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# Digital databases of court decisions in criminal proceedings: Value, risks, and use optimisation

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**Abstract**. The relevance of this study is conditioned, firstly, by the global trend of digitalisation of court practice which requires adaptation to the new reality, and secondly, by the insufficient development of the theoretical and methodological foundations for the use of such an exclusive source for the development of legal science and practice. The purpose of the study was to formulate, at the conceptual level, the basis for the effective use of court decision databases in criminal proceedings for scientific research, optimisation of practice and the educational process. The cluster of methodological research tools included systemic, comparative, synergistic, risk-oriented approaches, and methods of formal logic. The study summarised the data on the procedure for publishing court decisions in the Unified State Register of Court Decisions of Ukraine and reviewed the European practices of digital platforms or judicial practices. The study found that the Ukrainian platform of digitised documents is analogous to its European counterparts. It is a source of metadata of court decisions, data on criminal offences, pre-trial investigation and court proceedings, evidence, court reasonings, and specific language of legal documents. This allows not only implementing the principle of openness of court proceedings and access to court decisions but also considering these resources in an axiological context that unites a trilogy of components (political-legal, social, and procedural elements). The study also showed the risks, limitations, and problems of using court decision databases, such as inaccurate search results or restricted access to the system in extraordinary cases. The study suggested improving the national platform by adding options. The practical value of this study lies in presenting to a wide audience the possibilities of using digital platforms for judicial practices and formulating proposals for optimising the information and analytical tools of the Unified State Register of Court Decisions

**Keywords**: criminal proceedings; court; procedural decisions; information and analytical activities; digital documentation

## Introduction

The relevance of this study is caused by the need for constant monitoring of judicial practice to optimise the justice system. Judicial practice is an indicator of how openly and transparently justice is administered, how good the legislation is, and whether the principles of legal certainty are sufficiently implemented as a component of the rule of law. However, the number of criminal proceedings is increasing from year to year, and the number of court decisions is growing rapidly, which necessitates the development and implementation of high-quality information and analytical tools for working with this data. Therefore, the digitalisation of criminal proceedings has not spared the area of court decisions. National and international specialised registers have emerged that contain full-text documents or short summaries of judicial decisions, which are freely available for anyone to read. However, there are no comprehensive studies that would demonstrate the advantages and disadvantages of these information resources, which was the primary motivation for this study.

The literature discusses court decisions in various contexts. O. Omelchenko (2024) showed interest in developing general theoretical issues, specifically, the validity and motivation of court decisions, legal technologies for the preparation of court decisions – a study by O.O. Superson (2023). Other researchers, bypassing theoretical discussions, analysed the content of digitised documents in specialised areas, such as D.M. Hudenko (2024), who investigated the specific features of detective work during martial law in Ukraine based on judicial practice. P.R. Seseña *et al.* (2024) analysed the institution of plea bargaining in Spanish law through the lens of court decisions, while Y.C. Yu *et al.* (2023) studied deaths based on data published in the Taiwanese court decision database. While appreciating the substantial contribution of these researchers, these developments did not provide a general systematic view of the significance of judicial information resources in scientific doctrine and law enforcement.

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Notably, in the 2020s, a steady increase in the number of sources was observed, which integrated artificial intelligence and legal analytics. This refers to the introduction of auxiliary tools for searching for legal documents, preparing texts of court decisions, and predicting the outcome of court proceedings. D. Byelov and M. Bielova (2023) described the potential of artificial intelligence to analyse large amounts of information, including judicial practices, pattern identification, and search for relevant data to make informed decisions. F. de Arriba-Perez *et al.* (2022) proposed optimisation of the automatic classification of court decisions based on innovative natural language processing techniques. K. Javed and J. Li (2024) emphasised that the prospect that the ability of machine learning models to learn rules from vast datasets can eliminate cognitive biases inherent in humans and improve the accuracy of judicial decision-making cannot be ignored. M. Lidén (2024), appealing to the principle of "analogous cases should be treated equally", tested whether it is possible to predict court decisions based on a certain set of criteria that can be accessed without even reading the case file. The researcher stated that some judicial decisions are highly predictable. K. Chien *et al.* (2024) conducted an analogous study, analysing the ability of prosecutors to predict court decisions. S. Greenstein (2022) was critical of artificial intelligence in the field of justice, considering it "an existential threat to the rule of law", which is why the use of artificial intelligence stays controversial. Once again, the focus of these studies was on innovation rather than on how registers of digitised court documents affect the justice system and scientific doctrine.

An exception was the study by S. Brekke *et al.* (2023), which summarised the potential of the information database covering information on cases, judgments, and judges of the Court of Justice of the European Union (CJEU Database Platform). As the researchers argued, the various datasets provided by the platform "open the door" for theoretical and empirical studies of European legal policy. However, this approach presents only one scientific and theoretical aspect, while this type of resource has no less important practical application.

The purpose of the present study was to formulate a conceptual framework for the effective use of databases of court decisions in criminal proceedings for scientific research, optimisation of practice and education.

