purposes of money laundering or terrorist financing, and amending Directives 2009/138/EC and 2013/36/EU” (2018), Regulation (EU) No. 2023/1114 of the European Parliament and of the Council “On Markets in Crypto-Assets, and Amending Regulations (EU) No 1093/2010 and (EU) No 1095/2010 and Directives 2013/36/EU and (EU) 2019/1937” (2023), Law of France No. 2019-486 “Relating to the Growth and Transformation of Businesses” (2019).

At the final stage of the study, the challenges associated with different approaches to cryptocurrency regulation in the financial systems of the United States, Germany, and France were identified. Additionally, the feasibility of applying similar regulatory frameworks in post-Soviet countries in 2025 was examined. As a result, the study assessed the possibility and practicality of adopting American and European regulatory experiences in the five analysed post-Soviet countries. Based on this analysis, specific recommendations for regulatory improvements were developed.

Results

Since the 1970s, fiat money – a form of currency with no intrinsic value that is used as legal tender by government decree – has become dominant in the international financial system. Fiat money includes printed banknotes, minted coins, and non-cash funds, all of which derive their value from government recognition as legal tender. It is fully regulated by the state and functions as a centralised currency (Dapp, 2021). In this system, banks act as intermediaries between the central bank and currency users, charging fees for processing fiat currency transactions. By doing so, banks remain integral to the financial cycle and contribute to the security and stability of the currency (Khan *et al.*, 2020).

Economic conditions in the 21st century have evolved in parallel with the digitalisation of the global financial system. As a result, digital currency has emerged – a digital asset recognised as a means of payment, which includes digital fiat currency (Khan *et al.*, 2020; Xiong & Luo, 2024). While money throughout the 20th century existed primarily in physical form, it has now transitioned into a virtual format, though it remains under the control of each country's central bank. One of the primary issues with the digital format of fiat money is the double cost incurred by the end user. This refers to additional expenses that exceed a user's actual balance, including transaction fees for fund transfers, payment processing, and currency exchange. This drawback negatively impacts user trust in commercial banks, which act as intermediaries between individuals and the central bank (Sixt, 2017).

Cryptocurrency is gaining popularity as it eliminates the double-spending issue commonly associated with digital fiat currency (Khan *et al.*, 2020). It is a form of virtual currency that operates on a decentralised system (Xiong & Luo, 2024). Virtual currency refers to a digitally expressed value that functions as a medium of exchange, a store of value, and/or a unit of account. However, it does not hold the status of legal tender, as it is not backed by any legal jurisdiction (Gupta, 2021). Cryptocurrency exists exclusively in digital format and is secured through cryptography. Its foundation is blockchain technology – a decentralised ledger system that records transactions across multiple nodes. Blockchain structures data into sequentially linked blocks that are cryptographically secured and cannot be altered. In other words, blockchain ensures data integrity, security, and a verifiable transaction history, making it the backbone of cryptocurrency.

The development of blockchain technology has paved the way for alternative digital currencies beyond cryptocurrencies. Recognising the advantages of blockchain, central banks and national governments have explored the digitalisation of fiat currency to enhance the efficiency and security of financial systems. This has led to the emergence of Central Bank Digital Currencies (CBDCs). CBDCs offer several advantages, including faster and more cost-effective payment processing and the ability to store money exclusively in digital format. However, they also allow governments to monitor all user transactions, potentially enabling

personalised fiscal policies, such as automated taxation (Dapp, 2021). It can be concluded that, in comparison to cryptocurrency and fiat money, CBDCs have not yet gained significant popularity on a global scale. While fiat money operates under a centralised management system, it is affected by the double-spending problem. In contrast, cryptocurrency serves as an alternative for users, addressing the shortcomings of both CBDCs and fiat currency through decentralised management, a fully digital format, and the elimination of double-spending. In other words, cryptocurrency offers significant advantages to users. Cryptocurrency transaction systems are rapidly gaining popularity worldwide due to a trust framework involving individuals, organisations, computers, and decentralised organisations. By leveraging cryptocurrency, it is possible to minimise the costs traditionally imposed by banking systems on national economies. To address the issue of transaction security and verification, blockchain-based cryptocurrencies rely on a consensus mechanism, specifically Proof of Work (PoW). PoW is executed by a decentralised network of miners, who validate transactions and maintain the accuracy of the blockchain ledger. This means that, unlike fiat currency and CBDCs, cryptocurrencies are “mined” and exchanged within the economy without incurring transaction costs (Khan *et al.*, 2020).

Cryptocurrency presents regulatory challenges for governments worldwide. Several key issues in this process stem from the underlying blockchain technology, as various cryptocurrencies are built upon it. Firstly, cryptocurrencies provide alternative access to financial services, posing a challenge to the traditional decentralised banking system. While all transactions are recorded in a public ledger, the use of pseudonyms complicates regulation. This is because transactions are linked to a cryptographic address rather than the personal identity of the user. Another major issue is the decentralised nature of blockchain technology. On the one hand, decentralisation enhances the security of cryptocurrency. On the other hand, it creates challenges in legal liability (Xiong & Luo, 2024). Unlike conventional financial systems, cryptocurrencies operate without a central governing body, making it difficult to establish legal responsibility in cases of fraud (González-Gallego & Pérez-Cárceles, 2021). Additionally, the international scope of blockchain complicates government efforts to regulate it. As a result, each government has adopted its own approach to cryptocurrency regulation. For example: Total bans on cryptocurrency exist in China. Partial bans on certain cryptocurrency-related activities are in place in Pakistan and Saudi Arabia. Restrictive regulations with strict risk-mitigation measures exist in the United States and Canada. Supportive regulations that encourage cryptocurrency market development exist in Kazakhstan and Germany. No official regulation, but concerns about risks, exist in Armenia and Azerbaijan. No regulation at all exists in Yemen and Turkmenistan. Legal tender status is granted to cryptocurrencies in the Central African Republic and El Salvador. On an international scale, only around 27% of countries have

adopted a supportive stance towards cryptocurrency regulation. This reflects widespread concerns about the potential risks of financial crime, monetary policy violations, and threats to economic stability (Xiong & Luo, 2024).

