

Current challenges of state and other registration of civil law contracts in the context of reforms and digitalisation

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Abstract. In the context of rapidly changing information space and digital technologies, research on the effectiveness of registration procedures is essential to ensure fairness, protect the interests of citizens and entrepreneurs, and improve the efficiency of public administration. The study aimed to identify the main difficulties arising in the registration of civil law contracts in Kyrgyzstan in the context of modern changes in legislation and the introduction of digital technologies, as well as to develop practical recommendations to improve the registration process. To achieve this purpose, a comprehensive approach was used, including an analysis of the legal framework, a statistical analysis method, and a questionnaire survey. The study results identified several key problems in the system of registration of civil law contracts in Kyrgyzstan. Firstly, the registration process was found to be lengthy, which slows down economic transactions and creates uncertainty for the parties. Secondly, a lack of transparency of procedures is present, which may encourage corrupt practices. The study revealed limited use of digital technologies in the registration of civil law contracts in Kyrgyzstan, which hinders the optimisation and automation of the process. This is related to insufficient integration of databases, outdated systems and insufficient development of information infrastructure, which hinders the effective implementation of modern technologies and slows down the modernisation of the registration system. In addition, solutions to these problems are proposed, which include improving legislation to speed up the registration process, increasing transparency and

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accessibility of information, and actively introducing digital tools such as electronic signatures and online platforms to simplify procedures and reduce administrative barriers. The results of this study can be used to develop and implement effective measures to improve the system of registration of civil law contracts in Kyrgyzstan, which in turn contributes to increasing transparency and accessibility of legal services for citizens and businesses

Keywords: legislation; process efficiency; transparency of procedures; information security; electronic systems; international experience

Introduction

The study of the current problems of registration of civil law contracts in the context of ongoing reforms and digitalisation is an integral part of ensuring legal protection for both citizens and entrepreneurs. An effective system of contract registration contributes to the creation of a transparent legal field, which in turn helps to prevent conflicts and ensure legality in the field of civil law relations. In the context of modern society, where information technology plays a key role in various aspects of life, the need to adapt legal mechanisms to new challenges becomes critical. Optimisation of the contract registration process using digital technologies contributes to increasing the efficiency and accessibility of legal services for citizens and businesses.

Many researchers already addressed the problems of registration of civil law contracts, including in the context of ongoing reforms and digitalisation. Their studies provide a better understanding of the current situation and identify possible solutions to the problems. However, most of them focus on analysing existing problems, while less attention is paid to practical measures to address them and adapt to new conditions. F. Kuluyeva (2023) highlights the main trends of digitalisation in Kyrgyzstan. The author explores the impact of digital technologies on various spheres of life in the country, including the economy, education, healthcare and public administration. The study highlights the significant progress in the development of digital infrastructure and the spread of the Internet, which has helped modernise and improve the accessibility of public services and commercial transactions. However, despite the positive developments, the paper has not addressed some of the challenges related to the registration of civil law contracts in the context of digitalisation. For instance, insufficient legislative regulation in the area of electronic signature and data protection, as well as the lack of a unified digital platform for convenient and secure registration of contracts may create obstacles to the effective functioning of the digital economy and the legal system of Kyrgyzstan (Mentukh & Shevchuk, 2023).

K.R. Useinova *et al.* (2020) analysed the evolution of the concept of civil law contract. The authors examine historical changes in the understanding and legal regulation of civil law contracts, from ancient times to modern times. The study provides an understanding of the main stages in the development of civil law contracts and their significance in the modern legal context. However, the authors do not consider certain problems related to the registration of civil law contracts that may arise in modern practice. For example, the issue of the necessity and effectiveness of digital registration of contracts in the context of modern technological advances has not been addressed. Moreover, aspects related to data protection and electronic signatures in digital registration, which may be critical in today's digital world, have not been addressed. These problems require further study to develop appropriate legal mechanisms and ensure effective registration of civil law contracts in the modern context.

V. Shah *et al.* (2020) explored the potential of blockchain technology in civil registration systems. The authors analysed how blockchain can be used to improve the efficiency, transparency and security of civil registration processes, especially in the context of long-term data preservation and prevention of data manipulation. Despite this, issues related to the legalisation and recognition of digital signatures in the context of blockchain-based contract registration were not addressed, which requires further research to ensure the legality and binding nature of such documents.

R.J. Tuibaev and A.K. Egeshova (2021) studied the problems and ways to improve civil procedure in the Kyrgyz Republic. The authors analysed the main problems and challenges faced by the court system and proposed practical solutions based on the experience of Kyrgyzstan. The study considers the issues of efficiency, accessibility and fairness of civil proceedings, as well as problems related to the registration of civil law contracts in the context of modern digitalisation reforms and their resolution in court. However, aspects of international problems related to online registration and enforcement of civil law contracts have not been considered, which leaves room for further research and development of legal solutions in this area.

