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#### Note

## PROSPECTS FOR THE USE OF ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING ALGORITHMS FOR EFFECTIVE RESOLUTION OF CIVIL DISPUTES<sup>1</sup>

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**Summary:** 1. Preconditions for the problem of effective resolution of civil disputes in Ukraine. -2. Methodology for applying artificial intelligence and machine learning algorithms for effective resolution of civil disputes. — Conclusions.

**Keywords:** indicators of efficiency of the judicial system; factors influencing the effectiveness of dispute resolution; court case information catalogue; forecasting the results of court proceedings.

#### **ABSTRACT**

The article examines the main direction of the modern model's formation of justice in Ukraine regarding sustainable development, the need to support and develop strong and peaceful institutions, and adaptation of Ukrainian legislation to EU law. Based on the analysis of existing approaches, the use of artificial intelligence for the development of tools that analyse

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Within the project "Innovative technologies for processing court decisions using machine learning 1 **algorithms**", that financed by an external instrument of assistance of the European Union to fulfill Ukraine's obligations in the European Union Framework Program for Research and Innovation "Horizon 2020".

large data sets of the Unified the State Register of Court Decisions to identify stable regularities in the judicial system's functioning will be possible through the development of systems and assessment of risks to achieve the desired outcome of civil cases, increase the percentage of funds awarded, ensure the effective use of public funds for the maintenance of the judiciary in the state, and promote its growth equally across levels in society. The study showed that it is necessary to determine the indicators of the justice system's efficient functioning and the main factors affecting their efficient consideration of civil cases by the court, as well as the reasons for the risk of excessive length in court proceedings, non-enforcement of court decisions, and high court costs. The findings show that it is necessary to develop a catalogue of information from the analysed cases by taking into account the legal proceedings' administrative performance indicators in civil cases, as well as the identification of their main and significant factors affecting the effectiveness of legal proceedings and the derivation of quantitative and effective indicators.

# 1 PRECONDITIONS FOR THE EFFECTIVE RESOLUTION OF CIVIL DISPUTES PROBLEM IN UKRAINE

An effective system for the protection of human rights is an integral element of modern society and the duty of any democratic state to ruling the international community's law. The modern world's formation, in the context of globalisation and regionalisation under the auspices of the Universal Declaration of Human Rights and the European Convention on Human Rights, necessitates compliance with the standards of such protection, ensuring the existence of specific mechanisms for implementation and their proper restoration in the case of a violation of rights. The definition of the Sustainable Development Goals lays the foundations for specific directions to reform and improve existing mechanisms for the protection of rights. Everyone should feel protected, and their rights, in cases of violation, will be properly restored through existing mechanisms. These mechanisms in today's world must be effective and accountable to build peaceful and inclusive societies.<sup>2</sup>

In the context of recent crises, the importance of effectively functioning mechanisms to protect rights and ensure equal access to justice for all, and their ability to solve their main tasks, is even more pronounced. The coronavirus pandemic brought global restrictions on physical contact and digitalization to even the most archaic institutions. The war in Ukraine inevitably leads to large-scale losses and damages, and is likely to lead to greater negative consequences given the complexity of reforming the protection of private rights system in post-Soviet society.

All of this radically affects the deepening of the main problems of the modern Ukrainian system for protection of rights, including features such as the lack of an integrated approach to the resolution of private law disputes, which, accordingly, causes problems for further development and proper functioning of the protection system of such rights.

The already familiar concept of "civil justice" is practically unknown to Ukrainian legislation. Consequently, outdated post-Soviet ideas about civil proceedings intersect

UNGA Res 217 A 'Universal Declaration of Human Rights' (10 December 1948) <a href="https://www.un.org/en/about-us/universal-declaration-of-human-rights">https://www.un.org/en/about-us/universal-declaration-of-human-rights</a> accessed 19 April 2023; Council of Europe, European Convention on Human Rights: as amended by Protocols Nos 11, 14 and 15 supplemented by Protocols Nos 1, 4, 6, 7, 12, 13 and 16 (ECtHR 2021); UNGA Res 70/1 'Transforming our World: the 2030 Agenda for Sustainable Development' (25 September 2015) <a href="https://sdgs.un.org/2030agenda">https://sdgs.un.org/2030agenda</a> accessed 19 April 2023. Goal 16 of Sustainable Development "Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels".



with current trends in attempts to introduce alternative dispute resolutions, but are not successful enough.<sup>3</sup>