## Materials and methods

The fulfilment of this purpose and the substantiation of the findings obtained was made possible by the application of a cluster of methodological principles and approaches. The paradigm fundamental to the presentation of the researcher's views and opinions was shaped by the values of the rule of law, respect for human dignity, protection from arbitrariness, transparency, openness, and access to fair justice. The systemic approach provided a comprehensive understanding of the subject matter of the study and the links between its structural components. The comparative approach helped to compare Ukrainian and international practices in the formation of court decision databases and their use. The synergistic approach helped to identify significant points of convergence between modern technologies and judicial practice, which helped to organise and perform high-quality analytical work with large amounts of textual data published by the judicial authorities in the form of verdicts, rulings, and resolutions. The risk-oriented approach ensured forecasting of challenges and problems related to the use of information resources of the judiciary. The methodological toolkit also included methods of formal logic (analysis, synthesis, analogy, etc.), which were employed to build classifications, present arguments for intermediate and final conclusions.

The regulatory framework of the study included the Criminal Procedural Code of Ukraine (2012), the Law of Ukraine No. 3262-IV "On Access to Court Decisions" (2005) and the Decision of the High Council of Justice No. 1200/0/15-18 "On Approval of the Procedure for Maintaining the Unified State Register of Court Decisions" (2018). The study employed official judicial statistics on the state of administration of justice in Ukraine published on the web portal of the judiciary in Ukraine (Judicial statistics, n.d.); analysed the data of the Unified State Register of Court Decisions (n.d.), which as of the beginning of 2025 had 123,071,115 uploaded documents; the user interface of analogous national platforms for judicial practices of Belgium (Belgian Court Judgments Database, n.d.), Germany (German Court Judgments Database, n.d.) was studied. d.), Spain (Spanish Court Judgments Database, n.d.), Lithuania (Lithuanian Court Judgments Database, n.d.), the United Kingdom (UK Court Judgments Database, n.d.) and international platforms for judicial practices: the Court of Justice of the European Union (InfoCuria, n.d.) and the European Court of Human Rights (HUDOC Database, n.d.).

The research strategy involved first presenting the general legal basis for the formation and functioning of open databases of court decisions in Ukraine, then clarifying the significance and potential use of registers of court decisions, and logically concluding the research by differentiating the risks and problems of using these resources and formulating proposals for optimising their work.

## Results and discussion

**Legal regulation of the procedure for publishing court decisions in open databases: national context.** According to Ukrainian legislation, one of the principles of criminal proceedings is publicity and openness of court proceedings. This principle is prescribed in Item 20 of Part 1 of Article 7 and Article 27 of the Criminal Procedural Code of Ukraine (2012). This means that criminal proceedings in courts of all instances are conducted in public, except for restrictions stipulated by law. If justice is administered in the public eye, it is only logical that procedural decisions should be accessible to stakeholders and the public. Therefore, the principle of openness of court hearings is further implemented by making court decisions public, and courts make them every day. Over 80,000 criminal cases are considered annually at the first instance level in Ukraine alone. On average, another half a million appeals are resolved by investigating judges during pre-trial investigations (applications for recusal; complaints against decisions, actions, or inaction; motions by investigators, prosecutors, etc.). Figure 1 presents the dynamics of court statistics over the past three years. Each appeal ends with a procedural decision, while several such decisions may be issued in the criminal proceedings. All this confirms that in the digital era, innovative information and analytical tools are indispensable for observing the principle of openness of justice, presenting transparency of procedures, legal certainty, and unity of judicial practice.

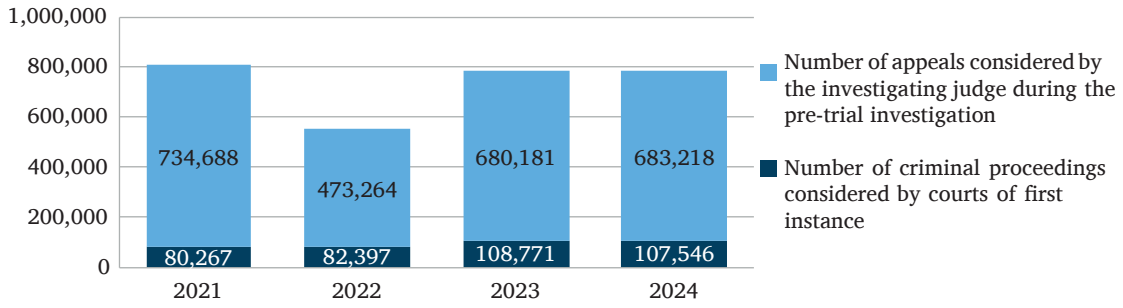


**Figure 1.** Quantitative indicators of consideration of materials in courts of first instance
**Source:** developed by the author of this study based on Judicial statistics (n.d.)