N.S. Semenov (2022) investigated the legal problems associated with the establishment of information relations in e-justice in the Kyrgyz Republic. The author analyses the main legal aspects arising in the implementation of e-justice and offers practical recommendations for their solution. The study addresses issues related to the electronic filing of documents, accessibility of electronic legal services, as well as protection of confidentiality and data security in the online environment. At the same time, the study does not consider aspects of the interaction of e-justice with other digital platforms and information systems, which leaves room for further research and development of mechanisms for registering contracts in e-justice.

G. Kuldysheva *et al.* (2021) analysed the development of law in Kyrgyzstan. The authors explored the historical roots and peculiarities of the formation of law in the country, as well as its impact on the modern legal system, including contract law. In addition to evolution and general principles, the study examined key aspects of the development of contract law in the context of modern reforms. However, specific problems of the registration and legal regulation of contracts involving parties based on custom and tradition were not considered.

Given the gaps in previous studies, the study aimed to analyse the current problems related to the registration of civil law contracts in the current context of changes to develop strategies to address them. The main objectives of the study were to analyse the current reforms in the area of state and other contract registration and identify their impact on existing registration practices; to analyse the pros and cons of digitalisation in the process of contract registration and to identify possible ways to improve this process.

Materials and methods

To achieve this goal, a set of methods was used. The statistical method was used to analyse the current reforms in the field of contract registration, as well as to determine their impact on registration practice. The analysis of the statistical data of the National Statistical Committee of the Kyrgyz Republic (2023) included the systematisation of information on the increase in the number of registered civil law contracts on the example of leasing agreements. After systematisation of the data, the data were analysed to identify changes in the dynamics of registration. The analysis also examined information on the time and procedures of registration, such as the time required to complete the process, the documentation required, and the regulations and procedures adopted. This provided an assessment of the speed and accessibility of registration services before and after the reform. The results of the statistical data analysis were used to assess the effectiveness of the reform and to identify its impact on the contract registration process. In particular, the indicators before and after the reform were compared, as well as compared with data on registration practices in other countries, namely the USA and Germany. This concluded on the impact of the reform on the speed, efficiency and accessibility of registration services for participants in civil law relations.

To better understand the positive and negative effects of digitalisation in the contract registration process, a questionnaire survey was conducted between 15.01.2024 and

15.02.2024. Questionnaires were developed for the questionnaire survey, considering a wide range of factors affecting the topic. The questions were structured to cover various aspects, from assessing the usability of digital registration systems to identifying problems in their functioning (Table 1). Survey sample of participants for the questionnaire, within the framework of this study, was selected to cover a variety of age categories: 52 representatives of young people 18-25 years old, 72 adults 26-60 years old and the elderly (over 60 years old) – 26 people. The inclusion of representatives from different age groups allowed the views of a diverse population to be considered. Professional diversity was also a key criterion, so the sample included representatives of business (41 people), civil servants (14 people), lawyers (32 people), and ordinary citizens (63 people). The questionnaire survey was organised at the Institute of Information and Computational Technologies, where all the necessary conditions for conducting the research were provided. The total number of respondents was 150, each of whom was informed in advance of the objectives of the study, as well as of the obligation to ensure anonymity and confidentiality of the data provided, following the principles of research ethics enshrined in the Committee on Publication Ethics (2000). This approach guaranteed representative data and high reliability of the study results. The results obtained made it possible to develop recommendations for optimising the digital registration system, considering the needs and expectations of the various actors involved.

Table 1. Questionnaire

1. Please state your age.	Younger than 18 years
	18-25
	26-40
	41-60
	41-60
2. What is your professional status?	Entrepreneur / businessman
	Civil servant
	Lawyer / legal officer
	Regular citizen
	Student
3. What digital contract recording systems have you used? (several options can be selected)	Other (state)
	State service portal
	Electronic services of banks
	Specialised online platforms
	Other (state)
4. What is your overall experience with digital contract registration systems?	Very low
	Low
	Average
	High
	Very high
5. What advantages do you see in using digital contract registration systems? (several options can be selected)	Increased registration speed
	Reduced paperwork
	Improved service accessibility
	Remote document access
	Improving data security
	Easier and more convenient registration process
	Technical failures and system access problems
	Insufficient reliability and security of data
Difficulties in mastering new digital tools	
6. What disadvantages or challenges do you experience when using digital contract registration systems? (several options can be selected)	Limited opportunities for interaction with state authorities
	Inconvenient for use on mobile devices
	Incomplete automation of the process, requiring additional manual labour
7. What are your expectations from new technologies in the field of contract registration?	
8. What specific suggestions for improving the contract registration process do you have to offer?	