Mediation, introduced in autumn 2020 by law, is not mandatory, even for certain case categories that are most suitable for its application. Although the requirements for the parties during pre-trial resolution of disputes are formal in practice, the parties do not adhere to this obligation, considering it an unnecessary formal procedure on the way to the administration of justice. An essential feature of justice in the eyes of most of society is the element of possible execution of a court decision, which cannot replace the priorities of compromise and the dispute's own mutually beneficial resolution. The procedure for resolving a dispute with the participation of a judge, introduced into Ukrainian procedural legislation due to the reforms of 2017 when following the example of the Canadian experience, is used in some cases, though of course, is not a common practice in Ukrainian courts.<sup>4</sup>

It is worth noting the problems regarding the judicial system's functioning and selection of judges in Ukraine, which makes it impossible to implement those innovations that assist in case of a reasonable and balanced approach in practice. The judiciary portal lacks transparent and accessible ways to search for specialists in information, legislation, and law, and this portal, in particular, does not interact with Ukraine's lawyer and mediator portals, holds no details on the execution of court decisions, etc.

The execution of court decisions is separated from the very essence of the trial, and often the parties involved in a private law dispute face the problem of non-enforcement of a court decision after an exhausting trial. Some of these decisions, by their nature, cannot be enforced, which challenges the participants in the trial whose efforts were aimed more toward achieving this enforcement than protecting rights (for example, the widespread practice of determining the child's place of residence, etc.; that is, cases when a decision's enforcement is practically impossible).<sup>5</sup>

The idea of mandatory representation of persons in courts by a lawyer, that has not been fully implemented, further distorted the idea of differentiation of legal proceedings and introduction of simplified consideration of claims for small amounts (small cases) in Ukrainian procedural legislation. The categorization of civil cases into insignificant and significant is so complex and ambiguous, both in rights and in judicial practice, that without

It is worth noting that Ukrainian scientists operate with the concepts of "civil litigation" and "civil procedure" in the national doctrine of law; bn this case, the latter does not differ essentially from the other in a meaningful way (see M Shtefan, O Uhrynovska); recently, there have been widespread tendencies to study the concepts of "justice in civil cases" (V Komarov), which is close to understanding civil proceedings; sometimes the concept of "civilistic process" is used in Ukrainian literature, which was traced mainly from russian sources by isolated scholars who tried to introduce it into national science. In our opinion, the concept of "civil justice" is more complex and reflects modern approaches and ideas of sustainable justice in civil cases, allows to gather in their diversity all the integral elements of access to justice and the right to a fair trial and to ensure their mutually coordinated functioning. I Izarova, V Nekrošius, V Vebraitė and Yu Prytyka, 'Legal, Social and Cultural Prerequisites for the Development of ADR Forms in Lithuania and Ukraine' (2020) 116 Taze (Law) 8, doi: 10.15388/Teise.2020.116.1.

For example, the participation of children in civil proceedings is almost not regulated, there are not even requirements and peculiarities of children's participation in court hearings, testimony, etc.; this determines the special role of mediators in the resolution of disputes involving children, see: I Izarova, A Krychyna, Y Mukha and A Tsybulko, 'On the Way of Implementing the Principle of Best Interests of the Child During Mediation: Ukrainian Experience' (2022) 1 Bulletin of Taras Shevchenko National University of Kyiv, Legal Studies 40, doi: 10.17721/1728-2195/2022/1.120-8. For example, in so-called medical disputes, given the urgent need to ensure the confidentiality of dispute resolution, mediation and other alternative dispute resolution methods are extremely effective, see: I Izarova and V Vebraite, 'Towards Effective Resolution of Medical Disputes in Ukraine and Lithuania: Comparison of Analyses, Challenges and Prospects' in R Maydannyk, A den Exter and I Izarova (eds), Ukrainian Legislation in the Field of Health Care in the Context of European and International Law (Springer Cham 2022) 153, doi: 10.1007/978-3-031-05690-1\_9.

<sup>5</sup> I Izarova, 'Sustainable Civil Justice through Open Law Enforcement: The Ukrainian Experience' (2020) 9 (5) Academic Journal of Interdisciplinary Studies 206, doi: 10.36941/ajis-2020-0098.

professional legal assistance, the average citizen is unable to apply in the manner prescribed by law which is most effective for the consideration of his case.<sup>6</sup>

The very differentiation of private law cases in the context of the case management's widespread implementation in different European countries is controversial. However, the complication of the criteria for determining such case categories distorts this opinion altogether.<sup>7</sup>

Court fees are the next fundamental problem related to Ukrainian civil proceedings, given the unpredictability of judicial mechanisms for protection of rights, as well as the low probability of voluntary enforcement of a court decision. A comparative study, conducted in more than 20 jurisdictions in the world, shows access to justice largely depends on the amount of court fees, which will be indicative in the context of Ukraine's recovery after the war and the population's mass impoverishment, which will seek compensation for the damage in the most effective way.