The provisions of the Law of Ukraine No. 3262-IV (2005) oblige courts to announce judgments in public, except those instances when the case was heard in closed session; establish the right of everyone to access court decisions in the manner prescribed by law; regulate the procedure for publishing court decisions in electronic form; determine the State Judicial Administration as the responsible entity for maintaining the Unified State Register of Court Decisions; and regulate the rules for official publication of court decisions. The aforementioned Decision of the High Council of Justice No. 1200/0/15-18 (2018) details the procedures related to the operation of the digital database of judicial practices. The same document (Section I, paragraph 17, item 1) defines the concept of "court decision", which is often referred to in the present study. It is a procedural document adopted by a court or investigating judge during a pre-trial investigation or during consideration of criminal proceedings at any stage of the court proceedings. These include rulings, verdicts, and resolutions of judicial authorities. Although a dissenting opinion of a judge is not a court decision by its very nature, this document is a special source of information containing individual evaluative judgements on the circumstances of the case, evidence, standards, and procedures applied, and alternative reasons for making a decision as opposed to those used by the majority of the court. Therefore, the presence of such documents in the database is also of significant theoretical and practical significance.

Unrestricted access to information on criminal proceedings cannot be absolutised. For instance, convicted persons may be stigmatised in society, analogously to the situation with public notification of criminals released from prison. M. Himmen *et al.* (2023) confirmed the preconceived negative attitudes towards such categories of people. A balance of public and private interests is necessary. The legislator, factoring in the vulnerability of the position of individual participants in criminal proceedings and security issues, mandates that the texts of court decisions open to the public should not disclose or replace with alphabetic or numeric designations personal data of individuals that enable their identification, information about their addresses of residence, contact details, taxpayer registration numbers, details of identity documents, vehicle registration numbers, bank account and payment card numbers, etc. In addition, the information that was used to protect the case or certain procedural actions in a closed court session is not subject to disclosure.

A special provision is made for the names of judges and other participants in the court proceedings. According to Article 7 of the Law of Ukraine No. 3262-IV (2005), their names (first name, patronymic, and surname) may not be indicated for security reasons. The procedure of "depersonalisation", i.e., disguising the specified information in the text of an electronic copy of a court decision or dissenting opinion, is performed automatically using specialised software (Section I, paragraph 17, item 1) (Decision of the High Council of Justice No. 1200/0/15-18, 2018).

An overview of the Unified State Register of Court Decisions gives grounds for the following conclusions: (1) the system has a user-friendly interface design, and the instructions in the Help section enable beginners to grasp the intricacies of searching for relevant documents; (2) the system offers clear criteria for clustering judicial enforcement acts (contextual search, court and judges, court decision, court case), a large set of filters for data search (by regional factor, by court instance, by time of adoption, by form of court decision, by subject of decision, by form of proceedings, by unique case number, etc;) (3) the system provides sufficiently fast data processing and presentation of information resources for viewing with the possibility of sorting documents and generating versions for printing electronic copies; (4) the system ensures reliable information protection, round-the-clock public access for everyone, and full access for authorised users, applies restrictions and blocking to avoid overloads.

**European practices in the operation of digital platforms for judicial practices.** The results of the review of certain foreign and international web portals of judicial practice confirmed that the Ukrainian analogue is not inferior in terms of convenience and efficiency of searching and researching court decisions. At the same time, despite the presence of typical components and options, each national database has its specific features that should be investigated in depth and evaluated from the standpoint of implementation in Ukraine.

The Belgian Court Judgments Database (n.d.), apart from the basic parameters, allows searching for texts in different languages, which is conditioned by the fact that three languages (Dutch, French, and German) are recognised as official; offers to read not only full texts of judgments, but also brief summaries of the case; opens an additional rubric of keywords in the drop-down list in the search fields. For instance, for the keyword "evidence", the database provides fourteen headings related to criminal proceedings with the number of decisions published on this issue. For example, "Evidence – Criminal cases – Witnesses – 568 documents", "Evidence – Criminal cases – Burden of proof. Discretion – 708 documents", etc. This approach, firstly, expedites the search, and secondly, improves the understanding of how

often a legal issue is discussed in the courtroom. Analogous parameters are offered by the Spanish Court Judgments Database (n.d.). In addition to summaries of judgments and keyword headings, this system allows for voice input. Spanish court judgments publish the names of the parties to the criminal proceedings and provide direct quotes in the judgments, making them resemble a transcript of a court hearing.

