

Globalization of Civil Law Regulation of Blockchain Technologies and Its Implementation in Uzbekistan

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Abstract

The phenomenon of globalization in civil law regulation of blockchain technologies is examined using the example of Japan's Payment Services Act. In the context of active economic digitalization, the problem of effective adaptation of international standards to national legal systems acquires particular relevance. The principles of adapting international FATF standards to the national characteristics of Japan's legal system are analyzed using a comprehensive methodology including glocalization analysis, comparative legal method, and institutional analysis. Key elements of the Japanese model have been identified: technological neutrality with functional regulation, multi-level regulation with clear division of powers between government bodies and self-regulatory organizations, the institution of self-regulation through the Japan Virtual Currency Exchange Association (JVCEA), and a system of “regulatory sandboxes” for testing innovations. The study demonstrated high efficiency of the Japanese approach, confirmed by the growth of cryptocurrency transaction volume to \$116 billion USD in 2023. Opportunities for applying Japan's glocalization experience to improve Uzbekistan's civil legislation in the field of digital technologies have been determined, including creating specialized regulatory bodies, implementing experimental legal regimes, and developing self-regulatory institutions. The research results can be used for forming a national digital development strategy and attracting international investments to the fintech sector.

Keywords: Globalization, Civil Law Regulation, Blockchain Technologies, Payment Services Act, Japan, Self-Regulation, Digital Assets, Uzbekistan

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I. Introduction

The modern era of digital transformation is characterized by complex interaction between globalization and localization trends in the legal regulation of innovative technologies (Plekhanov et al., 2023). The concept of glocalization, first formulated in economic theory, acquires particular relevance in the context of legal regulation of blockchain technologies, where universal technical standards must be combined with national legal traditions and economic priorities. The phenomenon of glocalization represents the adaptation of global legal standards to the specific conditions of national jurisdictions, in which compliance with international requirements is maintained, but local characteristics of legal culture, institutional structure, and economic development are taken into account. In the field of blockchain technology regulation, this approach becomes critically important, since mechanical copying of foreign solutions often leads to inefficiency and legal conflicts.

Blockchain technologies create unique challenges for traditional approaches to legal regulation, since their decentralized nature and cross-border character do not fit within the framework of classical jurisdictional boundaries (Zafar, 2025). At the same time, these technologies require a specialized legal regime that takes into account their technical features and potential risks for participants in civil transactions. Japan's experience in regulating blockchain technologies represents one of the most successful examples of glocalization in the field of digital law. Japan became the first major economy to create a comprehensive legal framework for crypto-assets, combining strict security standards with creating favorable conditions for innovation. The Payment Services Act adopted in 2009 (with amendments in 2023) demonstrated the possibility of effective adaptation of international standards of the Financial Action Task Force (FATF) to national conditions.

A distinctive feature of the Japanese approach is the combination of government regulation with developed self-regulatory institutions, which reflects the traditions of Japanese corporate culture and allows for flexibility in the legal regime while maintaining high standards of consumer protection (Buchanan & Deakin, 2024). The creation of the Japan Virtual Currency Exchange Association (JVCEA) as a self-regulatory organization became an important element of the Japanese model of glocalization. For developing jurisdictions, including Uzbekistan, the study of Japan's glocalization experience is of particular value in the context of forming a national strategy for regulating digital technologies. The Republic of Uzbekistan is actively developing its digital economy and strives to create a modern legal framework for innovative technologies, which makes the analysis of successful international practices for adapting global standards relevant.

The purpose of this research is to analyze Japan's experience in glocalization of civil law regulation of blockchain technologies and to determine opportunities for adapting this experience to improve Uzbekistan's legal system. Research objectives is

to identification of principles and mechanisms of the Japanese model of glocalization in the field of blockchain technology regulation; analysis of institutional architecture and practical results of applying the Japanese approach; determination of lessons from Japan's experience for developing jurisdictions and possibilities for their application in Uzbekistan's legal system.

II. Methodology

The methodological basis of the research consists of a comprehensive approach including specialized methods for analyzing processes of legal glocalization and adaptation of international standards to national conditions. Glocalization analysis is applied as the main research method for studying mechanisms of adapting global legal standards to local conditions. This method allows identifying factors contributing to successful integration of international requirements with national legal traditions, and determining criteria for the effectiveness of such adaptation. Special attention is paid to analyzing the balance between compliance with international standards and preservation of the legal identity of the national jurisdiction.

The comparative legal method is used to identify features of the Japanese model of blockchain technology regulation in the context of international experience. This method provides understanding of the unique characteristics of the Japanese approach and possibilities for its application in other legal systems, taking into account differences in legal traditions and institutional structures. Institutional analysis is applied to study the effectiveness of various regulatory mechanisms and organizational solutions adopted within the Japanese model. This method allows assessing the interaction of government bodies, self-regulatory organizations, and market participants in creating an effective system for regulating blockchain technologies.