Directing justice to the enforcement of court decisions, instead of building a system of preventive mechanisms and facilitating the resolution of disputes between the parties, identifies the main problems of the Ukrainian justice system's modern model. In the postwar conditions of restoration of justice for all who suffered from hostilities, suffered losses, damage to property – it will become the basis for a catastrophic decline in public confidence in the authorities.

In the context of ensuring the implementation of the Sustainable Development Goals, the lack of effective out-of-court mechanisms to prevent the emergence and escalation of private disputes is one of the problems that should gain our special attention. The spread of a negotiable culture, appeals to lawyers for professional legal assistance as well as for mandatory representation in courts, combined with the mandatory introduction of pre-trial dispute resolution procedures involving specific counterparties (banking institutions, employers' associations, etc.) will contribute to the development of an effective justice system. These ideas are in line with those reflected in the ELI / UNIDROIT Model Rules for European Civil Procedure, currently recognized as a set of the best rules worldwide.<sup>8</sup>

Another challenge faced is the massive displacement of Ukrainians, of about 12 million who have left their places of residence. The UN stated that 7 and a half million people left Ukraine during the war; 4.1 million refugees from Ukraine registered for temporary protection or similar national protection schemes in Europe<sup>9</sup> (*Last updated on September 30, 2022*). Regarding the states where Ukrainians are fleeing the war, they include Poland, which sheltered 2.95 million Ukrainians, Germany (867 thousand), Italy (105), Austria (73), and others. The ratio of a given country's population and the number of Ukrainians who received asylum there is also noteworthy (in particular, Lithuania sheltered Ukrainians in the amount of 2% of its total population, while Austria sheltered less than 1% (0.98 %), and France sheltered 0.10%).<sup>10</sup>

R Flejszar, I Izarova and V Vėbraitė, 'Access Towards Small Claims Justice: A comparative Study of Civil Procedure in Lithuania, Poland and Ukraine' (2019) 9 (1) International Journal of Procedural Law 97.

<sup>7</sup> CH van Rhee, E Maan and R Kostur, Monitoring of Implementation of the Civil and Commercial Procedural Codes: Final Report (Project Pravo-Justice, EU 2019); I Izarova, V Vebraite and R Fleishar, 'Case Management in Civil Procedure: A Comparative Study of the Legislation of Lithuania, Poland and Ukraine' (2018) 10 Law of Ukraine 129, doi: 0.33498/louu-2018-10-129.

<sup>8</sup> ELI and UNIDROIT, 'Model Rules of European Civil Procedure' (UNIDROIT, 2020) <a href="https://www.unidroit.org/instruments/civil-procedure/eli-unidroit-rules">https://www.unidroit.org/instruments/civil-procedure/eli-unidroit-rules</a> accessed 19 April 2023.

The most up-to-date data can be found here: 'Ukraine Refugee Situation' (Operational Data Portal, 29 June 2022) <a href="https://data.unhcr.org/en/situations/ukraine">https://data.unhcr.org/en/situations/ukraine</a> accessed 19 April 2023.

ibid; 'Ukraine Situation: Refugees from Ukraine across Europe' (Operational Data Portal, 30 June 2022) <a href="https://data.unhcr.org/en/documents/details/94001">https://data.unhcr.org/en/documents/details/94001</a> accessed 19 April 2023.



This means that a sufficiently large group of the population temporarily residing in a state's territory should receive equal access to justice, regardless of their status (temporarily displaced person), as well as the actual circumstances of their stay. The European Union Agency for Fundamental Rights has published national legislation implementing the Directive, but there are only 9 states included, and no details provided related to free legal aid or access to courts.

Ukraine's European integration aspirations necessitate the development of transparent relations on conditions of mutual trust in the member states' judicial systems. At the same time, the Ukrainian mechanism's low efficiency is evidenced by indicators of international organizations and an extremely low level of trust in Ukrainian society.<sup>11</sup>

According to the ECHR statistics, Ukraine ranked third in the number of complaints filed with the ECHR. Among the decisions adopted by the ECHR in 2020, almost a quarter (23%) are decisions in which Art. 6 ECHR is involved, especially regarding the fairness or length of court proceedings, or judgments' enforcement.