One of the key indicators for assessing cryptocurrency adoption in a country is a quantitative measure of its adoption level on a global scale, represented by the Cryptocurrency Adoption Index. This global index comprises four sub-indices, which take into account factors such as population size and purchasing power. The ranking is determined using the geometric mean, with normalised final values ranging from 0 to 1. A higher score, closer to 1, indicates a greater level of adoption. In 2024, the leading countries in cryptocurrency adoption were: India – 1.0 points (1st place), Nigeria – 0.693 points (2nd place), Indonesia – 0.680 points (3rd place), United States – 0.540 points (4th place). Among post-Soviet countries, Ukraine had the highest level of cryptocurrency adoption in 2024, with a score of 0.407 points, ranking 6th out of 151 countries in the international ranking. By comparison, in 2020, the United States ranked 6th out of 154 countries with a score of 0.327 points (2024 Global Adoption Index, 2024). Notably, in 2020, Ukraine was the global leader in cryptocurrency adoption, achieving a Cryptocurrency Adoption Index score of 1.0 points, the highest recorded level. Other post-Soviet countries, however, exhibited low levels of cryptocurrency adoption.

One of the key challenges for post-Soviet countries is the decision between adapting existing cryptocurrency regulations based on the successful experiences of other nations or developing an entirely new regulatory framework (Ishchuk & Ishchuk, 2023). To examine international regulatory approaches and identify aspects that could be applied to post-Soviet countries, this study selected nations that ranked highly in the Cryptocurrency Adoption Index in 2024: North America: United States (0.540 points, 4th place), European Union: Germany (0.110 points, 21st place) and France (0.106 points, 22nd place). Additionally, post-Soviet countries with varying levels of cryptocurrency adoption were selected for analysis: Ukraine (0.407 points, 6th place), Georgia (0.030 points, 54th place), Moldova (0.027 points, 59th place), Armenia (0.019 points, 77th place), Azerbaijan (0.014 points, 92nd place) (2024 Global Adoption Index, 2024). The extent to which cryptocurrency is adopted in each country is reflected in its regulatory approach. Currently, there is no unified international regulatory framework for cryptocurrencies (Seok, 2024). While complete bans on cryptocurrency usage exist in some countries across South America, Africa, and Asia, such prohibitions remain relatively rare, affecting only 10.8% of countries globally (Thomson Reuters, 2022). As of 2024, 71 countries have yet to implement regulations for the cryptocurrency market (Xiong & Luo, 2024).

Among the post-Soviet countries analysed, only Ukraine and Georgia have legalised and regulated cryptocurrency at the state level. In both nations, the government actively promotes the development of the crypto market. In contrast,

Moldova has partially restricted cryptocurrency usage, while Azerbaijan and Armenia have not developed specific regulatory frameworks but have expressed concerns about potential risks. These variations in regulatory approaches highlight the need for a more detailed analysis of the current situation in post-Soviet countries (Xiong & Luo, 2024).

Cryptocurrency regulation in the analysed countries varies significantly in terms of legislation, tax policy, and investor protection. From a regulatory perspective, it is crucial to examine the legal framework governing cryptocurrencies. Since March 2022, the foundation for cryptocurrency regulation in Ukraine has been the Law of Ukraine No. 2074-IX (2024). Under this law, the legal status of cryptocurrency in Ukraine is defined as a virtual asset within civil law. It is described as a set of electronic data that holds value and cost. However, cryptocurrency is not recognised as a means of payment, meaning it cannot be used for purchasing goods or services (Thomson Reuters, 2022). In Ukraine, virtual assets are categorised into two types: secured by fiat currency, such as stable coins and unsecured, such as Bitcoin. Virtual currencies can be stored, exchanged, transferred, bought, and sold. However, a key issue in Ukraine's cryptocurrency regulation is its tax policy. The lack of comprehensive regulation has led to concerns regarding money laundering and tax evasion (Martinčević *et al.*, 2022). The Law of Ukraine No. 2074-IX (2024) states that compliance and oversight of virtual assets will be carried out by the National Securities and Stock Market Commission.

Cryptocurrency-related activity is growing worldwide, including in Georgia. Cryptocurrency is not recognized a legal form of payment in Georgia. In 2014, the National Bank of Georgia classified cryptocurrencies as digital assets with an uncertain legal status, highlighting their potential use in money laundering and criminal activities. As a result, cryptocurrencies in Georgia are not recognised as virtual currencies, but rather as digital assets, which has prevented their legalisation in the country. Cryptocurrency regulation in Georgia is influenced by the positions of multiple government institutions, including the Central Bank, the Ministry of Finance, the Ministry of Economic Development, and the Prosecutor General's Office. However, these institutions do not hold a unified stance on the definition and regulation of cryptocurrencies. Furthermore, Georgia lacks specific legislation that defines the legal status of cryptocurrencies or provides regulatory measures. Cryptocurrencies are not recognised as a means of payment, and there are no legal protections against fraud and market manipulation.

Up until 2016, the Georgian government had imposed restrictions on cryptocurrency-related activities. However, it later legalised these digital assets, acknowledging the risks associated with them. In subsequent years, the Georgian government expressed interest in improving cryptocurrency regulation as part of an effort to develop a national cryptocurrency (Topuria, 2024). Order of the President of the National Bank of Georgia No. 94/04 (2023) came into force

in Georgia, mandating the registration of the so-called “virtual asset service providers” with the National Bank of Georgia and outlining their subsequent obligations. In 2019 the National Bank of Georgia introduced digital bank licensing principles to lower entry barriers for new market participants. In 2022, the first digital bank was licensed, followed by three more in 2023. The digital lari pilot program was also launched in 2024 (AccountAnts, n.d.). In parallel with progress in this direction, it is anticipated that this advancement will contribute to reducing cartel transactions within Georgian banking system.