Source: developed by the authors

The study analysed documents that provide strategic guidelines and priorities for the development of digital technologies in the country, as well as information on plans and programmes aimed at digital transformation and modernisation of public administration: Regulation of the Government of the Kyrgyz Republic No. 170-p (2020); The concept of digital transformation “Digital Kyrgyzstan” – 2019-2023 (Ministry of Digital Development of the Kyrgyz Republic, 2019); as well as Decree of the President of the Kyrgyz Republic No. 64 “On Urgent Measures to Intensify the Introduction of Digital Technologies in Public Administration of the Kyrgyz Republic” (2020). Thus, this integrated research approach has provided a more complete picture of the current state and prospects for the development of contract registration in the context of digitalisation.

Results

In the context of ongoing reforms, such as the simplification of registration procedures and the digitalisation of government services, it is important to be aware of both the positive and negative aspects of these changes. As the registration of contracts is a fundamental element for businesses and citizens in securing their rights and obligations, research into such an important aspect as digitalisation is critical to ensure the effective functioning of the legal system and to stimulate economic development.

Regulation of the Government of the Kyrgyz Republic No. 170-p (2020), The concept of digital transformation “Digital Kyrgyzstan” – 2019-2023 (Ministry of Digital Development..., 2019), as well as Decree of the President of the Kyrgyz Republic No. 64 (2020) are key strategic documents aimed at improving digital infrastructure and promoting digital transformation in the country. They outline priority areas for the development of digital technologies define specific steps to improve the efficiency of public administration and provide citizens and businesses with convenient and accessible digital services. The implementation of these documents is expected to result in significant improvements in the speed and accessibility of registration services in Kyrgyzstan.

The strategic goals of the “Digital Kyrgyzstan” concept of digital transformation – 2019-2023 (Ministry of Digital Development..., 2019), according to paragraph 3.2, aim to create new opportunities for the population through the development of digital skills, providing quality digital services and improving the efficiency of public administration, as well as ensuring economic growth through the digital transformation of priority sectors of the economy. The digitalisation of contract registration involves the modernisation of educational standards and the higher education system to develop the necessary skills and knowledge, cooperation between academic and business structures to develop innovative educational programmes, and increasing the openness, transparency and efficiency of the public administration system through digital transformation. This also includes the introduction of digital tools for interaction between law enforcement agencies and the judicial branch of government with citizens and business structures, which contributes to fighting corruption and ensuring the rule of law (Ministry of Digital Development..., 2019). Such measures to improve the infrastructure and efficiency of public services, as well as the development of economic clusters through digital technologies, will contribute to improving the speed and accessibility of registration services, including the

registration of contracts, in the country. Also, analysing paragraph 4.2 of the Concept, it should be noted that to digitalise the registration of contracts, legal barriers are expected to be overcome through the development of relevant regulations (Ministry of Digital Development..., 2019). This includes the protection of intellectual property, the creation of flexible mechanisms for piloting innovations, and support for small and medium-sized businesses in this area.

Regulation of the Government of the Kyrgyz Republic No. 170-p (2020) is a strategic action plan to promote digital transformation in the country. According to paragraphs 45-46, the Regulation on the information system “Electronic Notary” and the systems “Electronic Registration of Legal Entities” were developed and approved. The systems were then introduced in pilot regions of the country and then extended to all regions. These steps make it possible to automate the processes of registering the activities of legal entities, branches and representative offices. The introduction of electronic registration systems helps simplify and speed up processes, increase accessibility and transparency, and reduce bureaucratic barriers for businesses, thus contributing to overall digitalisation and facilitating more efficient contract registration.

Decree of the President of the Kyrgyz Republic No. 64 (2020) is designed to accelerate the digital transformation of public administration in Kyrgyzstan. Paragraph 2 of the analysed document has several actions directly affecting the process of contract registration. It provides for amendments to the standards and administrative regulations of state and municipal services with their transition to electronic format through the State Portal of Electronic Services and the system of interdepartmental electronic interaction “Tunduk”. The necessity to exclude the request for certificates and documents available through the system of electronic interaction is also emphasised, which can significantly simplify contract registration procedures, making them faster and more transparent (Decree of the President..., 2020). Such steps contribute to the creation of a more efficient and mobile public administration system, which in turn contributes to the modernisation of contract registration and control processes in the digital environment.