Sociological surveys that measured trust in the judiciary and independence of judges in the EU, conducted within the framework of the Eurobarometer and the EU Justice Scoreboard, aimed at clarifying public opinion about the state of justice, remain unknown to the general public in Ukraine but should be taken into account when implementing an effective system to monitor measures.<sup>12</sup>

All the above demonstrates the need for an integrated approach to reform Ukraine's civil justice system, which will be useful to incorporate artificial intelligence and machine learning algorithms to identify stable patterns of the justice system's functioning and development.

It is important to clearly clarify the real public expectations from the modern justice system in Ukraine, the demand of citizens and businesses for justice's effectiveness in the post-war country, and purposefully identify areas for improvement to substantiate the concept of sustainable justice. For the first time, a comprehensive approach will be applied to the formation of a holistic view of the justice system for citizens and businesses, as well as the peculiarities of the modern justice system in the sustainable development field, based on the requirements of proportionality and optimality of models for preventing and resolving private disputes.

Specific components of building trust in the judiciary and an algorithm developed on this basis for assessing the judiciary's quality in the country, as well as collection of data on its functionality works to strengthen trust in the justice system by following the example of analogues, EU and CoE. Such indicators of justice efficiency, with the help of algorithms for continuous monitoring and collection of data on the developed indicators, will allow timely and flexible responses to unavoidable changes.<sup>13</sup>

The 2022 Eurobarometer Standard Study demonstrates continued strong support for the EU's response to Russian aggression against Ukraine, in any case, relations should be based on constant mutual trust. The 2022 Eurobarometer Standard Study demonstrates continued strong support for the EU's response to Russian aggression against Ukraine, in any case, relations should be based on constant mutual trust, see: Standard Eurobarometer 97 – Summer 2022' (European Union, September 2022) <a href="https://europa.eu/eurobarometer">https://europa.eu/eurobarometer</a> surveys/detail/2693> accessed 19 April 2023. In the World Bank rating Doing Business 2020 Ukraine took 64th place. Program Rule of Law Index of the World Justice Project, in 2020–2021 Ukraine took the 72nd place-74 seats, see: Ukraine (World Justice Project, 2022) <a href="https://worldjusticeproject.org/rule-of-law-index/country/2021/Ukraine">https://worldjusticeproject.org/rule-of-law-index/country/2021/Ukraine> accessed 19 April 2023. Freedom House Seeding Ukraine at 39/100 and announcing transition or hybrid regime, see: Ukraine (Freedom House, 2022) <a href="https://freedomhouse.org/country/ukraine/nations-transit/2022">https://freedomhouse.org/country/ukraine/nations-transit/2022</a> accessed 19 April 2023.

<sup>12</sup> European Commission, Directorate-General for Justice and Consumers, Perceived Independence of the National Justice Systems in the EU Among the General Public: Report (Publications Office 2019) doi: 10.2838/60311; European Commission, 'EU Justice Scoreboard' (European Commission, 19 May 2022) <a href="https://ec.europa.eu/info/policies/justice-and-fundamental-rights/upholding-rule-law/eu-justice-scoreboard\_en">https://ec.europa.eu/info/policies/justice-and-fundamental-rights/upholding-rule-law/eu-justice-scoreboard\_en</a> accessed 19 April 2023.

<sup>13</sup> EU Justice Scoreboard (n 14).

Special attention should be given to the issues of recognition and enforcement of court judgments for EU member states in Ukraine, servicing documents and collecting evidence in court proceedings involving temporarily protected Ukrainians.

### 2 METHODOLOGY FOR APPLYING ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING ALGORITHMS FOR EFFECTIVE RESOLUTION OF CIVIL DISPUTES

In the overwhelming majority, legal research of Ukrainian scientists involves the use of general scientific methods that allow reaching conclusions as well as special scientific methods used in legal research.

In particular, the application of the dialectical method involves a comprehensive consideration of the study's objects in their interrelation, totality, and dynamics of development, using categories and laws of dialectics. To determine the negative consequences of the colonial-totalitarian model of the court's functioning as a mechanism of state coercion in Ukraine, and to formulate specific directions of the modern model of sustainable justice; justification of the need to change the focus of permanent justice to the peaceful resolution of disputes as opposed to the system that provides cases by national courts, etc.<sup>14</sup>

Logical methods make it possible to generalize the conditions and features of the widespread use of out-of-court dispute resolution and determine their place in the justice system with performance indicators. This may lead to a shift in the focus on permanent justice to the peaceful resolution of disputes, in contrast with the system of enforcement by national courts, while units of research papers focus on supporting and developing strong and peaceful institutions in Ukraine's justice system, determining compliance with the requirements of sustainable development of modern legal procedural institutions.