The case study method is used for detailed examination of specific legal innovations and mechanisms implemented within Japanese payment services legislation. This provides a deep understanding of practical aspects of applying theoretical approaches to glocalization. The source base of the research consists of primary regulatory legal acts, primarily Japan's Payment Services Act as amended in 2023 and related subordinate regulations and guidelines of the Financial Services Agency of Japan (FSA). An important component of the source base are documents and standards developed by self-regulatory organizations of Japan's crypto-industry, including rules and guidelines of the Japan Virtual Currency Exchange Association.

International FATF standards, Basel banking supervision principles, and OECD recommendations on financial technology regulation serve as the basis for analyzing the process of adapting global requirements to national conditions. Scientific literature includes current analytical materials from leading specialists in the field of fintech regulation and digital law for the period 2020-2024.

III. Results

A. Principles of the Japanese Model of Blockchain Regulation Glocalization

The Japanese model of glocalization in the field of blockchain technology regulation is based on the fundamental principle of “technological neutrality with functional regulation,” which means focusing on the economic substance and risks of financial operations regardless of the technological solutions used. This approach allowed avoiding the creation of separate “blockchain legislation” and instead integrating new technologies into the existing financial regulatory system. A key feature of the Japanese approach was the careful adaptation of FATF recommendations to the characteristics of the national financial system and legal traditions. Instead of mechanically copying international standards, Japan developed an original system for classifying digital assets, including three main categories: crypto-assets, electronic payment instruments for stable coins, and security tokens falling under securities legislation (Jayasuriya Daluwathumullagamage & Sims, 2020).

The Japanese approach to regulating stable coins as “electronic payment instruments” has particular significance, which allowed applying proven consumer protection mechanisms from traditional banking legislation to them. This solution ensured legal certainty and reduced regulatory risks, creating a predictable environment for innovation development in digital payments. The principle of proportionality of regulation became the basis for creating differentiated requirements for various categories of market participants (Mehrling, 2012). Large cryptocurrency exchanges are subject to strict licensing and regular supervision, including requirements for segregation of client funds and creation of reserve funds. Small operators work under a simplified regime with less stringent capital and reporting requirements. Technology startups have gained access to “regulatory sandboxes” where they can test innovative solutions with temporary regulatory relaxations.

The institution of self-regulation has become the most important element of the Japanese model, reflecting national traditions of corporate governance and consensual decision-making. The Japan Virtual Currency Exchange Association received official powers to develop technical standards, monitor compliance with ethical norms, and coordinate interaction between market participants and the regulator. This allowed reducing the administrative burden on government bodies and ensuring more flexible response to technological changes. Integration of new regulation with existing banking and financial law institutions ensured continuity of the legal system and minimized the risk of legal conflicts. Japanese regulators adapted existing licensing, supervision, and sanctions mechanisms to the characteristics of crypto-assets, which allowed quickly creating an effective control system without radically restructuring the institutional architecture (Ovsiannikov, 2017).

B. Institutional Architecture and Control Mechanisms

The Japanese institutional model for regulating blockchain technologies is built on the principle of multi-level control with clear division of powers between various government authorities and self-regulatory organizations. The Financial Services Agency of Japan (FSA) performs the functions of the central regulator, possessing powers to license crypto-asset service providers, supervise their activities, and apply administrative sanctions for violations. The licensing system is based on the strict “fit and proper” principle, requiring license applicants to demonstrate technical competence, financial stability, organizational reliability, and compliance with high standards of corporate governance. The licensing procedure includes detailed verification of cybersecurity systems, risk management procedures, client fund protection mechanisms, and key personnel qualifications. This ensures high standards of security and reliability without creating excessive barriers to market entry (Rahman et al., 2025).

A unique feature of the Japanese approach is the creation of specialized divisions within the FSA for working with financial technologies. The FSA FinTech Department brings together experts in law, finance, information technology, and cybersecurity, which ensures an interdisciplinary approach to regulating innovative products and services. This division also coordinates interaction with international organizations and participates in developing global standards for fintech service regulation. The regulatory sandbox mechanism allows fintech companies to test new products and services in a controlled environment with temporary relaxations of certain regulatory requirements (Alaassar et al., 2021). From 2018 to 2024, more than 30 projects passed through Japanese sandboxes, including decentralized financial services, digital payment systems, blockchain infrastructure solutions, and innovative approaches to digital asset management.

The monitoring and supervision system is built on a risk-oriented approach, in which the intensity and frequency of control measures is determined by the size, complexity of activities, and systemic importance of the regulated entity. Large cryptocurrency exchanges with high transaction volumes are subject to reporting, regular on-site inspections, and continuous monitoring of key risk indicators. Small service providers also report and are subject to scheduled inspections. Special attention is paid to international cooperation and information exchange with foreign regulators. The FSA actively participates in the work of international organizations, including FATF, the Basel Committee on Banking Supervision, and IOSCO, promoting harmonization of approaches to crypto-asset regulation at the global level.

