

Digital Registers as a Legal Source and their Impact on Civil Law

Javohir Eshonqulov

Lecturer of Cyber Law Department, Tashkent State University of Law, Uzbekistan

javoxireshonqulov0724@gmail.com

Xaitbayeva Shohzoda

Tashkent State University of Law, Faculty of International Law and Comparative Legislation

shagzoda.xayitboyeva@gmail.com

Abstract: This article analyzes the impact of digital registers on civil law. In particular, the role of technologies such as blockchain, electronic cadastral systems, and automated state registers as a legal source, the guarantee of property rights, the automation of contracts and obligations, the protection of personal data, and their impact on legal reliability are studied. Additionally, the introduction of electronic databases in civil registry offices and its effect on legal marriage procedures and the prevention of legal violations, innovations in notarial records, and the automatic execution function of smart contracts are discussed. The research is based on legal analysis and international experience, providing conclusions on the development prospects of digital registers and methods for resolving legal issues.

Keywords: legal source, digital registers, civil law, blockchain, electronic database, smart contracts, automatic execution, legal reliability, advantages and disadvantages of digital registers, personal data protection, electronic documents.



This is an open-access article under the [CC-BY 4.0](https://creativecommons.org/licenses/by/4.0/) license

INTRODUCTION

It is no secret that digital technologies are increasingly penetrating not only economic and technological fields but also the legal system. Moreover, they automate the process of documenting and formalizing contracts, making these procedures more convenient for parties. These advancements have led to the emergence of new terms, one of which is "digital registers." What are digital registers?

Digital registers are special electronic systems used for recording, storing, and managing data, playing a crucial role in increasing the reliability of legal relationships, ensuring contract execution, and guaranteeing property rights. In short, they are tools that reduce human involvement in civil relations while strengthening the principle of reliability.

METHODOLOGY

During the preparation of this scientific article, legal analysis, comparative, systematic, and normative-legal approaches were utilized. The main goal of the study is to analyze the impact of digital registers on civil law as a legal source, identify existing gaps and effective solutions in the legal frameworks of Uzbekistan and foreign countries, and propose legislative recommendations.

1. Analysis of Normative-Legal Documents

The study examined the legal impact of digital registers on civil law and the protection of personal data based on the following legal documents:

- Presidential Decree No. 6079 of the Republic of Uzbekistan on "Digital Uzbekistan – 2030" strategy.
- Law of the Republic of Uzbekistan "On Electronic Document Management" (April 29, 2004, O'RQ-594).
- Law of the Republic of Uzbekistan "On Personal Data" (July 2, 2019, O'RQ-547).
- ISO/IEC 27001 – International standard on Information Security Management Systems.

2. Comparative Method

A comparative analysis was conducted between the legal regulations of Uzbekistan and those of foreign countries (Estonia, the USA, and the European Union) to understand the role of digital registers in civil law.

3. Analytical Approach

The legal characteristics of digital registers, as well as issues and risks associated with their use as a legal source, were analyzed. One of the main risks identified is the insufficient protection mechanisms for personal data.

4. Legal Risk Assessment and Development of Solutions

Potential issues arising from the use of legal registers as a source in Uzbekistan were identified, and recommendations were provided for their resolution.

RESULTS

The role of digital registers in civil law relationships is particularly significant. Specifically:

Digital registers as a guarantee of property rights and legal transparency

Digital registers play a crucial role in the registration and protection of property rights. In traditional paper-based documentation systems, confirming property rights can be time-consuming, subject to bureaucracy, and vulnerable to corruption and loss of documents.

In this context, digital registers serve as a solution to these problems. In Uzbekistan, an electronic cadastral system has been introduced, enabling the reliable storage of data related to land plots and real estate. This system allows instant verification of property ownership or lease information.

In foreign countries such as Estonia, blockchain-based property registers are widely used, significantly reducing unlawful property transfers and fraud. Other countries have also developed systems where property rights can be confirmed via digital signatures, minimizing the need for notarial verification. These developments not only facilitate property relations for citizens but also optimize government service processes.

The role of digital registers in contract execution

Another significant impact of digital registers is the automation of contract execution. Blockchain-based smart contracts have taken this process to a new level.

What are smart contracts? Smart contracts are electronic agreements that automatically execute digital transactions based on pre-defined conditions. A key feature of smart contracts is their automatic execution—once the specified conditions are met, the contract executes without intermediaries such as notaries, lawyers, or other legal entities.

Once a smart contract is recorded on the blockchain, it cannot be altered or canceled unless explicitly permitted within the contract. A major advantage of smart contracts is that assets or funds do not transfer to another party until contract obligations are met, establishing a "trust bridge" between parties.

For example, in the USA and Germany, contracts related to crypto-assets are executed using smart contracts. In some countries, such as Switzerland, the legal status of smart contracts is officially recognized, and they can be used as evidence in court proceedings.

Digital registers as a guarantee of legal reliability and their use as evidence

A crucial aspect of digital registers is their recognition as reliable legal evidence. Electronic databases provide unalterable records, ensuring legal reliability. Documents verified with an electronic signature are accepted as written evidence in court proceedings.

In judicial disputes, digital registers serve as a key source of evidence. For example, if an individual needs to prove their property ownership, electronic cadastral data can be used as reliable evidence. Unlike traditional paper documents, digital records cannot be lost or easily forged.

Countries like Estonia recognize register data as legal court evidence, and blockchain-based notarial systems ensure document authenticity.