Statistical studies allow determination of quantitative indicators of the judicial system's work, often used in scientific research. <sup>15</sup> At the same time, the indicators taken into account cannot objectively demonstrate the advantages and gaps of the current justice system without defining relationships and specific indicators of the effectiveness of judicial proceedings in specific civil cases. It should be noted that among certain categories of cases developed for the collection of judicial statistics, there are no characteristics <sup>16</sup> of main and significant IP factors altering the effectiveness of legal proceedings, and there are no quantitative indicators of the effectiveness of the administration of justice.

Some studies carry out a systematic analysis of Ukraine's current civil procedural legislation, as well as legislation in the judicial system, enforcement proceedings, regulatory legal acts, and draft laws that will form a comprehensive view of the regulation of relations regarding the protection of individuals' rights in Ukraine, the use of judicial or extrajudicial forms

O Khotynska-Nor and I Izarova, 'To reach sustainable justice with Millennials': Example of Ukraine' (2022) 12 (4) Juridical Tribune 457, doi: 10.24818/TBJ/2022/12/4.02; O Khotynska-Nor, 'Judicial Transparency: Towards Sustainable Development in Post-Soviet Civil Society' (2022) 5 (2) Access to Justice in Eastern Europe 83, doi: 10.33327/AJEE-18-5.2-n000212; M Stefanchuk, 'Modern Trends in the Formation and Development of the Human Rights Mechanism in Ukraine' (2022) 5 (3) Access to Justice in Eastern Europe 19, doi: 10.33327/AJEE-18-5.3-a000311.

Judicial Statistics' (Judicial Power of Ukraine, 2023) <a href="https://court.gov.ua/inshe/sudova\_statystyka">https://court.gov.ua/inshe/sudova\_statystyka</a> > accessed 19 April 2023; I Izarova and Yu Prytyka, 'Simplified Civil Litigation of Ukraine: Challenges of the First Year of Application in Judicial Practice' (2019) 145 Problems of Legality 51, doi: 10.21564/2414-990x.145.160567.

<sup>16</sup> Catalogue of 101 categories and open data resource, see: Datasets (*Diya: Open Data Portal*, 2023) <a href="https://data.gov.ua/en/dataset?q=Court+decisions&sort=title\_string+asc">https://data.gov.ua/en/dataset?q=Court+decisions&sort=title\_string+asc</a> accessed 19 April 2023.



of protection of rights, which becomes the basis for the development of appropriate recommendations for improving current legislation.

The comparative legal method will help clarify the experience of leading jurisdictions in studying other countries' relevant legislation. It will answer questions such as directions for reforming national and European procedural legislation in terms of balancing judicial and out-of-court resolution of disputes, whether the current Ukrainian regulations correspond to such trends, as well as how to identify the necessary directions for further reform.<sup>17</sup>

The disadvantage of such work is the lack of objective and large-scale studies of judicial practice, namely the data from the Unified State Register of Court Decisions (hereinafter – the Register), which in recent years, has accumulated more than one million court decisions for free access. Of course, the majority of procedural and legal studies contain references to the data used in the Register. At the same time, it should understood that some of the studies contain at least an analysis of 100-200 court decisions, while one category of cases usually covers more than 1,000 cases per year and sometimes reaches tens of thousands. The selection of decisions is carried out through the choice of keywords and several options available for choosing the type of decision and court's region, which does not contribute to the objectivity of the conclusions, but only narrows the sample of cases for analysis. <sup>18</sup>

Units of scientific research are devoted to the issues of obtaining large amounts of data currently available for research.

Additionally, during 2015–2022, many interdisciplinary studies appeared in process in which scientists defended the idea(s) of the possibilities of the predictive function of machine learning algorithms and other artificial intelligence tools.<sup>19</sup>

In our opinion, modern scientific research in the field of justice requires using artificial intelligence machine learning algorithms, such as special hardware and software systems for pre-processing the texts from court decisions. This will make it possible to prepare objective recommendations for improving and optimizing Ukraine's judicial system's functionality, the consideration and resolution of civil cases, and the reduction of judicial cases' costs, development of a risk assessment system for achieving the desired civil litigation result, increasing the percentage of funds awarded, and ensuring the effective use of public funds for the maintenance of the state judiciary.