British lawyers number the paragraphs of judgments, which simplifies the navigation through the numerous facts, legal positions, and reasoning of judgments (UK Court Judgments Database, n.d.). It also facilitates the possibility of further citation of the document. The practice of numbering paragraphs of court decisions is also present in Germany, Lithuania, and international institutions such as the Court of Justice of the European Union and the European Court of Human Rights. The British database also has an option to automatically navigate to analogous content, which can also be a useful addition to information and analytical work with big data. UK court decisions are unique in their content, due to the specific features of mentality, historical and socio-cultural factors. In the text of guilty verdicts, judges, firstly, address the defendants personally, and secondly, do not neglect the opportunity to express their emotions, empathy, and admit to the complexity of resolving moral and legal dilemmas. All this turns the "dry" legal language of documents into a kind of philosophical essay. For instance, in a murder case, a judge may use the following wording: "This is a truly tragic case...", "You harmed three people with whom you had no disputes; they were long-term colleagues with whom you had been on friendly terms, none of whom had felt any threat from you in the past...", "I do not regard you as inherently wicked...", "I am grateful to the defence for drawing to my attention the case of...", etc. (Judgments of the Crown Court of United Kingdom…, 2024). German lawyers employ a completely opposite approach – a simplified window for searching for documents, and the decisions themselves are concise, brief, and contain a summary of the circumstances and the final outcome of the trial without any emotions (German Court Judgments Database, n.d.).

A feature of the Lithuanian database (Lithuanian Court Judgments Database, n.d.) is the mandatory informing of users about the possibility of reviewing decisions. The home page of this resource contains the following message: "Attention! Procedural decisions in first instance and appellate cases may be reviewed and amended by a higher court. Only final court decisions are legally binding". Lithuanian court decisions depersonalise defendants, but fully disclose the names of judges, prosecutors, probation officers, and court clerks.

To conclude the review, it is advisable to focus on useful additions that are built into the shells of the databases of the Court of Justice of the European Union (InfoCuria, n.d.) and the European Court of Human Rights (HUDOC Database, n.d.). This means the ability to open court decisions not only in HTML format, but also to download PDF or DOCX files, send them to email accounts, and share them on social media. This simplifies copying and storing data. The option to automatically set the time parameters "within the last 8 days", "within the last month", "within the last year", "within the last 5 years" is also convenient, as some systems, including the Ukrainian one, require accurate marks in the calendar of the start and end dates of the court decision or receipt of the court decision. A user of the CJEU database can easily select the current period.

**Theoretical and practical significance of the functioning of the court decision database.** Analysing the significance of the functioning of databases for judicial practices requires considering the political-legal, social, and procedural elements. The political-legal axiology is rooted in the fact that digitised court practices create opportunities for monitoring and evaluation of the state's domestic humanitarian policy in the field of law. This allows understanding what model of criminal procedure it builds and what fundamental principles it lays down as the basis for the rules and procedures of criminal prosecution, standards of proof, the way the right to defence, access to justice, reconciliation of the parties, etc., are ensured. In this regard, legal positions published in the decisions of the highest judicial authorities, as well as press releases on complex cases involving controversial political issues, are of exceptional significance. P. Meyer (2022) emphasised that press releases promote open justice; inform about the progress of certain proceedings, i.e., set the agenda; demonstrate transparency in conflict resolution by courts and promote a profound faith in the legitimacy of judicial proceedings.

The public value generally lies in the formation of a positive image of law enforcement, judicial, prosecutorial, and advocacy bodies through openness and transparency of their communication and the final results of the adversarial process. This increases trust in state institutions and convincingly proves that criminals will be punished, innocent people will be acquitted, rights and freedoms will be protected from arbitrariness, and justice will be restored. Admittedly, not all decisions meet all these requirements, but this is what the legislators sought to demonstrate when constructing the tasks of criminal proceedings in Article 2 of the Criminal Procedural Code of Ukraine (2012). As rightly noted by K. Javed and J. Li (2024), the judiciary plays a crucial role in upholding the rule of law, which is vital for the overall well-being of society. Legitimate legal decision-making is the primary goal of the rule of law. N. Mocan *et al.* (2020) confirmed that the quality of the judicial system considerably affects people's choice to break or not to break the law. On the contrary, a poor-quality judicial system increases the probability that people consider various types of dishonest behaviour acceptable. Therewith, general access to court decisions may increase conflict and nihilistic sentiments, as society may be impatient and seek instant results in sensitive high-profile cases, while the "cumbersome machine" of justice must work efficiently and in compliance with all procedures and standards.

The procedural significance of digital platforms for judicial practices is formed by three components: scientific, applied, and educational. As for first of these, the database of court decisions is a valuable source for the development of criminal procedure and forensic science. Certain legal institutions, standards, or individual cases become the subject of academic discourse and empirical research. The amount of data presented by a digitised court decision may vary depending on the form and procedure used. As a rule, the full set of data is presented by the decisions of higher courts that conclude the case, as well as by the decisions of the ECtHR. Table 1 summarises the findings of the systematisation of digitised court decisions with relevant examples of judicial practices.