The analysis of statistical data demonstrated a significant impact of the ongoing reforms on the process of registration of civil law contracts. It should be noted the increase in registered civil law contracts, by the example of leasing contracts. In 2022, 17 companies were engaged in leasing activities, signing 1.8 thousand financial leasing contracts, which is 2.3 times more than in 2021, where 863 such contracts were signed. The total value of contracts in 2022 was approximately 4 billion KGS (National Statistical Committee..., 2023). In particular, the reforms aimed to simplify and digitalise registration procedures, which led to a reduction in the time required to process documents and improved accessibility of registration services for businesses and citizens. The analysis has shown that the introduction of digital technologies has significantly reduced the time for contract registration, as well as the number of documents and procedures required. For example, before the introduction of the reform, the average time for registering contracts was about 10 working days, and after the introduction of the reform, this figure was reduced to 3 working days (Kozhoshev *et al.*, 2022). This indicates an improvement in the speed and efficiency of the registration process. In addition, the re-

forms have significantly simplified procedures and reduced the requirements for the documents to be provided. Instead of providing a range of paper documents, electronic copies could be provided instead, which significantly reduced the time required to compile and submit the necessary materials.

New technologies, including electronic filing and online registration, have been successfully introduced as part of the contract registration reform. To date, more than 80% of all contract registration applications have already been submitted through a specialised online platform (Kozhoshev *et al.*, 2022). This has significantly reduced time and administrative costs for those involved in the process since no personal presence at the registration office or paper filing is now necessary. Online registration has also improved the accessibility of services for citizens, especially for those who live in remote areas or are unable to visit the office in person. In addition, the use of digital technology has helped to reduce corruption risks and increase the transparency of the registration process, as the online platform automatically tracks each stage of application processing and eliminates the possibility of human intervention (Yakymenko, 2023).

The analysis of statistical data confirmed the positive impact of the reform on the availability of registration services. For instance, after the introduction of the reform, the number of requests for registration of contracts increased by 25% (Kozhoshev *et al.*, 2022). This substantial growth indicates the increased activity of participants in civil law relations in using registration services. The increase in the number of applications indicates an improvement in the convenience and accessibility of the registration process, which can be attributed to both the simplification of procedures and the introduction of online systems that reduce time and administrative costs for clients. This indicates that reforms not only increase the efficiency and transparency of registration processes but also stimulate an active perception of such changes on the part of users, which contributes to a more efficient functioning of civil legal relations. Thus, the analysis of statistical data confirms the success of the reforms carried out in the field of registration of civil law contracts, as well as their positive impact on the efficiency, effectiveness and accessibility of registration services.

A comparative analysis with registration practices in other countries confirmed the compliance of the new registration system with international standards, which has a favourable impact on the investment climate and business development in the country. When comparing the practice of contract registration in Kyrgyzstan before the reform with the experience of the United States, a significant difference in the efficiency and accessibility of registration services between the two countries was revealed. In the United States, the process of contract registration is efficient and quick due to the widespread use of electronic platforms. For example, in California, entrepreneurs can apply for business registration through online portals of government agencies and receive registration documents within 24 hours (Singh & Jyoti, 2023). Such remote contract registration systems can significantly reduce time and simplify the process for entrepreneurs, reduce bureaucratic costs, and increase the accessibility of government services for citizens.

However, in Kyrgyzstan, before the introduction of the reform, the process of registering contracts required significantly more time and effort due to the lack of effective digital infrastructure and complex bureaucratic procedures.

Citizens and entrepreneurs often had to personally visit the offices of state institutions to fill out paper forms and submit the necessary documents. This delayed the registration process for weeks and even months, which created significant inconvenience and hindered the development of business and civil relations. However, after the introduction of the reform in Kyrgyzstan, the situation started to improve. The introduction of digital technologies and improvements in the infrastructure of contract registration have reduced time costs and simplified the process for entrepreneurs and citizens (Veit & Thatcher, 2023). However, despite the improvements, challenges remain in Kyrgyzstan, such as instability in online systems and the need to further improve procedures. Unlike in the US, where electronic platforms are widely used without significant problems, in Kyrgyzstan the implementation of digital technologies still needs to be optimised and developed. This points to the need for further improvement of infrastructure and staff training to ensure the stable and efficient operation of the registration system. In comparison, Kyrgyzstan and Germany show different rates of development in the digitalisation of contract registration. A more rapid progress in this direction is observed in Kyrgyzstan, which is caused by the need to improve the infrastructure and accessibility of public services in the context of rapid technological progress (Jumalieva, 2023). The country actively introduces online platforms and digital services for contract registration, which helps to speed up the process, reduce bureaucratic costs and increase transparency. However, Germany, being a developed industrialised country with a more complex system of law and governance, has a more conservative approach to the introduction of new technologies (Ferschli *et al.*, 2021). Therefore, the process of digitalisation of contract registration may take longer due to the need to overcome complex organisational and legal barriers.