In Azerbaijan, cryptocurrencies do not fit within the traditional classification of assets. They are not recognised as legal tender, as only national and foreign state-backed currencies are considered valid forms of money. Additionally, cryptocurrency is not classified as intangible property, since it is considered an alienable right with economic value. Consequently, Azerbaijan does not have specific legislative or tax regulations governing cryptocurrency, nor does it have fraud prevention mechanisms (Safarli, 2023). The country's regulatory approach to cryptocurrency remains conservative. Similarly, Moldova and Armenia do not have clearly defined legislative or tax regulations for cryptocurrency, and there are no legal mechanisms for fraud prevention or market protection. The Moldovan government has adopted a liberal stance towards cryptocurrency circulation, while in Armenia, cryptocurrencies are not subject to prohibitive measures, except for criminal procedural regulations (Lohoyda, 2021).

It can be concluded that while Ukraine has established legislation regulating cryptocurrency and defining its legal status, it lacks a clear tax policy regarding cryptocurrencies. In contrast, Georgia has implemented a tax policy for cryptocurrencies but does not have specific legislation defining their legal status or regulatory framework. In Azerbaijan, Moldova, and Armenia, there are no established laws, tax policies, or mechanisms for fraud prevention in the cryptocurrency sector. As a result, while Ukraine and Georgia have taken initial steps towards legal regulation, their regulatory frameworks remain underdeveloped, positioning them as emerging markets for cryptocurrency. Therefore, it is crucial for these countries to incorporate best international practices regarding the legal status and regulation of cryptocurrency into their legislative frameworks. For Moldova, Armenia, and Azerbaijan, alternative approaches must be explored to address cryptocurrency-related challenges effectively. To develop country-specific measures, it is essential to consider each nation's local characteristics, which play a vital role in determining the feasibility and acceptance of cryptocurrency regulation. Two key local factors influencing cryptocurrency adoption are political and technological capabilities. Political conditions are assessed using indicators such as the EFW and the Democracy Index (Heritage Foundation, 2024; Economist Intelligence Unit Limited, 2024a; 2024b). Currently, the EFW is calculated for 184 countries by Heritage Foundation (2024). Table 1 provides a comparative analysis of EFW trends over time in the analysed countries.

Table 1. Dynamics of EFW in the countries under study in comparison for 2020-2024

Year \ Country	Azerbaijan	Armenia	Germany	Georgia	Moldova	USA	Ukraine	France
2020	69.3	70.6	73.5	77.1	62.0	76.6	54.9	66.0
2021	70.1	71.9	72.5	77.2	62.5	74.8	56.2	65.7
2022	61.6	65.3	76.1	71.8	61.3	72.1	54.1	65.9
2023	61.4	65.1	73.7	68.7	58.5	70.6	–	63.6
2024	61.6	64.9	72.1	68.4	57.1	70.1	–	62.5
Absolute change during 2020-2024	–7.7	–5.7	–1.4	–8.7	–4.9	–6.5	–	–3.5

Note: due to the ongoing military actions in Ukraine, the primary data required for the calculation of the EFW has ceased to be published. As a result, the most recent available EFW value for Ukraine is from 2022

Source: compiled by the authors based on Heritage Foundation (2024)

The dynamics of EFW changes from 2020 to 2024 have been negative for all the analysed countries. However, it is important to note that the rate of decline in post-Soviet countries has been significantly greater than in EU countries. For instance, while Georgia surpassed the United States in this indicator in 2020, economic conditions in post-Soviet countries have deteriorated significantly over the years. As a result, all five post-Soviet countries examined in this study now exhibit lower levels of economic

freedom compared to the United States and EU nations. As of 2024, according to the EFW indicator: Moldova and Ukraine are classified as “unfree” countries, scoring within the 50-59.9 range. Armenia, Azerbaijan, and Georgia are classified as “moderately free”, similar to France. The United States and Germany are classified as “mostly free”, scoring within the 70-79.9 range (Heritage Foundation, 2024). It is also essential to consider the dynamics of political freedom, as measured by the Democracy Index (Table 2).

Table 2. Dynamics of the Democracy Index in the countries under study in comparison for 2020-2024

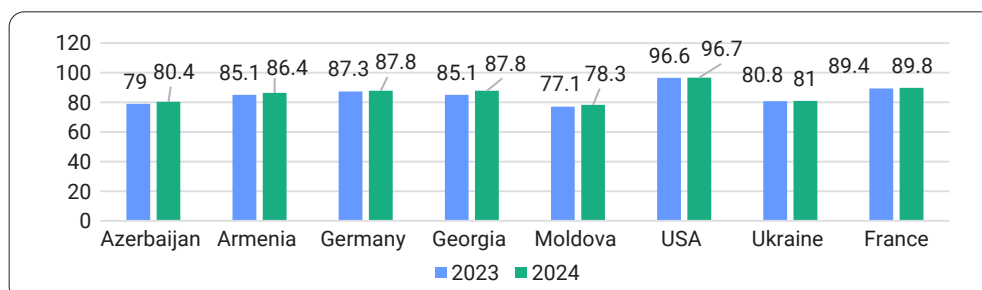
Year	Azerbaijan	Armenia	Germany	Georgia	Moldova	USA	Ukraine	France
2020	2.68	5.35	8.67	5.31	5.78	7.92	5.81	7.99
2021	2.68	5.49	8.67	5.12	6.10	7.85	5.57	7.99
2022	2.87	5.63	8.80	5.20	6.23	7.85	5.42	8.07
2023	2.80	5.42	8.80	5.20	6.23	7.85	5.06	8.07
2024	2.80	5.35	8.73	4.70	6.04	7.85	4.90	7.99
Absolute change during 2020-2023	+0.12	0.0	+0.06	-0.61	+0.26	-0.07	-0.91	0.0

Source: compiled by the authors based on Economist Intelligence Unit Limited (2024a; 2024b)

Between 2020 and 2024, the Democracy Index increased in all post-Soviet countries, with the exception of Georgia and Ukraine, where it showed a declining trend, and Armenia, where it returned to its 2020 value. In 2024, according to the Democracy Index classification: Germany was categorised as a full democracy, falling within the 10.00-8.01 range. The United States, France, and Moldova were classified as flawed democracies, with scores in the 8.00-6.01 range. Ukraine, Georgia, and Armenia were categorised as hybrid regimes, with Democracy Index values between 6.00 and 4.01. Azerbaijan, with a Democracy Index of 2.80 in 2023, fell within the 4.00-1.00 range and was therefore classified as an authoritarian regime (Economist Intelligence Unit Limited, 2024a; 2024b). Considering the

Democracy Index alongside the EFW, it can be concluded that all five analysed post-Soviet countries face a political environment that hinders the full-scale adoption and regulation of cryptocurrencies, due to limitations in political and economic freedom.

