

ABSTRACT
of dissertation work
for the degree of Doctor of Philosophy (PhD)
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The purpose of the dissertation research is to provide a comprehensive study of the institution of electronic transactions within the framework of civil law theory, current legislation, and law enforcement practice, as well as in the context of the digital economy, to develop its theoretical and methodological foundations, and to design a doctrinally grounded model for its legal regulation in the Republic of Kazakhstan. Achieving this goal involves clarifying the concepts related to electronic transactions, systematizing legal mechanisms, identifying legislative gaps, and developing proposals for improving civil legislation.

To achieve the formulated purpose, the study sets the following interrelated **objectives**:

- to study the doctrine of electronic transactions, electronic expression of will and its forms, the conceptual framework, and the specifics of concluding transactions using an electronic agent, an electronic mandate, and an electronic log of actions;

- to analyze national and foreign approaches to attributing automated actions to a person, identify regulatory gaps, and substantiate the substantive legal presumption of attributing an automated expression of will to a specific person, along with the limits of its application;

- to investigate the specifics of concluding an electronic contract and clarify the rules of electronic acceptance, and to determine the criteria for fixing the moment of conclusion of an electronic contract;

- to analyze the legal nature of automated ("smart") performance of obligations and determine the requirements for the controllability of such self-performance;

- to investigate the legal role of digital platforms in the mechanism of electronic transactions, including an analysis of practice and user terms, and to substantiate the qualification of the platform as a controlling intermediary, defining its duties and liability;

- to consider the civil law regime of digital content and digital services as an object of contractual obligations and substantiate the minimum duties of the provider and consumer remedies;

- to investigate the possibility of recognizing data as counter-performance (consideration) in electronic transactions and determine the conditions and civil law consequences of such qualification, taking into account personal data protection requirements.

The methodological framework of the research is based on an interconnected system of general scientific and specialized legal methods aimed at a comprehensive analysis of the institution of electronic transactions in the digital environment. The study employs a system-structural approach, formal-dogmatic and logical-legal analysis, as well as historical-legal and comparative legal methods. In addition, hermeneutic and teleological methods of legal interpretation, elements of legal

modeling and legislative drafting techniques, as well as empirical legal analysis and law-and-economics approaches were applied. These methods made it possible to determine the place of electronic transactions within civil law, their functional equivalence to traditional forms, and the specific features of legal regulation in the digital environment. The findings were verified in light of law enforcement practice and the techno-legal characteristics of digital processes and formed the basis for proposals aimed at improving civil legislation.

The main provisions (proven scientific hypotheses and other conclusions that are new knowledge) submitted for defense:

1. An original position is developed regarding the legal nature of transactions concluded through an electronic agent and the definition of the concept of an «electronic agent». An electronic agent is proposed to be understood as a software (or software-hardware) system, including artificial intelligence, which autonomously - without human involvement at the moment of action - forms, expresses, or performs the will of a party in an electronic transaction. At the same time, an electronic agent is not a subject of law; the legal consequences of its actions, within the scope of an electronic mandate (digital power of attorney), are attributed to the principal. The necessity is substantiated for the normative recognition of the validity of transactions conducted through an electronic agent, the introduction of legal definitions of an electronic agent, electronic mandate, and electronic log of actions, as well as the establishment of obligations for intermediary platforms to obtain explicit consent. An evidentiary regime for the electronic log is proposed, including presumptions of its integrity and immutability unless proven otherwise. In this regard, it is proposed to supplement the Civil Code of the Republic of Kazakhstan with a new Article 147-1 «Transactions concluded using an electronic agent».

2. An original concept of the presumption of attribution of automated outcomes in electronic transactions is formulated. It is proposed to proceed from the rule that electronic messages and instructions automatically generated and transmitted by a participant's information system in its normal operation are presumed to originate from that participant and to produce civil law consequences. An exception is associated with an apparent anomaly of the result, recognizable by a bona fide counterparty exercising ordinary care («knew or should have known»), with an appropriate allocation of the burden of proof between the parties. This concept is aimed at eliminating legal uncertainty in disputes related to errors, system failures, or other anomalies in electronic communications. In this regard, it is proposed to introduce into the Civil Code of the Republic of Kazakhstan a new Article 147-2 entitled «Attribution of automated expression of will».

3. The necessity of legislative clarification of the rules on acceptance and the determination of the moment of contract conclusion in online communications is substantiated, without introducing a new autonomous term. It is demonstrated that the introduction of a separate term to designate such forms of acceptance is not required and may create additional interpretative risks. Accordingly, it is proposed to establish a functional rule whereby acceptance may be expressed either through a direct electronic communication of the person or through an automated confirmation and/or other event of an information system (e.g., confirmation in a personal account, one-

time code verification, or a smart trigger), provided that such a procedure is agreed by the parties or follows from the customary practices of the platform. The moment of contract conclusion is proposed to be determined by the technical accessibility of the acceptance to the addressee at the agreed electronic address (personal account, e-mail, or other communication channel), since from that moment obligations arise, time limits are calculated, and risks of delay or non-performance are allocated. In this regard, it is proposed to supplement the Civil Code of the Republic of Kazakhstan with a new Article 397-1 entitled «Moment of contract conclusion via information and communication networks».