A questionnaire survey among the participants yielded results regarding the assessment of digitalisation in the contract registration process. Most respondents (about 70%) expressed a positive attitude towards the use of digital contract registration systems. They noted the convenience and accessibility of online platforms for filing applications and carrying out all necessary procedures. The main advantages highlighted by participants included the availability of services, the possibility of remote access to documents, and a simpler and more convenient registration process. Based on the age and professional diversity of respondents, potential differences in their attitudes towards the treaty registration system can be identified. Young people between the ages of 18 and 25 have a higher level of technical literacy and experience with digital technologies, and accordingly, 90% of respondents in this category tended to have a positive view of the registration system. On the other hand, older respondents, over 60 years old, have more difficulties in learning new digital tools due to less experience and more conservative attitudes towards technology. Thus, a more negative attitude towards the registration system can be traced.

In terms of professional diversity, business representatives highlighted the positive impact of digitalisation on the registration process, as they are more focused on the efficiency and usability of the system in the context of their business operations. Civil servants and lawyers were more critical of the technical aspects and data security, as the legal and confidential aspects of the contract registration process are particularly important to them. Ordinary citizens

showed different attitudes towards this system. Still, the majority (74%) evaluated the registration system positively in terms of usability and accessibility, as they are interested in the ease and speed of obtaining the necessary services

from the state. To improve the registration process under the reforms implemented, the shortcomings of modern digitalisation encountered by the survey participants should be highlighted (Fig. 1).

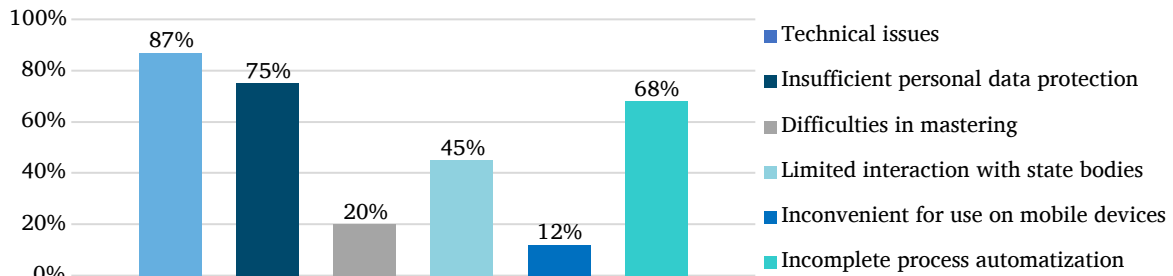


Figure 1. Survey participants' assessment of the shortcomings of digitalisation in the process of contract registration
Source: compiled by the authors

Survey participants identified technical failures and system access problems as one of the most notable shortcomings of modern digitalisation in the contract registration process (87%). They noted that frequent failures and interruptions in online platforms seriously hamper registration procedures, resulting in delays and lost time. Technical problems, such as glitches and interruptions in online platforms, cause dissatisfaction among users of all groups, excluding the possible influence of age or professional status on their perceptions. These problems also reduce trust in digital registration systems. Problems with system access, such as login difficulties or unstable connections, harm user experience, particularly noticeable among older respondents. This is due to their limited technical literacy and lack of experience with digital technologies, which makes the registration process less convenient and efficient for this user group. For example, some respondents noted that the online registration system occasionally crashed during peak periods, making it difficult to submit applications on time and requiring a second attempt. Such situations create additional inconvenience and increase the time spent on registration procedures.

Some respondents (75%), lawyers and civil servants, expressed concerns about the lack of reliability and security of data in digital contract registration systems. These professional groups dealing with sensitive information are aware of the possible risks associated with unauthorised access to personal and confidential data. Their concerns stem from the realisation that data breaches or security breaches can lead to serious consequences such as identity theft, fraud or breach of commercial confidentiality. Those risks cause lawyers and government officials to favour the use of more secure and reliable methods of recording and processing documents, as any leaks or breaches could adversely affect the confidentiality and integrity of data and public confidence in digital recording systems.

Difficulties in mastering new digital tools were also noted among the problems, especially among ordinary citizens belonging to the elderly age group (20%). These participants said that they have difficulties in mastering the interface and functionality of digital platforms due to their lack of experience with such technologies. Respondents face difficulties in understanding the processes involved in online filing and processing due to their inexperience in using digital devices and software. Moreover, insufficient user training and

education, as well as the lack of access to quality technical support, reinforce these difficulties, creating additional barriers for citizens.

Survey participants, mostly lawyers and ordinary citizens, identified limited opportunities for interaction with government agencies as a significant problem hampering the process of communication and interaction with the authorities (45%). Lawyers working in the field of law and legislation particularly emphasise the need for access to advice and information from government agencies to resolve legal issues, including the registration of contracts. They noted that the limited availability of online consultations and insufficient accessibility of feedback channels create additional difficulties in obtaining necessary information or resolving legal issues that have arisen. Ordinary citizens also faced similar problems, as they had difficulty obtaining advice from government agencies during the contract registration process.