Additionally, when assessing the local characteristics of post-Soviet countries, it is essential to examine the development of information and communication technologies (ICTs), which provide the technological foundation for cryptocurrency market growth. This factor is measured by the IDI. Currently, the IDI is calculated by the United Nations (UN) for 170 countries. The IDI dynamics for 2023-2024 in the analysed countries are presented in Figure 1.

**Figure 1.** IDI dynamics in the countries under study compared for 2023-2024

Source: compiled by the authors based on World Population Review (n.d.)

As of 2024, the IDI in Ukraine increased by 0.2% compared to 2023, while in Armenia, it rose by 1.3%. In Azerbaijan, Moldova, and Georgia, the IDI increased by 1.4%, 1.2%, and 2.7%, respectively, compared to the previous year. The positive growth in IDI levels across post-Soviet countries, in comparison to EU nations and the United States, highlights a solid technological foundation for cryptocurrency market development (World Population Review, n.d.). Furthermore, as of 2024, the IDI and EFW indicators in the five post-Soviet countries exhibited similar trends, placing them within the same or closely related groups in terms of technological and economic conditions for cryptocurrency adoption.

Having analysed cryptocurrency regulation in the post-Soviet countries, as well as the local characteristics of Georgia, Ukraine, Moldova, Armenia, and Azerbaijan, it is crucial to examine the experiences of other countries and

identify key regulatory challenges. Learning from these experiences can serve as a foundation for improving cryptocurrency regulation in the post-Soviet region.

The United States hosts the largest number of crypto investors, exchanges, and mining funds. As of 2024, the IDI in the United States stood at 96.7% out of 100%. The EFW, IDI, and Democracy Index collectively provide a strong foundation for the functioning and expansion of the cryptocurrency market. The regulation of crypto assets in the United States is integrated into the existing regulatory framework (Burgess, 2024). While the cryptocurrency regulatory landscape continues to evolve annually, the perspectives of different regulatory agencies remain divergent. For example: The Securities and Exchange Commission (SEC) classifies cryptocurrency as a security. The Commodity Futures Trading Commission (CFTC) considers it a commodity. The Treasury Department (Treasury) defines

it as a currency. The Internal Revenue Service (IRS) treats cryptocurrency as a digital asset that functions as a medium of exchange, store of value, and/or means of settlement, requiring annual disclosure in tax returns (Thomson Reuters, 2022). Despite a White House directive to coordinate regulatory efforts among these agencies, there is no single federal law governing cryptocurrency. This fragmented regulatory framework results in inconsistent guidelines and gaps in consumer protection.

However, efforts are underway to establish a unified regulatory framework that classifies different types of cryptocurrencies as securities, commodities, or property, with the aim of enhancing consumer protection against financial crimes (Xiong & Luo, 2024). For Ukraine and Georgia, the U.S. experience highlights the importance of avoiding similar regulatory pitfalls. To enhance cryptocurrency regulation, it is crucial for these countries to: develop a coordinated regulatory system that ensures effective communication and collaboration between government agencies; establish a comprehensive tax policy to mitigate risks for investors and reduce opportunities for tax evasion; strengthen fraud prevention and financial crime measures, drawing lessons from U.S. regulatory practices. Given that Georgia and Ukraine currently have limited mechanisms to prevent fraud and financial crimes in the cryptocurrency sector, their governments can improve regulatory safeguards by adopting best practices from the U.S. model while addressing its shortcomings.

In addition to the United States, it is also essential to examine adaptive regulatory measures from EU countries that could be applied to post-Soviet nations to improve cryptocurrency regulation. The primary objective of cryptocurrency regulation in the EU is to harmonise regulatory and legal frameworks across all member states by integrating cryptocurrency into national regulatory structures. The EU introduced the Directive (EU) No. 2018/843 of the European Parliament and of the Council (2018), which partially addresses cryptocurrency regulation, particularly in the context of fraud prevention and financial crime mitigation. However, EU member states retain the right to adapt the Directive at their own discretion, leading to inconsistencies in regulation across the EU (Burgess, 2024).

To better understand these regulatory differences, it is useful to compare Germany and France, two countries with distinct cryptocurrency regulatory frameworks. Despite their similar IDI and EFW scores, as well as high Democracy Index values – which provide favourable local conditions for the cryptocurrency market – Germany and France have taken different approaches to cryptocurrency regulation (Heritage Foundation, 2024; World Population Review, n.d.). Germany was among the first countries to authorise financial institutions and the general public to store cryptocurrency legally (Thomson Reuters, 2022). As a result, the regulation of crypto assets in Germany and France differs significantly, despite their comparable economic and political environments.

The French government actively supports the development of the cryptocurrency market within the country (2024 Global Adoption Index, 2024). From a legislative perspective, France adopted the Law of France No. 2019-486 (2019), which, in addition to regulating business expansion and transformation, also governs cryptocurrency regulation. The Law of France No. 2019-486 establishes the legal status of cryptocurrency as a digital asset, rather than a currency, as cryptocurrency is not recognised as a medium of exchange and is considered ineffective as a store of value in France. Additionally, Law of France No. 2019-486 sets rules for cryptocurrency investors, requiring them to either register or obtain a licence, depending on their intended use of cryptocurrencies. These registration and licensing requirements serve as key measures to prevent money laundering and fraud (AbdelAziz & Shalaby, 2023).