**Table 1.** Data typology of digital platforms for judicial practices

| No. | Data category | Data content | Examples of court decisions |
|---|---|---|---|
| 1 | Court decision metadata | ➨ the date of the decision;<br>➨ date of entry into force;<br>➨ date of registration;<br>➨ date of granting public access;<br>➨ number of criminal proceedings;<br>➨ number of court proceedings;<br>➨ category of the case;<br>➨ place and judicial authority that made the decision. | Judgment of the Ternopil City and District Court of the Ternopil Region No. 607/13102/22 (2023); Resolution of the Supreme Court No. 278/3344/15-k (2024). |
| 2 | Data about the criminal offence | ➨ legal qualification of the criminal offence;<br>➨ the factual circumstances of the criminal offence (who (data is impersonal), where, when, under what circumstances, with what tools and means, and in what manner committed the act);<br>➨ the amount and nature of the damage caused;<br>➨ motive and purpose of the offender;<br>➨ circumstances that characterise the personality of the accused, aggravate or mitigate the punishment, and are grounds for exemption from criminal liability or punishment;<br>➨ other circumstances stipulated by law. | Judgment of the Kropyvnytskyi Court of Appeal No. 404/5456/17 (2024); Decision of the investigative judge of the Shevchenkiv District Court of Kyiv No. 761/16582/24 (2024). |
| 3 | Data on pre-trial investigation | ➨ compliance with the principles of criminal proceedings;<br>➨ measures to ensure criminal proceedings;<br>➨ list and results of investigative (detective) actions and covert investigative (detective) actions;<br>➨ legal positions of the prosecution and the defence;<br>➨ application of the special procedure of criminal proceedings;<br>➨ mistakes and shortcomings in the work made by the subjects of criminal activity, which became the basis for cancellation or amendment of the decision. | Judgment of the Pechersk District Court of Kyiv No. 757/10370/23-k (2023); Judgment of Chernyakhiv District Court of Zhytomyr Region No. 278/205/24, (2024); Judgment of the European Court of Human Rights No. 3016/16 (2024). |
| 4 | Data on evidence and proof | ➨ lists of sources of proof, evidence, the method of obtaining them, and procedural design;<br>➨ method of examination and evaluation of evidence by the court;<br>➨ grounds for declaring evidence inadmissible;<br>➨ deciding on the status of material evidence. | Judgment of Kharkiv District Court of Kharkiv Region No. 635/3143/20 (2024); Judgment of the Halytsky District Court of Lviv No. 461/9870/20 (2024). |
| 5 | Data on court proceedings | ➨ implementation of immediacy, publicity, openness, and other principles stipulated by law;<br>➨ exercise of procedural rights and powers by the parties to criminal proceedings in an adversarial trial;<br>➨ mistakes and shortcomings made by the court during the trial. | Resolution of the Supreme Court No. 758/1780/17 (2022); Resolution of the Supreme Court No. 278/3344/15-k (2024). |
| 6 | Data on motives of the investigating judge, court | ➨ application of standards and norms (e.g., the concept of the fruit of the poisonous tree, the "beyond reasonable doubt" standard, the proportionality test, etc;)<br>➨ reasons for not considering certain evidence;<br>➨ reasons for refusing to satisfy applications for recusal, motions;<br>➨ reasons for upholding, changing, or cancelling court decisions;<br>➨ references to legal positions of the Supreme Court;<br>➨ references to the case law of the European Court of Human Rights;<br>➨ dissenting opinions of judges. | Resolution of the Supreme Court No. 359/9903/22 (2023); Judgment of the European Court of Human Rights Nos. 56540/14 and 57252/14, (2023). |
| 7 | Data on language of legal documents | ➨ use of legal terminology;<br>➨ use of established "language formulas" to describe certain facts, phenomena, or processes;<br>➨ the way legal arguments are formulated. | Resolution of the Supreme Court No. 344/12021/22 (2024); Judgment of the Halytsky District Court of Lviv No. 461/9870/20 (2024); Judgment of the European Court of Human Rights No. 49134/20 (2024). |

**Source:** developed by the author of this study based on data from the Unified State Register of Court Decisions (n.d.) and HUDOC Database (n.d.)

The scientific doctrine shows how court practice applies the rules of substantive and procedural law, especially when the period of innovation testing is ongoing. For instance, content analysis of court decisions helps to identify typical problems in the application of legal institutions. This knowledge encourages lawmakers to improve the legal regulation of criminal proceedings and to be more careful when proposing changes and additions.

Scientific research using digital platforms of court decisions may relate to (1) investigating general trends in

criminal justice and criminal procedural policy through the lens of court decisions; (2) studying court decisions in a single typical, unique, or high-profile case; (3) reviewing court decisions on a group of cases clustered by certain criteria, for instance: legal qualification of the act; the subject of decision-making; regional feature; temporal boundaries; method of committing the offence; application of a certain principle, legal institution, standard (e.g., the principle of access to justice, the institution of plea bargaining in criminal proceedings or the doctrine of the fruit of the poisonous tree); motives and assessments of the court; the method of performing certain procedural actions; position and/or activity of the defence, prosecution, other participants in criminal proceedings, etc. (the proposed list of criteria is not exhaustive).

Considering the study of a single sentence, one can employed *mutatis mutandis* depending on the research purpose, the template proposed by I. Hloviuk (2024). It makes provision for the study of such decisions according to the following indicators: presentation of the contextual element in the description of the factual circumstances; description of the violated legal provisions; formulation of the charge, which was found by the court to be proven; legal qualification of the act; evidence to support the circumstances established by the court; compliance with the guarantees of protection.