4. An original characterization of self-executing (smart) performance of transactions is developed, and it is substantiated that automated performance cannot be excluded from the scope of civil law regulation solely because it is carried out by technological means. A self-executing condition of an electronic transaction is understood as a pre-defined method of performance whereby the result is achieved automatically through an information system without human involvement at the moment of execution. Such automation is permissible only as a method of performance and not as a means of excluding legal consequences, liability, or judicial control. It is demonstrated that automation cannot eliminate the possibility of suspension, modification, or termination of performance in cases provided by law or contract, nor the application of restitution and other remedies for the protection of civil rights. Contractual clauses excluding such consequences under the pretext of technical irreversibility of execution are considered inadmissible. In this regard, it is proposed to amend Article 8 of the Civil Code of the Republic of Kazakhstan by adding a new paragraph 1.1, as well as to introduce a new Article 278-1 entitled «Performance of obligations by automated means (Self-executing obligation)».

5. An original approach is developed to conceptualizing the platform as a controlling intermediary in the conclusion of electronic transactions, and the scope of its duties and liability is defined. It is substantiated that a platform which organizes the interface and information flows, and influences the accessibility and ranking of offers, should be qualified as a controlling intermediary capable of affecting the formation of the parties' expression of will. The necessity of establishing the platform's obligations to ensure the good faith organization of contract conclusion is demonstrated. These obligations include conducting minimum due diligence of sellers, ensuring the accuracy of information provided, transparency of recommendations and dynamic pricing, prompt handling of complaints, and the prohibition of manipulative interface practices. In addition, it is proposed to establish the platform's direct liability for harm caused by misleading or concealed information, as well as by technical failures affecting the expression of will. The invalidity of contractual clauses limiting liability and restricting consumer rights is also substantiated. In this regard, it is proposed to amend Article 1 of the Law of the Republic of Kazakhstan «On Informatization» (in terms of definitions) and to introduce a new Article 18-1 establishing the obligations of digital platform intermediaries.

6. An original conceptualization of the categories «digital content» and «digital service» as independent objects of electronic transactions is proposed, along with the formulation of the basic obligations of the supplier. Digital content is defined as data

in digital form (including software, applications, audio-visual materials, e-books, and other forms of use of intellectual property objects), while a digital service is defined as the creation, processing, storage, updating, or provision of access to digital data (e.g., cloud services, streaming, subscriptions). The introduction of minimum supplier obligations is substantiated, including ensuring updates and security, remedying defects within a reasonable time, prior notification of termination of support, and ensuring the consumer's right to termination/refund in case of significant deterioration of functionality. In this regard, it is proposed to amend Article 1 of the Law of the Republic of Kazakhstan «On protection of consumer rights» (in terms of definitions) and to introduce a new Article 10-1 regulating digital content and the provision of digital services.

7. An original position is formulated regarding the admissibility of using data (primarily personal data) as consideration in electronic transactions and the legal consequences of such a model. It is substantiated that a model in which consumer data may serve as consideration should be recognized, provided that informed consent is obtained, the purposes of processing are transparent, and the consumer is afforded guarantees of quality, safety, and liability equivalent to those applicable in monetary transactions. It is established that the processing of data strictly necessary for the performance of a contract or compliance with legal requirements does not constitute consideration; in all other cases, the provision of data should be treated as economically significant consideration, subject to rules on quality, liability, and the right to withdrawal/refund. In this regard, it is proposed to supplement Article 384 of the Civil Code of the Republic of Kazakhstan with a new paragraph 4 («Transfer of personal data as consideration»).

The text of the proposed amendments and new legislative provisions is set out in Appendix A.

Description of the main research results.

All research objectives set in the dissertation have been fully achieved. The theoretical and practical foundations of civil law regulation of transactions concluded through electronic communication tools were comprehensively analyzed, and their place within the system of civil law was determined. The correlation between national legislation and international models was examined, and the legal framework for the conclusion and performance of electronic transactions was substantiated.

The study clarifies the concepts of «electronic agent» and «electronic mandate», proposes approaches to the legal attribution of automated actions, and establishes criteria for determining the moment of contract conclusion and receipt of acceptance. The legal nature of smart contracts, the role and liability of digital platforms, the legal regime of digital content and services, as well as issues of consumer protection and personal data use were also analyzed.

As a result, scientifically grounded conclusions and practical recommendations aimed at improving the legal regulation of electronic transactions were developed.

The dissertation was discussed at an extended meeting of the Higher School of Law of the Turan University, and its results were tested through publications in peer-reviewed international journals, authorized academic journals, and presentations at international scientific and practical conferences.

Justification of the scientific novelty and significance of the obtained results.

For the first time in Kazakh civil law scholarship, a comprehensive and systematic analysis of the theoretical and practical issues of civil law regulation of transactions conducted through electronic communication tools has been carried out, taking into account the provisions of the Civil Code of the Republic of Kazakhstan, special legislation, and international instruments. A technology-neutral conceptual framework has been developed, along with criteria suitable for law-making and presumptions ensuring legal certainty and evidentiary reliability of electronic transactions.

The significance of the research results lies in the development of scholarly proposals aimed at improving civil legislation, enhancing legal certainty in civil law relations within the digital environment, and advancing law enforcement practice in the field of electronic commerce. The findings of the dissertation may be used in academic research, teaching, and the practice of regulating the digital economy.

Compliance with scientific development directions or state programs. The dissertation is carried out in line with the priority areas of scientific development aimed at advancing the digital economy and improving the legal regulation of relations in the digital environment. The study aligns with the objectives of digitalization and the development of e-commerce outlined in the Addresses of the President of the Republic of Kazakhstan, as well as with the following policy documents: «Concept for the Development of Digital Transformation, Information and Communication Technologies, and Cybersecurity for 2023-2029», «Concept for the Development of Artificial Intelligence for 2024-2029», «Action Plan for the Development of E-commerce until 2027», and «Trade Policy Concept of the Republic of Kazakhstan until 2030».