Since 2019, anonymous cryptocurrency accounts have been prohibited in France under the Law of France No. 2019-486 (2019). The Financial Markets Authority (AMF) is responsible for overseeing the sector. In terms of taxation, cryptocurrencies in France are classified similarly to movable property: casual traders are subject to a 30% tax; miners and regular traders pay a 45% tax (Thomson Reuters, 2022). France's cryptocurrency regulation differs from that of the EU and other countries, including the United States, as it implements an unrestricted incentive plan that deviates from the traditional financial instruments' regulatory framework. A distinctive feature of AMF oversight in France is its comprehensive responsibility for regulating cryptocurrencies and digital assets, ensuring investor protection and market stability as the sector rapidly evolves. In contrast, cryptocurrency regulation in the United States remains fragmented, with multiple agencies – including the SEC, the CFTC, and the IRS – sharing regulatory authority. The absence of a unified federal law further complicates the regulatory landscape in the U.S.

In Germany, both individuals and legal entities can use and trade cryptocurrency through official exchanges. However, a licence from the German Federal Financial Supervisory Authority (BaFin) is required for such activities. Regarding the legal status of cryptocurrency in Germany: Cryptocurrency is considered an illegal means of payment but is recognised as a legal asset in the form of a financial instrument. Crypto assets are accepted as a means of exchange, payment, and investment, meaning they can be transferred, stored, and sold. From a taxation perspective, cryptocurrencies in Germany are classified as private money and are therefore taxed accordingly: Profits of less than EUR 600, held for less than a year, are not taxable. Sales of cryptocurrencies stored for more than a year are tax-exempt. If neither of the above conditions is met, profits are taxed at the standard income tax rate (Thomson Reuters, 2022).

To address regulatory gaps in the harmonisation of cryptocurrency laws across the EU, the Regulation (EU) No. 2023/1114 of the European Parliament and of the

Council (2023) aims to regulate crypto assets that are not covered under existing financial legislation. The Regulation (EU) No. 2023/1114 of the European Parliament and of the Council provisions apply to three categories of crypto assets: Asset-referenced tokens (ARTs) – Tokens that stabilise their value by linking to a basket of assets, such as stable coins. E-money tokens (EMTs) – Tokens that stabilise their value by pegging to a fiat currency, such as the USD-pegged cryptocurrency USD Coin (USDC) (Burgess, 2024). Utility tokens – Tokens used to access goods and services within a specific network. However, Regulation (EU) No. 2023/1114 of the European Parliament and of the Council does not apply to decentralised finance (DeFi), as DeFi operates without intermediaries and falls outside the scope of traditional financial regulation (Xiong & Luo, 2024).

Analysing the EU and US approaches to cryptocurrency regulation, alongside the local characteristics of post-Soviet countries, it becomes evident that adopting these regulatory models is advisable only for Ukraine and Georgia, rather than for all post-Soviet nations. This is primarily because Ukraine and Georgia already have a restrictive regulatory framework and possess the necessary political and technological conditions to foster cryptocurrency market development. Although both Ukraine and Georgia have taken initial steps towards cryptocurrency regulation, their regulatory systems remain incomplete, particularly in terms of legislation, tax policy, and measures to prevent fraud and financial crimes. For regulation to be effective, it is crucial to identify and address the existing gaps and risks specific to each country. Additionally, learning from the experiences of other nations – those that have advanced further in cryptocurrency regulation – can help avoid past regulatory mistakes.

The EU approach to cryptocurrency integration is cautious and gradual, meaning that the financial system is introduced to cryptocurrencies in a controlled and phased manner. This slow integration strategy is particularly relevant for Ukraine and Georgia, considering their local economic and regulatory environments and their long-term cryptocurrency market development goals (Burgess, 2024). Over time, this approach has become more tailored to individual national markets, contributing to a more harmonised regulatory framework. However, such harmonisation must still account for market dynamics and the unique characteristics of each country (Xiong & Luo, 2024). The legal regulatory model chosen by a country has a direct impact on the growth and stability of its cryptocurrency market within its financial system (Topuria, 2024). Therefore, a gradual and systematic integration of cryptocurrencies, combined with a comprehensive legal, tax, and protective regulatory framework, represents the most effective approach for both Ukraine and Georgia.

In Georgia, the first priority in improving cryptocurrency regulation is to establish a clear legal framework. A key difference between Georgia and other countries lies in the classification of cryptocurrency. When defining its legal status, Georgia should consider international experiences,

where cryptocurrency is classified as property, a security, or a commodity. In developing its cryptocurrency regulations, Georgia must also address the regulatory shortcomings observed in the United States, where fragmented oversight has led to inconsistent policies (Burgess, 2024). A similar issue exists in Georgia: the unclear legal status of cryptocurrency creates management challenges and fails to provide adequate security guarantees for users (Topuria, 2024).

To resolve this issue, Georgia must establish clear legal definitions for cryptocurrency and assign specific responsibilities to regulatory bodies. This would prevent regulatory duplication and ensure a more effective oversight system (Xiong & Luo, 2024). Additionally, improving the classification of cryptocurrencies and mandating all service providers to become self-regulatory organisations could enhance user data protection and reduce the risk of financial crimes (Burgess, 2024). These measures represent the second most critical step for Georgia in improving cryptocurrency market regulation. For Ukraine, given its existing legislation, the primary challenge lies in its tax policy. It is crucial to eliminate ambiguities in taxation and establish a transparent and flexible tax system, similar to Germany's approach. Implementing such a taxation model would be the second key measure for Ukraine in enhancing its regulatory framework and advancing the development of its cryptocurrency market.