The practical value of databases for judicial practices lies in the ability to quickly search and access court decisions relevant to the request of a legal user working on an analogous case. In effect, a kind of digital consultation is taking place. For instance, an investigator or prosecutor studies the grounds for declaring evidence inadmissible in a particular situation to avoid mistakes in their procedural activities and understand the court's motives in making decisions. A lawyer may use information about inadmissible sources of evidence to emphasise the "weak" positions of the prosecution in their client's case. An example is the study by B. Liang and M. Hu (2023), where the researchers sampled acquittals and focused on the legal arguments of the defence, the effects of these arguments on the outcome, and the legal basis for the judges' not guilty verdicts.

The study of court practice may signal the need to strengthen the competence of lawyers. G. Kovács *et al.* (2022), based on an analysis of Hungarian court decisions, tried to establish the frequency of submission of contaminated DNA samples to the court and the court's assessment of genetic examination findings. The result, according to the researchers, was surprising, since among the analysed 29,409 court decisions from 1996-2021, only 2,181 mentioned DNA analysis, the concept of "contamination" and its synonyms in relation to DNA was mentioned in only 50 cases, and only 3 cases were relevant to the subject of the study. The rest concerned issues of mixed DNA, DNA transfer, destruction or degradation of biological material, poor work of personnel at the scene, and in more than half of the cases (26), the system simply provided false search results. On this basis, researchers expressed doubts regarding the quality of the courts' assessment of the evidence, as more contamination cases were actually expected, considering the complex process of detection, extraction, storage, and examination of DNA samples and the potential danger of contamination of such materials at each stage. G. Kovács *et al.* (2022) noted that judges should be aware of how DNA samples are contaminated and check whether professionals followed the quality policies and legislation regarding the collection, storage, and use of DNA materials in each case.

B. Custers (2024) formulated analogous conclusions regarding the need to strengthen the competence of the court. Based on the analysis of judicial practices, the researcher stated that a fair trial in the 21st century requires that courts and judges have a sufficient understanding of complex technologies in the cases in which they rule. Continuing this idea and considering the asymmetry of knowledge and information identified in judicial practice, which stems from the lack of understanding of judges of how a particular technology functions, B. Custers (2024) offered a discussion of the possibility of transferring technologically complex cases to specialised courts.

Apart from court decisions, transcripts of court hearings could be a valuable source of information on the evaluation and use of evidence. A. Bali *et al.* (2020) provided an example of an empirical study that analysed 137 court hearing transcripts. As a result, it was found that in 80 cases (60%), the courts accepted incorrect expert opinions and testimony without asking questions, as well as prosecutors referred to erroneous forensic evidence and testimony. Although this is not the only reason for false convictions, it is one of the significant factors of erroneous court decisions. Thus, it makes sense to discuss the idea of supplementing court decision databases with additional files containing court transcripts.

Having no experience of pre-trial investigation of a particular criminal offence under a certain legal qualification, an authorised entity can monitor court decisions and determine an indicative methodology for investigation, including a list of key procedural actions and material evidence seized in the case, areas of use of specialised knowledge, etc. The search for such data can be narrowed down to one's region to determine the rules of best practice in the location of the pre-trial investigation body, or vice versa, to expand the region if there are contradictions or no relevant court decisions at the local level. Judges and investigating judges also monitor the practice to get acquainted with the legal positions of higher judicial bodies, the experience of their colleagues in resolving complex, atypical issues, and the positions of the European Court of Human Rights. This institution extends far beyond the praxeology of "individual justice", forming the foundation for a universal, supranational human rights paradigm (Dufeniuk, 2021a).

Thus, from a practical standpoint, the value of court decision databases lies in the fact that they can, firstly, act as a kind of "digital consultant" on problematic issues of law enforcement practice, providing hints on how a particular legal problem was previously resolved, what were the patterns of activity of the defence, prosecutor, court, other persons in certain categories of cases, etc. Secondly, to serve as a kind of "alarm indicator", i.e., to signal gaps and shortcomings in legislation, interpretation of rules, and staff competence that create obstacles to fair justice.

The court decision databases are used for educational purposes, as law students can observe how "rules-in-theory" and "rules-in-law" are transformed into "rules-in-action". For future lawyers, it is valuable to study impersonal case files to focus on the language and terminology of legal documents, the logic of assessments and judgements, and

compliance with procedures. They must be thoroughly aware of the possibilities of information and analytical work with such resources to be capable of effectively using the beneficial features of digital platforms for judicial practices in their professional activities. For lecturers, these resources are a valuable source of illustrative material for lectures, preparation of quests, problem situations, debates, and other interactive learning tasks. Such a practice-oriented approach allows verifying knowledge, bringing students closer to the conditions of investigation and trial of real criminal offences, developing critical thinking and information and analytical skills.