C. Effectiveness of the Japanese Model

The practical implementation of the Japanese glocalization model has demonstrated high effectiveness in achieving the main regulatory objectives: ensuring financial stability, protecting consumer rights, and creating favorable conditions for innovation. In fiscal year 2023, the volume of crypto-asset transactions in Japan exceeded 16.9 trillion Japanese yen (approximately \$116 billion USD), including spot

trading of about 11.4 trillion yen and margin trading of 5.6 trillion yen, reflecting the growing popularity of the cryptocurrency market in the country. Creating a clear legal framework for stable coins as “electronic payment instruments” led to active development of this market segment and growth of international recognition of Japanese digital payment solutions. Stable coins issued in accordance with Japanese legislative requirements have received widespread recognition in international payment systems and are actively used for cross-border transfers in the Asia-Pacific Economic Cooperation region (Damak & Güngör, 2025).

The effectiveness of the self-regulatory institution is confirmed by industry standard compliance statistics: none of the JVCEA members have been involved in major violations or scandals over the past four years. The association's standards have effectively become mandatory for all market participants and have been adapted by regulators in Singapore, South Korea, and Hong Kong as the basis for their own regulatory approaches. International recognition of the Japanese model is expressed in the fact that the FSA actively engages in cooperation to strengthen international standards of the Basel Committee on Banking Supervision for crypto-assets and other organizations.

IV. Discussion

A. Lessons from Japan's Experience for Developing Jurisdictions

Analysis of the Japanese glocalization model reveals several fundamental principles that can be adapted by other jurisdictions to create effective blockchain technology regulation systems taking into account national characteristics and development priorities. The first lesson concerns the importance of a phased approach to regulation, starting with creating experimental legal regimes and gradually expanding to a full-fledged regulatory framework. Japan's experience shows that premature introduction of strict requirements can suppress innovation, while complete absence of regulation creates unacceptable risks for consumers and financial stability.

The second important principle relates to the necessity of effectively combining government regulation with development of self-regulatory institutions. The Japanese model demonstrates that properly organized self-regulation can significantly reduce the administrative burden on government bodies, increase the adaptability of the legal system to technological changes, and ensure closer interaction between the regulator and market participants. The third lesson emphasizes the critical importance of creating specialized interdisciplinary divisions in regulatory bodies that unite experts in law, finance, technology, and cybersecurity. The complexity of blockchain technologies and their potential legal consequences requires deep understanding of both technical aspects and legal principles, which is only possible with a team of diverse specialists.

The fourth principle concerns the significance of active international cooperation and proactive participation in developing global standards. Japan was able

to influence the formation of the international agenda precisely due to its readiness to share its experience, participate in international initiatives, and adapt best world practices to national conditions. The fifth lesson emphasizes the necessity of preserving the principle of technological neutrality while simultaneously focusing on functional characteristics and risks of innovative products and services. This allows avoiding rapid obsolescence of legislation when new technological solutions appear and ensures equal competitive conditions for various technological approaches.

B. Opportunities for Adapting Japan's Experience in Uzbekistan

Uzbekistan's legal system, based on the continental legal tradition, has significant potential for successful adaptation of the Japanese glocalization model, taking into account national characteristics and priorities for digital economy development. The existing institutional base and active government support for innovation create favorable conditions for implementing advanced approaches to blockchain technology regulation. Creating a specialized regulatory body or division similar to Japan's FinTech Department could ensure coordination of efforts by various agencies in the field of digital technology regulation and create a single point of contact for market participants. Such a body could unite representatives of the Central Bank, the Ministry of Digital Technologies, the Ministry of Justice, and other interested agencies (Gulyamov, 2024).

Implementing the institution of “regulatory sandboxes” within existing special economic zones or techno parks would allow testing new approaches to regulation without risk to the overall stability of the financial system. Creating such regimes within the Tashkent City Technopark and other innovation platforms appears particularly promising. Developing self-regulation through creating associations of digital asset market participants could contribute to the formation of industry standards, ethical norms, and best practices. This is particularly important given the traditions of Uzbek business culture, where great importance is attached to reputation and long-term partnership relations. Phased implementation of Japan's experience should begin with developing a clear classification of digital assets and creating legal foundations for their regulation within existing civil and financial legislation. This would ensure legal certainty for market participants and create the foundation for further development of an innovative ecosystem in the country.

Conclusion

The conducted research of Japan's experience in glocalization of civil law regulation of blockchain technologies demonstrates the high effectiveness of an adaptive approach that combines compliance with international standards while taking into account national characteristics of the legal system and economic culture. The Japanese model has successfully resolved the fundamental dilemma of modern digital law: how to ensure innovative development while maintaining financial stability and consumer protection. Key principles of Japanese glocalization technological

neutrality, phased regulation, effective self-regulation, and international cooperation can serve as the foundation for creating modern systems of blockchain technology regulation in developing jurisdictions. Japan's experience in creating specialized institutions and mechanisms that ensure balance between government control and market self-regulation is of particular value.

For Uzbekistan, adaptation of Japan's experience opens prospects for creating a competitive legal environment for digital economy development and attracting international investments in the financial technology sector. Successful implementation requires a phased approach, starting with creating experimental legal regimes and gradually expanding the regulatory base taking into account accumulated experience and changing market needs. Glocalization as an approach to legal regulation of innovative technologies will acquire increasing importance in conditions of further digitalization of the economy and society. Japan's experience demonstrates the possibility of creating effective legal solutions that provide competitive advantages at the international level while preserving national legal identity and protecting national interests.

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