The third most important measure, jointly essential for Ukraine and Georgia in improving cryptocurrency regulation, is the implementation of financial fraud and money laundering prevention measures, drawing from France's experience. Specifically, the registration and licensing of cryptocurrency exchanges, along with expanding the functions of a central regulatory body, could significantly reduce risks associated with financial fraud and money laundering through crypto assets. In contrast, the regulatory approaches adopted in the United States and the European Union are not suitable for Moldova, Armenia, and Azerbaijan, given these countries' neutral or negative stance towards integrating cryptocurrencies into their financial systems. Additionally, challenges such as a weaker technological infrastructure and political instability make these approaches impractical. For these three post-Soviet nations, a more viable strategy would be the consideration and implementation of CBDCs. As cryptocurrencies gain global popularity, an increasing number of central banks are developing CBDCs, which offer the advantage of linking digital assets to national currencies. This strategy is the most suitable and pragmatic approach for post-Soviet countries (Makarchuk *et al.*, 2023; Burgess, 2024).

In cash-based economies, where traditional banking and digital payment systems do not pose significant competition to physical currency, CBDCs offer an optimal solution (Mancini-Griffoli *et al.*, 2018). For instance, digital currencies have already been introduced in the UK and the United States. Through CBDCs, central banks can simultaneously protect users' financial rights and prevent financial crimes, offering a secure and reliable means of

payment. This contrasts with the increasing influence of cryptocurrencies, which pose regulatory and financial stability challenges in many countries. Thus, CBDCs present a viable alternative for post-Soviet countries that perceive cryptocurrency legalisation as too risky and existing regulatory mechanisms as insufficient for ensuring the stability and efficiency of their financial systems (Burgess, 2024).

Cryptocurrency has yet to achieve full success as a medium of exchange, a store of value, or a stable unit of account, whereas CBDCs are designed to address these shortcomings (Gupta, 2021). While cryptocurrency, fiat money, and bank deposits coexist, CBDCs offer the advantage of minimal transaction costs, a feature that is also a key benefit of cryptocurrency over fiat money (Mancini-Griffoli *et al.*, 2018). One of the main advantages of cryptocurrency is its ability to operate without intermediaries, thereby minimising third-party risk. In contrast, CBDCs can only partially mitigate this risk by reducing transaction layering, while at the same time granting central banks greater control over transactions.

Another advantage of cryptocurrency is its decentralised nature and complete transaction anonymity, which limits government oversight. In this regard, cryptocurrencies and CBDCs represent opposing financial models, as CBDCs are fully centralised and enable government control over transactions. However, given the rapid digitalisation of financial systems, post-Soviet countries that are strongly opposed to cryptocurrencies should not immediately reject financial system innovations. Instead, they should consider more controlled alternatives, such as CBDCs (Gupta, 2021). As the analysis has shown, fiat currency poses risks to users, and the primary reason for cryptocurrency's popularity is its ability to eliminate such risks. However, CBDCs do not fully resolve this issue, as they remove intermediaries between the central bank and the end user (Cukierman, 2020). In this system, the central bank benefits from transaction control, while users benefit from a simplified and more secure financial process. Such a regulatory structure significantly reduces the risk of financial fraud (Ballaschk & Paulick, 2021).

For Moldova, Armenia, and Azerbaijan, these factors provide strong justification for opting out of cryptocurrency adoption in favour of CBDCs. The recommended strategy for these countries should include: developing a legislative framework for digital currencies; improving technological infrastructure to support digital financial transactions; conducting public awareness campaigns to educate citizens on CBDCs; gradually integrating CBDCs into the financial system while monitoring their impact on the broader economy. CBDCs eliminate many of cryptocurrency's disadvantages while offering the benefits of digital currency adoption. Although CBDCs may not rely on blockchain technology or cryptographic systems, they remain a critical benchmark for cost efficiency, privacy, and financial innovation in the years ahead. Given the neutral stance of the Armenian and Azerbaijani governments, the liberal approach of Moldova, and the political and

technological feasibility of CBDC adoption, this represents the most viable alternative for these three countries.

Discussion

The study found that, in general, cryptocurrency is a cryptographically protected virtual currency that is gaining global popularity. However, the primary challenge faced by different countries is the imperfect regulatory framework for this type of digital asset. The main issues relate to legislation and the legal status of cryptocurrency. None of the analysed post-Soviet countries has adopted a unified classification for cryptocurrencies. For instance: In Ukraine, cryptocurrency is classified as a virtual asset, but not a means of payment (Spytska, 2023). In Georgia, it is considered a digital asset, rather than a virtual currency. In Azerbaijan, cryptocurrency does not align with the traditional asset classification system. In Armenia and Moldova, there is no official definition or legal interpretation of cryptocurrency at the national level. This lack of legal clarity presents a significant barrier to the development of an effective regulatory system, which, in turn, impacts cryptocurrency adoption. While all analysed countries acknowledge the risks of money laundering and financial fraud, there is no consensus on the legal status of crypto assets. These findings align with the research of L. Öztürk & E. Sülüngür (2021), who concluded that most national governments seeking to develop cryptocurrency markets recognise associated risks but take minimal legislative action to define the legal status of cryptocurrencies. To establish effective regulation, it is essential to provide a clear legal definition of cryptocurrencies. Standardising and harmonising regulatory frameworks would facilitate greater consistency and internalisation of rules governing cryptocurrency use and oversight.

Through an analysis of local characteristics and the potential for cryptocurrency adoption within the financial systems of post-Soviet countries, it was determined that all analysed nations have a less developed political landscape. Specifically: Moldova and Ukraine are categorised as unfree countries. Armenia, Azerbaijan, and Georgia are classified as moderately free countries. In terms of information technology infrastructure, the five analysed countries exhibit similar levels of development within the post-Soviet space, yet remain significantly behind the United States and the European Union. This technological gap has a direct impact on cryptocurrency adoption in each country. It was observed that: Azerbaijan and Armenia do not take specific regulatory actions regarding cryptocurrency. Moldova maintains a liberal policy towards cryptocurrency. Ukraine and Georgia have implemented the most structured and strictly regulated approaches among the analysed post-Soviet countries. This distinction arises from the fact that Ukraine and Georgia recognise the opportunities that cryptocurrencies offer to users, which contributes to their global popularity (Kuzheliev, 2023). Conversely, Moldova, Azerbaijan, and Armenia focus primarily on the risks associated with cryptocurrencies, such as minimal regulatory control and a decentralised system. These

findings align with the research of Y. Mezquita *et al.* (2023), who concluded that governments in many countries reject financial assets that are voluntarily created and lack security control within the financial system. Similarly, L. Öztürk & E. Sülüngür (2021) emphasised the importance of evaluating both the benefits and risks when determining a country's approach to cryptocurrency adoption.