**Risks and problems of using court decision databases in criminal proceedings.** Despite its considerable positive value, the functioning of digital platforms of court decisions is fraught with certain risks and challenges. Firstly, search algorithms may produce inaccurate results (e.g., the system produces rulings and sentences instead of verdicts). There is a risk that not all solutions found by contextual search may be relevant to the query, and therefore generalised quantitative indicators of the documents found should not be considered *a priori* correct. To verify the result, one will have to open each document separately. Some decisions are not entered into the system at all, which should also be considered when researching judicial practices. Inconveniences also arise from the lack of the ability to download documents in PDF or DOCX format. To create a citation of a court decision, one has to manually copy and format the metadata and the relevant links to the electronic page. This drawback could be eliminated by adding a button to the open document interface to automatically generate citations in various formats of the user's choice. Such a mechanism has long been used in the scientific field, where a link to a publication can be generated or copied and easily added to one's research.

Secondly, the system can detect flaws in ensuring data anonymity. Automated anonymisation algorithms may mistakenly miss data on the accused, the victim, or other information that may help identify the event and participants in the criminal procedure. However, this drawback is not relevant for the European Court of Human Rights database (HUDOC Database, n.d.), where the name of the complainant is not subject to any coding, but other personal information is not made public.

F. Baumann and F. Fagan (2023) discussed the dilemma of anonymity of personal data of judges. The researchers agreed that open information about the "author" of a court decision is of public benefit but noted that judges may be less forthright in their decisions and oral explanations due to the awareness that they are being watched by the public. They try to avoid accusations of bias, worry about career growth or possible disgrace due to their decisions and actions, and therefore alter their behavioural strategy. This, according to researchers, creates a situation where "more" information does not mean "better".

Thirdly, digital platforms of court decisions provide general access to documents that may have differing versions of decisions on the same legal issue. The lack of uniform practice arises from differences in the interpretation of certain rules and institutions of substantive or procedural law. This risk should be considered when reviewing a particular judicial practice. Higher judicial authorities formulate legal positions with the purpose of unifying approaches, although they do not always manage to do so in a prompt and high-quality manner. In some cases, the Supreme Court deviates from its previously expressed positions. Considering the above, the Database of legal positions of the Supreme Court (Database of legal positions of the Supreme Court, n.d.) should be used as an additional source of information in the empirical study of judicial practices.

Fourthly, the texts of court decisions are largely formed based on textual information from criminal proceedings, documents of the prosecutor and investigator. Linguistic and stylistic errors and incorrect wording at the pre-trial investigation stage are sometimes duplicated further. In this case, it is difficult to discuss the possibility of using a court decision as an example of a legal document. Errors can be not only formal but also substantive, for instance, inappropriate references to the case law of the European Court of Human Rights (Dufeniuk, 2021). The national registry also does not allow checking whether a court decision was appealed, amended, or cancelled. In the context of this discourse, it is also worth noting that the lack of paragraph numbering in most court decisions complicates findings certain data, evaluations, and judgements, especially in cases of large verdicts and rulings.

Fifthly, a special simplified procedure for consideration of materials (when there are legal grounds, and no one disputes the facts and evidence provided by the parties) contributes to the implementation of the principle of reasonable time and saving procedural resources. At the same time, verdicts in such cases are not highly informative in terms of forensic tactics and methodology. They do not contain a list of procedural actions and a brief summary of their results, the court's assessment of the admissibility of evidence, etc.

Lastly, the information contained in court decision databases constantly needs to be protected from cyber threats. In special situations, public access to the information in such databases may be restricted, as happened after the outbreak of a full-scale aggressive war in Ukraine (Burtnyk, 2022). For several weeks in a row, the Unified State Register of Court Decisions was blocked, which made it impossible to review the practices of solving urgent problems of applying measures to ensure criminal proceedings, resolving applications for permission to conduct investigative (search) actions, etc., under martial law.

Considering the above analysis, it is possible to formulate ways to optimise the functioning of the Unified State Register of Court Decisions (n.d.). One of the key trends in the digital transformation of criminal justice involves the development of information and analytical tools (including the use of artificial intelligence) for working with documents posted on the digital platform of judicial practices. This task can be achieved by adding the following options:

- a special note (signal information) that the court decision was amended or cancelled with a hyperlink to the relevant document;
- summarisation of the text of court decisions (a brief summary of the circumstances and content of the decision);
- the ability to automatically generate a citation of a particular court decision;
- the ability to download a court decision in HTML, PDF, or DOCX format of the user's choice;
- the ability to send a court decision file to a mailbox or share it on social media;
- the ability to select a time period in one action (last week, last month, last year, last five years).

Apart from these innovations, it is advisable to extend the practice of numbering paragraphs of the reasoning part of court decisions; to supplement the educational programmes of future lawyers with an additional module on working with various databases of court decisions to prepare competent professionals to work in the field of criminal justice in the digital age; to strengthen links between different databases of court decisions. Examples of such integration already exist. For instance, the Database of legal positions of the Supreme Court (n.d.) allows following a link to a court decision posted in the Unified State Register of Court Decisions (n.d.). In the future, it is expected that such a link will be available to the content of the HUDOC database.