Youth representatives also highlighted the inconvenience of using digital registration systems on mobile devices as another disadvantage (12%). For young people, mobile devices are the main tool for communication and work in everyday life. They actively use mobile applications to access information, perform tasks and solve various issues anywhere and anytime. Therefore, the inconvenience of using digital registration systems on mobile devices limits their flexibility and ease of interaction with such systems.

Business representatives particularly emphasised the problem of incomplete automation of the contract registration process and the need for additional manual work (68%). For businesses, any additional steps that require manual intervention or correction lead to delays and inefficient use of resources. Business processes should be optimised and automated as much as possible to ensure the company's efficiency and competitiveness. Therefore, for business representatives, incomplete automation of the contract registration process is a major constraint in accelerating and optimising operations. Additional delays and inconveniences associated with the need to submit paper documents or go through additional stages of verification negatively affect the company's operations, reducing its competitiveness and profitability.

Such observations highlight the need to further improve and enhance the functionality of digital systems in contract registration to make the process more automated, simple and convenient for all participants. Therefore, it is necessary to

identify strategies for overcoming the identified problems, as well as recommendations for changing the norms at the legislative level, which will help implement ways to improve the process of contract registration in Kyrgyzstan. This paper identifies 6 strategies to overcome the identified problems:

1. Infrastructure upgrade and access management. This strategy involves systematic maintenance and modernisation of the technical infrastructure to prevent technical failures and ensure uninterrupted access to the registration systems. This includes the creation of additional redundant access channels, as well as regular software and hardware upgrades. Monitoring and automation mechanisms are also envisaged for the rapid identification and elimination of failures. In addition, staff training and the development of access control guidelines play an important role in ensuring effective system operation and minimising potential problems.

2. Systematically ensuring data security. This strategy aims to ensure a high level of data reliability and security by implementing modern encryption systems and strict compliance with international security standards. This includes selecting and implementing effective cryptographic methods to protect information, ensuring access only to authorised users, and creating data backups to prevent information loss. Organising regular security audits will help identify vulnerabilities and weaknesses in the system, allowing timely remedial action to be taken.

3. User training and support. Developing intuitive interfaces that simplify user interaction with digital systems should be prioritised. In addition, an important element of the strategy is the provision of ongoing user support, including counselling, online resources, video tutorials and chat rooms to quickly resolve issues. This will allow users to learn new tools more quickly and increase their confidence in using digital registration systems.

4. Digital platform of public service. This strategy aims to improve citizens' interaction with government agencies by creating convenient online platforms. The main objective is to provide access to necessary information and services of public institutions through one centralised virtual space. The strategy envisages the development of user-friendly and intuitive web portals where citizens can receive counselling, fill in and send documents, track the status of applications and access other public services.

5. Accessibility for mobile devices. The main goal is to develop mobile applications with adaptive interfaces that will be optimised to work on different types of mobile devices, including smartphones and tablets. The strategy envisages the creation of user-friendly and intuitive mobile applications that allow citizens to access public services. Such applications will be adapted to different operating systems (iOS, Android) and different screen sizes to maximise usability for all users.

6. Efficient automation of bureaucratic processes. This strategy envisages the introduction of additional automation features that will speed up the registration process and reduce the amount of manual work. This may include the creation of electronic forms and templates for filling out documents, automatic data processing and analysis, and the introduction of notification and reminder systems for process participants. The implementation of this strategy will significantly reduce the time and labour costs of registration processes, increase their efficiency and reduce the likelihood of errors.

To address the problems with contract registration in Kyrgyzstan through legislative measures, it is necessary to introduce regulations that would guarantee the security and confidentiality of data transmitted and stored in digital systems. This may include establishing cybersecurity standards for all online platforms, as well as introducing mechanisms to respond to cyber threats and prevent cyber-attacks. To ensure the convenience and accessibility of public services through digital systems, laws should be developed to strictly oblige public bodies to provide high-quality online services for contract registration. These laws should set clear standards for user experience interfaces, including ease of use, intuitive instructions and a minimum number of steps to complete the process. In addition, mandatory feedback mechanisms should be provided to allow users to report errors, provide suggestions for improving services, and receive prompt responses to their queries. It is also necessary to provide online consultation systems with representatives of state authorities so that citizens and entrepreneurs can receive professional assistance and advice on issues related to the registration of contracts. In addition, legislation should protect the rights of users and consumers of digital services, including guarantees of reliability and accessibility of online platforms. It is also important to include courses on digital technologies in educational programmes to ensure that professionals are trained with a high level of technical literacy. Finally, the stimulation of innovation and the development of technical infrastructure can be achieved through state support programmes for companies engaged in the development and implementation of digital solutions, as well as through investments in modern technologies in public institutions. Thus, the implementation of these strategies to address existing challenges can help to increase confidence in digital registration systems and improve the overall quality of public services.