Impact of digital registers on notarial records and electronic databases

Traditional notarial processes relied on paper-based document preparation and archiving. Digital registers have enabled electronic storage and management of these documents, reducing human errors and ensuring document authenticity through electronic signatures and digital identification.

Blockchain-based notarial services have revolutionized the notarial field. Documents stored on a blockchain cannot be forged, and automatic verification has expedited notarial certification. Today, remote notarial certification is possible via e-notary platforms, eliminating the need for in-person notarization.

The role of digital registers in civil registry offices (FHDYO)

Civil registry offices (FHDYO) provide various services, such as birth and death registration and marriage registration. Digital registers play a crucial role in preventing errors arising from human involvement.

For example, under Uzbek law, individuals can only enter into one legal marriage. Previously, marriage records were maintained on paper, creating legal loopholes where individuals could marry multiple times in different jurisdictions without detection. Courts had to manually request records from various registry offices, increasing bureaucracy.

The introduction of a unified electronic state register has resolved these issues. Now, all marriage records are stored in a single digital database, preventing fraudulent marriages and strengthening legal guarantees for marital unions.

DISCUSSION

Digital registries have their own unique advantages and disadvantages. They have already become an integral part of the modern legal system, helping to make civil legal relations more transparent, reliable, and efficient.

If we first consider the advantages of digital registries:

1. **Legal Transparency and Reliability**

Digital registries ensure that all legal records are stored electronically in a precise and immutable manner. Through state registries, reliable information about property rights, contracts, and a citizen's personal status can be obtained. Registries based on blockchain technology are particularly secure, as once records are registered, they cannot be altered or deleted, preventing fraud.

2. **Simplification of Civil-Legal Relations**

People were genuinely exhausted by the long process of verifying and registering paper documents, as well as the excessive bureaucracy involved. Digital registries accelerate this process and reduce human involvement. Electronic contracts, particularly smart contracts, enable agreements to be concluded quickly and executed automatically. Most importantly, citizens can obtain documents related to property, marriage, birth, inheritance, and other legal records online, making the process much more convenient.

3. **Combating Fraud and Corruption**

When real estate transactions or other large financial operations are conducted through a digital system, the risk of document falsification or loss is eliminated. This provides notaries and courts with a reliable database of documents.

4. **International Experience**

In some countries, such as Estonia, Singapore, and Switzerland, digital registries are an integral part of the legal system and are widely used as evidence in judicial proceedings. Uzbekistan is also developing its legal digitization efforts by adopting international best practices. Civil registry offices, notaries, court documents, and state registries are gradually transitioning to electronic systems.

If we look at the other side of the coin, digital registries also have some drawbacks. The main legal issue is that legislation concerning digital registries is not yet fully developed. For example, in Uzbekistan, documents based on blockchain technology or smart contracts do not yet have full legal force. Additionally, the recognition of electronic signatures at the international level remains complex. Different countries have different standards, raising doubts about the legal validity of international agreements.

CONCLUSION

Another major issue is the security of personal data. If cybersecurity measures in state digital systems are not sufficiently strengthened, documents could fall into the hands of fraudsters. Since digital registries store vast amounts of data, they are vulnerable to cyberattacks, such as hacking or malware, which could lead to data theft or corruption. There is also the potential issue of technical failures. System malfunctions could result in personal data being exposed to the public.

For instance, in 2021, a cyberattack targeted a medical registry system in the state of Florida, USA, leading to the disclosure of numerous individuals' personal information. This included names, birth dates, email addresses, and financial information. As a result, affected individuals faced risks such as financial fraud and identity theft. This incident prompted the government to strengthen mechanisms for protecting personal data in digital registries.

Digital registries have already secured their place in the legal system, and now several mechanisms must be developed to ensure their efficient operation. Some key recommendations for protecting personal data in digital registries include:

1. **Data Encryption** – Personal data should be stored in a way that can only be accessed with a special key.
2. **Strengthening Cybersecurity Mechanisms** – Implementing technical and legal norms to enhance data protection.
3. **Anonymization or Pseudonymization of Data** – Converting personal data into a format that is not directly linked to an individual before processing. Pseudonymization involves replacing data with a code or identifier that can be re-identified only with special keys.

Thus, while digital registries can automate and accelerate the process of storing and managing personal data, they also pose security and privacy challenges. Without proper protective measures, these systems could threaten personal privacy. Therefore, when creating and maintaining digital registries, it is essential to comply with international standards for privacy protection.

References

1. **Presidential Decree No. 6079 of the Republic of Uzbekistan** – "On Approving the 'Digital Uzbekistan – 2030' Strategy and Measures for its Effective Implementation."
2. **Presidential Decree No. 3832 of the Republic of Uzbekistan** – "On Measures for the Development of the Digital Economy and the Circulation of Crypto Assets in Uzbekistan."
3. **Law No. 547 of the Republic of Uzbekistan** – "On Personal Data."
4. **ISO/IEC 27001** – International Standard on Information Security Management Systems.
5. **Resolution No. 389 of the Cabinet of Ministers of the Republic of Uzbekistan** – "On Approval of Certain Normative-Legal Documents Regulating the Maintenance of State Cadastres."
6. **Resolution No. 550 of the Cabinet of Ministers of the Republic of Uzbekistan** – "On Systematization of Normative-Legal Documents in the Field of Registration of Marriage, Family, and Civil Status Records."
7. **Eshonkulov, J. (2025). *The Role of Smart Contracts in Civil Law and Issues of Legal Regulation*. Uzbek Journal of Law and Digital Policy.**