To examine various approaches to cryptocurrency regulation on a global scale and identify best practices that could be adopted by post-Soviet countries, the regulatory systems of the United States, Germany, and France were analysed. The findings revealed that classification issues regarding cryptocurrency also persist in these countries.

In the EU, despite efforts to harmonise cryptocurrency legislation across member states, differences in adaptation remain at the national level. Similar conclusions were drawn by V. Benson *et al.*, (2024), who studied the challenges of regulatory harmonisation in the cryptocurrency sector. Their research found that the EU lacks a unified national regulatory framework, and existing legislation is primarily focused on implementing AML measures rather than establishing comprehensive cryptocurrency regulation.

In the United States, cryptocurrency is classified as a security, commodity, or property, depending on the regulatory agency (Llazo *et al.*, 2024). Both the United States and EU countries have attempted to create a unified regulatory system for cryptocurrencies, but inconsistencies remain. This regulatory experience is valuable for Ukraine and Georgia, as both nations are actively integrating cryptocurrencies into their financial systems. However, it is crucial for them to learn from the regulatory challenges faced by the US and EU and to avoid similar pitfalls when developing their own frameworks. Despite ongoing improvements, the regulatory systems in the United States, Germany, and France are still far from perfect. The notion that countries should adopt external regulatory models differs from the conclusions of M.G. Lindsay (2023), who compared cryptocurrency regulations in Western and Asian countries. Their research found that domestic cryptocurrency regulations are becoming obsolete, given the rapid rise in cryptocurrency adoption. According to their findings, the only viable solution is international regulatory coordination rather than country-specific legislation.

The analysis revealed that Armenia and Azerbaijan have not taken concrete steps to regulate cryptocurrencies, while Moldova remains critical of their introduction into the financial market. The primary concerns for these countries stem from the risks posed by cryptocurrencies to government control, including: a challenge to the traditional banking system due to transaction anonymity; the absence of double costs, which affects financial oversight; a decentralised system, which weakens the control of each country's central bank (Karimli *et al.*, 2024). Given the lack of interest from Armenia, Azerbaijan, and Moldova in integrating cryptocurrencies into their financial systems, it would not be advisable to apply the regulatory models of the United States and the European Union, as suggested

for Georgia and Ukraine. Instead, these three countries should focus on an alternative strategy: the development and implementation of CBDCs. CBDCs offer similar advantages to users as cryptocurrencies while eliminating risks for governments. As digitalisation becomes essential for improving financial systems, CBDCs present a viable opportunity to achieve this goal (Dmytrenko, 2024). Similar conclusions were drawn by M. Bordo & A. Levin (2017), who found that CBDCs function as a stable store of value, a unit of account, and a medium of exchange with minimal transaction costs for users. This stands in contrast to the operational characteristics of cryptocurrencies. These findings are consistent with the results of this study and have been confirmed by other researchers, including W. Engert & B.S.C. Fung (2017), who analysed central banks' motives and the potential consequences of CBDC implementation. The design and functionality of CBDCs have been extensively examined by D. Chaum *et al.* (2021) and E. Prasad (2021), who identified two main types of CBDCs: General-purpose CBDC – This serves as a digital complement to physical currency. It allows direct transfers between users without requiring commercial banks, while still enabling central banks to monitor and process transactions (Chaum *et al.*, 2021). Wholesale CBDC – Designed for large-scale transactions between financial institutions, serving as a digital analogue of traditional currency (Prasad, 2021). Given the political and economic conditions in Armenia, Azerbaijan, and Moldova, the implementation of CBDCs presents the most practical alternative to cryptocurrency adoption, ensuring a controlled and secure financial system while facilitating technological progress.

Given the risks associated with minimal control over cryptocurrencies due to their cryptographic nature, Armenia, Azerbaijan, and Moldova may choose to develop a CBDC design that does not rely on blockchain technology. This aligns with the findings of U. Bindseil (2019), who examined potential digital currency models for central banks. His analysis concluded that the design choice between a CBDC based on accounts or tokens plays a crucial role in shaping a country's future economic policy. The debate over CBDC design remains ongoing among researchers. While some scholars, such as D. Chaum *et al.* (2021), completely reject the idea of blockchain-based CBDCs, others, including T. Zhang & Z. Huang (2021), argued that blockchain technology can be effectively integrated into CBDC systems. However, these contrasting perspectives reinforce the notion that blockchain-based CBDC models are not a necessity for Moldova, Armenia, and Azerbaijan, making their exclusion from CBDC development strategies a valid approach in line with their existing policies. It is also important to consider the challenges associated with CBDC implementation. Both T. Zhang & Z. Huang (2021) and D. Chaum *et al.* (2021) highlighted several potential drawbacks, including: increased transaction costs compared to traditional payment systems and limited scalability, which could impact efficiency and widespread adoption. However, in this study, the potential disadvantages of CBDCs for

Moldova, Armenia, and Azerbaijan were not examined, with the focus placed solely on their benefits and advantages. Future research should explore both the strengths and limitations of CBDC implementation to provide a comprehensive assessment of its viability for these countries.