## Conclusions

The proposed study is the first paper in the Ukrainian scientific doctrine to examine the theoretical foundations of using the resources of digital platforms for judicial practices for research, optimisation of practice, and the educational process. A systematic analysis of the legal regulation of the procedure for publishing court decisions in open databases suggests that in Ukraine, the implementation of the principle of publicity and openness of court proceedings is a logical continuation of ensuring general access to court decisions. These documents with anonymised data are published in the Unified State Register of Court Decisions. The Ukrainian platform of digitised documents is not inferior to its Western European counterparts in terms of content, document clustering, search filters, data processing speed and information protection. At the same time, the study revealed a lot of room for development and improvement based on the best practices of international institutions.

The database of court decisions is useful for the state, as it allows presenting humanitarian policy in a broad sense, which defines the model of criminal procedure and the fundamental principles of criminal justice (political and legal value). For society, its significance lies in the fact that it demonstrates the openness and transparency of law enforcement and judicial bodies and increases trust in state institutions (public value).

The procedural value of digital platforms for judicial practices is formed by scientific, applied, and educational components. At the theoretical, scientific level, the database of court decisions provides ample opportunities for empirical research and academic discussions. At the applied level, it is a "digital consultant", a source of information for investigators, prosecutors, judges, defence counsel, victims, and others about a criminal offence, the practices of pre-trial investigation or court proceedings, evaluative judgements, motives, court reasoning, application of principles, presumptions, standards, and procedures. The explanations set out in the legal positions of the highest judicial bodies contribute to the unity of judicial practice. In addition, databases of court decisions can serve as a kind of "warning indicator", as they enable a critical assessment of the state of legal support and the competence of law enforcement personnel. At the educational level, the digitised documents of "Themis" present the functioning of legal institutions in real life, legal language, and argumentation. Additionally, these resources can serve as the basis for preparing educational tasks, quests, simulations, and other forms of interactive learning.

Risks and problems of using court decision databases include inaccurate search results and certain analytical limitations; flaws in ensuring the anonymity of personal data; lack of uniform court practice; incorrect wording copied from fragments of documentation of prosecutors and pre-trial investigation bodies; low information content of court decisions made under a simplified procedure; the need to constantly protect data from unauthorised interference and restrict access in extraordinary situations. Considering the best European practices, the study formulated concrete proposals for improving information and analytical tools for working with text documents and recommended that the educational programme for future lawyers should include a thematic module on working with court decision databases to train competent professionals in the field of criminal justice.

Promising areas for further research include the development of algorithms for improving the functionality of databases and forecasting court decisions based on artificial intelligence technologies, the development of methodological recommendations for the use of these resources in the scientific, practical, and educational spheres, and the study of the issues of integration of various digital platforms of judicial practice.

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## Conflict of interest

None.

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# Цифрові бази даних судових рішень у кримінальному процесі: значення, ризики та оптимізація використання

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**Анотація**. Актуальність статті обумовлена, по-перше, глобальною тенденцією цифровізації судової практики, що вимагає адаптації до нових реалій, по-друге, недостатньою розробкою теоретико-методологічних засад використання такого ексклюзивного джерела для розвитку правової науки і практики. Мета дослідження полягала у формуванні на концептуальному рівні основ ефективного використання баз даних судових рішень у кримінальному процесі для наукових досліджень, оптимізації практики та освітнього процесу. Кластер методологічних інструментів дослідження охоплював системний, компаративний, синергетичний, ризик-орієнтований підходи та методи формальної логіки. У роботі узагальнено дані щодо процедури оприлюднення судових рішень у Єдиному державному реєстрі судових рішень України, а також проведено огляд європейського досвіду функціонування цифрових платформ судової практики. Встановлено, що українська платформа оцифрованих документів схожа на європейські аналоги. Вона є джерелом метаданих судових рішень, даних про кримінальне правопорушення, досудове розслідування та судове провадження, докази, мотиви суду та специфічну мову юридичних документів. Це дає змогу не тільки реалізувати засаду відкритості судового провадження, доступу до судових рішень, але й розглядати ці ресурси в аксіологічному контексті, що об'єднує трилогію компонентів (політико-правова, соціальна та процесуальна складові). Дослідження також показало ризики, обмеження та проблеми використання баз даних судових рішень, наприклад, неточність результатів пошуку чи обмеження доступу до системи в екстраординарних випадках. Запропоновано удосконалення національної платформи шляхом додавання опцій. Практична цінність дослідження полягає у презентації для широкої аудиторії можливостей використання цифрових платформ судової практики та формулюванні пропозицій оптимізації інформаційно-аналітичних інструментів Єдиного державного реєстру судових рішень

**Ключові слова**: кримінальне провадження; суд; процесуальні рішення; інформаційно-аналітична діяльність; цифрова документація