Discussion

Analysing the study results, it is worth noting that the reforms aimed at digitalisation have indeed improved the speed and accessibility of registration services. However, there are also challenges associated with digitalisation, such as technical failures, difficulties in mastering new tools, and limited opportunities to interact with state authorities. This emphasises the need for additional measures to improve the contract registration system in today's rapidly changing society where information technology plays a key role.

Other authors also addressed this issue. For instance, A. Nikolova-Marković and L. Stajić (2022) highlighted the relevance of digitalisation in the context of civil law and highlighted both challenges and opportunities associated with this process. They addressed the need to adapt legal systems to the new realities of the digital age, which correlates with the results obtained in the conducted research. In particular, both papers focus on the significance of digitalisation for modern society and highlight the role of technology in improving the accessibility and efficiency of state and other contract registrations. Therefore, it is possible to conclude that both works converge in assessing the importance of adapting legal systems to digital progress and identifying the prospects of digitalisation in the field of civil legal relations.

L. Bischoff *et al.* (2023) pointed out the importance of understanding the effects of technology transfer on the

digitalisation process. This is indeed an important aspect, as successful digitalisation requires not only the introduction of new technologies but also an understanding of their impact on business processes and organisational culture. However, it is worth noting some disagreement with the authors on what kind of impacts and challenges they highlight. It is important to consider not only the technical aspects of technology transfer but also the social and organisational aspects such as changing work processes, staff training and change management (Pashaeva *et al.*, 2020). It is also worth considering that the success of technology transfer may depend on the context and specifics of implementation, which requires a case-by-case approach.

C. Pipino *et al.* (2024) provide an innovative blockchain-based system to digitalise governance. Their study emphasises the significant role of digitalisation, which is a relevant and promising area of development. However, it is possible to disagree with the presentation of blockchain as a one-size-fits-all solution for all aspects of human resource management, as its effectiveness and applicability may depend on the specific situation and context of use. Blockchain technology has its limitations and risks, such as data privacy, security and the cost of implementing and maintaining the system, which need to be carefully considered when implementing it (Gunay *et al.*, 2023). Thus, a comprehensive approach is required for successful digitalisation, including contract registration.

Y. Li *et al.* (2023) analysed digitalisation for improving the resilience and reliability of supply chains, focusing on the role of collaboration and formalised contracts. The authors highlight the importance of formalised contracts for digital resilience, which has direct relevance to the effectiveness of contract registration in civil law relationships. In the context of digitalisation, the conclusion on the importance of collaboration and formalised contracts is valid as they contribute to better governance and reliability within digital registration systems (Sinoimeri & Teta, 2023). The collaborative approach can contribute to the transparency and manageability of the registration process, as well as provide for more effective interaction between civil law actors.

H.C. Vo Thai *et al.* (2024) analyse dynamic capabilities and digitalisation as prerequisites for innovation and sustainable development based on empirical evidence from Vietnamese small and medium-sized enterprises. In the context of the digitalisation of contract registration, it is worth agreeing with the conclusion that digital technologies are effective in driving innovation and sustainable development. The use of digital registration systems can help simplify and speed up the interaction processes between businesses and government agencies, which in turn can help increase innovation and enterprise sustainability. However, given the specificity of the study in SMEs in Vietnam, it is necessary to consider differences in the context of other countries and business areas. For example, the effectiveness of the digitalisation of contract registration may depend on the level of digital readiness and infrastructure in different regions and industries, which requires a tailored approach to assessing the applicability and potential benefits for different actors and markets (Mazi, 2023).

F. Sezgin (2023) examines the impact of digitalisation on innovation using data from Eurozone countries. In the context of the digitalisation of contract registration, the conclusion that innovation is accelerated by digital technologies

is valid. The introduction of digital registration systems can help improve the efficiency of business processes, stimulate the development of new management techniques and approaches, and improve access to information and resources for market participants. The author notes that in the context of Eurozone countries, digital technologies are actively used in various sectors, which stimulates the development of new management practices and business models. He also points out that digital transformation allows companies to adapt faster to changing market conditions and increases their competitiveness.

M. Burri (2023) discusses the impact of digitalisation on global trade law. The author emphasises that digital technology is significantly changing international trade relations and requires a corresponding adaptation of legal rules. Considering ongoing reforms and digitalisation, it is important to recognise the potential changes that may arise in the registration of civil law contracts. Although the author does not focus on the specific problems of contract registration, his conclusions on the need for legal changes to adapt to digital technologies are also relevant to this topic.