Conclusions

The study determined that the EFW dynamics for all post-Soviet countries have been negative, ranging from 4.9% to 8.7% during 2020-2024, indicating political barriers to cryptocurrency regulation. Meanwhile, the IDI dynamics for the same period showed an increase of 0.2%-2.7% in all post-Soviet countries, reflecting a strong technological foundation. Despite similar local characteristics supporting the development of cryptocurrencies, a single regulatory strategy is not suitable for all five analysed countries. The experiences of the United States, Germany, and France are particularly relevant for Ukraine and Georgia. In the United States, fragmented cryptocurrency regulation has resulted in regulatory challenges, whereas in EU countries, efforts to harmonise regulations among member states have led to variation in national implementation. The main issues in both the US and the EU include: the absence of a clear definition and classification of cryptocurrencies as well as the lack of a unified regulatory framework. These problems should be taken into account by post-Soviet countries to prevent similar issues from arising in their own regulatory frameworks. Ukraine and Georgia have already adopted restrictive policies regarding cryptocurrency. Considering their local characteristics, further refinement of cryptocurrency regulation should incorporate lessons from the United States, Germany, and France. General measures for improvement in Ukraine and Georgia include: slow and structured integration of cryptocurrencies into the financial system and enhancement of control measures to strengthen regulatory oversight. Additionally: Ukraine should focus on improving its tax policies to ensure greater transparency. Georgia should establish clear legislation and define the legal status of cryptocurrencies.

Many countries remain reluctant to introduce blockchain technology into their financial systems, with integration challenges particularly evident in Moldova, Armenia, and Azerbaijan. The adoption and regulation of cryptocurrencies in post-Soviet countries varies significantly,

primarily due to local conditions, which remain far less developed compared to the United States and EU countries. Armenia and Azerbaijan have no cryptocurrency regulation in place. Moldova, despite maintaining a liberal stance, has not developed a clear regulatory framework. Given these circumstances, Moldova, Armenia, and Azerbaijan should consider an alternative approach – the development and implementation of CBDCs. Unlike cryptocurrencies, CBDCs present minimal risks while offering opportunities for both users and governments, providing a structured and controlled integration of digital currency into the financial system.

Including countries from other regions, beyond Central Europe and North America, in the analysis could provide broader insights and a greater variety of successful approaches to cryptocurrency regulation. This would allow post-Soviet countries to explore diverse regulatory models and better understand which measures should be implemented to enhance their own regulatory frameworks. However, a limitation of this study is that it only examined three countries, restricting the scope of comparative analysis.

For Ukraine and Georgia, it is essential to improve the classification of cryptocurrencies as a first step in refining regulation. Once a clear legal definition of cryptocurrency is established for each country, it will be possible to develop more detailed regulatory measures. For Moldova, Armenia, and Azerbaijan, further independent research is required to explore the development and implementation of digital currencies, assessing both the opportunities and risks associated with their introduction. These studies should take into account the specific developmental characteristics, as well as the strengths and weaknesses of each country's financial and technological infrastructure. Future research should also focus on the potential establishment of an international cryptocurrency regulation system, aimed at preventing financial crimes related to cryptocurrencies. This would be relevant for both countries that actively promote cryptocurrency adoption and those that completely reject its integration into their financial systems.

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Conflict of Interest

None.

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Регулювання криптовалют у пострадянських країнах: баланс між глобальними практиками та місцевою специфікою

Автанділ Сілагадзе

Доктор економічних наук, професор
Тбіліський державний університет
0179, просп. Іллі Чавчавадзе, 1, м. Тбілісі, Грузія
<https://orcid.org/0000-0001-7782-9827>

Гіоргі Гаганідзе

Кандидат економічних наук, професор
Тбіліський державний університет
0179, просп. Іллі Чавчавадзе, 1, м. Тбілісі, Грузія
<https://orcid.org/0000-0002-6530-1600>

Тамаз Зубіашвілі

Доктор економічних наук, доцент
Тбіліський державний університет
0179, просп. Іллі Чавчавадзе, 1, м. Тбілісі, Грузія
<https://orcid.org/0009-0002-7215-0780>

Тамар Атанелішвілі

Доктор економічних наук, доцент
Тбіліський державний університет
0179, просп. Іллі Чавчавадзе, 1, м. Тбілісі, Грузія
<https://orcid.org/0000-0003-2567-0337>

Анотація. У цьому дослідженні розглядалося регулювання криптовалют у пострадянських країнах та визначаються потенційні сфери для вдосконалення. Аналізувалися різні регуляторні підходи в цих країнах – від обмежувальної політики (Україна і Грузія) до більш ліберальної (Молдова). Вірменія та Азербайджан, не застосовуючи конкретних регуляторних заходів, висловили занепокоєння щодо прийняття криптовалют, що дозволило їм зайняти проміжну позицію. Виявило, що технологічні та політичні основи криптовалютних ринків у п'яти пострадянських країнах схожі, утворюючи найбільш порівнянну групу. Однак вони значно відстають від Європейського Союзу та Сполучених Штатів. Хоча політична свобода в цих країнах залишилася в межах 55-72 балів у 2024 році, тренд з 2020 по 2024 рік демонстрував зниження. Нерівність у розвитку інформаційно-комунікаційних технологій (ІКТ) між пострадянськими країнами коливалася від 70 до 88 балів, тоді як у США, Німеччині та Франції цей показник коливається від 87 до 97 балів. Однак загальна тенденція розвитку ІКТ у пострадянських країнах залишається позитивною. У дослідженні зроблено висновок, що для Грузії та України було б корисно перейняти регуляторну практику США, Німеччини та Франції, проаналізувавши їхній досвід, виклики та помилки. Зокрема, Грузія повинна вдосконалити своє законодавство та правовий статус криптовалют, спираючись на досвід Європейського Союзу та США, тоді як Україна повинна зосередитися на вдосконаленні податкової політики, спираючись на підхід Німеччини. Крім того, обом країнам необхідно посилити заходи щодо боротьби з фінансовими злочинами, пов'язаними з криптовалютами, за прикладом Франції. Для Молдови, Вірменії та Азербайджану замість безпосереднього вирішення проблем, пов'язаних з криптовалютами, рекомендовано альтернативний підхід: розробка та впровадження цифрових валют центральних банків.

Ключові слова: безпека; подвійні витрати; цифрова валюта; віртуальна валюта; центральний банк