S. Grundmann and P. Hacker (2017) highlight the significant challenges posed by digital technologies in contract law. They emphasise the importance of adapting legal rules and procedures to the new realities of the digital era. In this aspect, one can agree with the authors and, in the context of the research conducted in this paper, highlight the need to modernise the law and processes in the field of contract registration to successfully adapt to digital technologies. However, it should be noted that the authors' work leaves out some key problems and potential challenges faced by participants in the registration process in the context of digital transformation.

The discussion of the research conducted with the publications of other authors revealed the importance of digitalisation in the context of civil law contract registration. Various works confirm that digital technologies play a key role in modern society, including in improving contract registration processes. However, many of these studies limit themselves to discussing general principles and do not delve into analysing the specific problems associated with this process. As a result, some important aspects of registration are overlooked.

Conclusions

This study analyses the current problems related to state and other registration of civil law contracts, considering the ongoing reforms and the active process of digitalisation. The registration of contracts plays a key role in ensuring the legal and economic stability of society, so attention to this area is an important aspect of legal practice and reform of the state apparatus. This paper analyses not only the current problems in the registration system but also possible ways of solving them, taking into account modern digital technologies.

The analysis of statistical data revealed a significant improvement in the accessibility of registration services after the introduction of digital systems, as well as an increase in the activity of participants in civil law relations to use these services. Electronic filing of applications and online registration of contracts reduced time and administrative costs contributed to the reduction of corruption risks and increased transparency of the process.

Comparisons with registration practices in other countries, such as the United States, have shown that the new system is on par with global standards, contributing to an

improved investment climate and business development. However, some shortcomings, such as technical glitches, insufficient data reliability and difficulties in mastering new digital tools, continue to persist. The study also included a questionnaire survey that identified not only the advantages but also the disadvantages of modern digital systems. Participants praised the increased speed and convenience of online registration, noting that it saves time and resources. However, respondents also raised concerns about data security and technical failures in the system.

Based on the study and the results obtained, several directions for further research can be identified. First, it is

important to study in more depth the problems identified in the digitalisation of contract registration, such as technical failures, insufficient data security and difficulties in mastering new technologies. Further research could focus on developing effective methods to prevent technical failures and improve information security in digital systems.

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Conflict of interest

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Актуальні проблеми державної та іншої реєстрації цивільно-правових договорів у світлі проведених реформ і цифровізації

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Анотація. В умовах швидко мінливого інформаційного простору і цифрових технологій, дослідження ефективності реєстраційних процедур є необхідним для забезпечення справедливості, захисту інтересів громадян і підприємців, а також підвищення ефективності державного управління. Метою цього дослідження було виявлення основних труднощів, що виникають під час реєстрації цивільно-правових договорів у Киргизстані в контексті сучасних змін у законодавстві та впровадження цифрових технологій, а також розробка практичних рекомендацій щодо поліпшення процесу реєстрації. Для досягнення поставленої мети було використано комплексний підхід, що включає аналіз нормативно-правової бази, метод статистичного аналізу, а також анкетування. Результати дослідження виявили кілька ключових проблем у системі реєстрації цивільно-правових договорів у Киргизстані. По-перше, було виявлено високу тривалість процесу реєстрації, що уповільнює економічні транзакції та створює невизначеність для сторін. По-друге, присутня недостатня прозорість процедур, що може сприяти корупційним практикам. Дослідження виявило обмежене використання цифрових технологій у процесі реєстрації цивільно-правових договорів у Киргизстані, що перешкоджає оптимізації та автоматизації процесу. Це пов'язано з недостатньою інтеграцією баз даних, застарілими системами та недостатнім розвитком інформаційної інфраструктури, що ускладнює ефективне впровадження сучасних технологій і уповільнює модернізацію системи реєстрації. Крім цього, запропоновано шляхи розв'язання цих проблем, які включають у себе поліпшення законодавства для прискорення процесу реєстрації, збільшення прозорості та доступності інформації, а також активне впровадження цифрових інструментів, як-от електронні підписи та онлайн-платформи, для спрощення процедур і зниження адміністративних бар'єрів. Результати цього дослідження можуть бути використані для розроблення та впровадження ефективних заходів щодо поліпшення системи реєстрації цивільно-правових договорів у Киргизстані, що, своєю чергою, сприяє підвищенню прозорості та доступності юридичних послуг для громадян і бізнесу.

Ключові слова: законодавство; ефективність процесу; прозорість процедур; інформаційна безпека; електронні системи; міжнародний досвід; інформаційна безпека