Labelling texts of court decisions in large arrays when collecting empirical data for further application in deep algorithms of Natural Language Processing will make it possible to

OM Spektor, 'Alternative Methods of Resolving Civil Legal Disputes' (PhD (Law) thesis, Taras Shevchenko National University of Kyiv 2012) 18; MJ Polishchuk, 'Mediation as a Method of Resolving Civil Legal Disputes' (PhD (Law) thesis, Taras Shevchenko National University of Kyiv 2017) 18; O Terekh, 'Alternative Ways to Resolve Labour Disputes: Practice of Ukraine and the EU' (2020) 2 Bulletin of Taras Shevchenko Kyiv National University, Legal Studies 61, doi: 10.17721/1728-2195/2020/2.113-12; N Vasylyna, 'Prospects for the Development of the Dispute Resolution Institute with the Participation of Notary' (2020) 1 Bulletin of the Higher Qualification Commission of Judges of Ukraine 20; CH van Rhee, 'Mandatory Mediation before Litigation in Civil and Commercial Matters: A European Perspective' (2021) 4 (4) Access to Justice in Eastern Europe 7, doi: 10.33327/AJEE-18-4.4-a000082; T Tsuvina and T Vakhonieva, 'Law of Ukraine "On Mediation": Main Achievements and Further Steps of Developing Mediation in Ukraine' (2022) 5 (1) Access to Justice in Eastern Europe 142, doi: 10.33327/AJEE-18-5.1-n000104.

SE Ustiushenko, 'Legal Fees in Ukrainian Civil Proceeding' (PhD (Law) thesis, National University "Odesa Law Academy" 2021); KA Lubiana, 'Participation of a Lawyer in the Simplified Civil Court Proceedings of Ukraine' (PhD (Law) thesis, Taras Shevchenko Kyiv National University 2021); TV Oldak, 'Class Action in the Civil Proceedings of Ukraine' (PhD (Law) thesis, Kharkiv National University of Internal Affairs 2023); TF Korotenko, 'Court Orders in the Civil Process of Ukraine Addressed to the Competent Authorities of Foreign Countries' (PhD (Law) thesis, National Academy of Sciences of Ukraine, VM Koretsky Institute of State and Law 2021); DA Korol, 'Differentiation of Civil Court Proceedings' (PhD (Law) thesis, Institute of Law of Taras Shevchenko Kyiv National University 2020).

<sup>19</sup> M Medvedeva, M Wieling and M Vols, 'Rethinking the Field of Automatic Prediction of Court Decisions' (2023) 31 Artificial Intelligence and Law 195, doi: 10.1007/s10506-021-09306-3.

identify patterns and predict changes in the number of court cases, participants, and court costs, as well as optimize legal proceedings in civil cases with a high degree of probability, taking into account the possibilities of analysing hundreds of thousands of court decisions.

Some indicators for the justice system's effective functioning may highlight significant problems. Take, for instance, the total duration of protection of the rights of a person who applied to the court. In this case, we must think not about the time interval from the date of filing an application to the court until the final court decision, but from the moment of applying for protection of rights until the actual execution of the court decision. The behaviour of the parties in a trial based on the analysis of court orders on procedural coercion measures applied may be such an indicator, as well as information about court costs and their distribution between the parties. It is possible to find out the proportionality and effectiveness of the case's trial. The enforcement of a court decision, which finalizes the case's trial, is not transparent for investigation given the lack of unified data and openness of the work of the enforcement service. At the same time, in some case categories, it is possible to presume the possibility of such execution when the court allows the immediate execution of court decisions.

Analysis of large amounts of data will show more objectively the relationships and priorities of compromise and disputes' mutually beneficial resolution between the parties before litigation. Specifically, review of the ratio of directed and successfully conducted dispute resolution procedures with the participation of a judge, though not yet a common practice in Ukrainian courts, should become common in certain case categories.

The methods of execution of court decisions as a separate, painful issue of effective judicial protection of rights, as well as an element of the resolution of civil law disputes, should also become an indicator of the effectiveness of the justice system's functioning. Considering the importance of choosing the appropriate method of protection of rights for its effective resolution and proper consideration of a civil case by the court, as well as the mutual influence of the protection of rights' effectiveness and the method choice of such protection.<sup>20</sup>

The relationship between the representation of the individuals' interests in civil and commercial proceedings and the effectiveness of court proceedings and the protection of rights can also become an important indicator that will substantiate the idea of mandatory representation by a lawyer of persons in courts in specific case categories, or according to the criteria of the case's complexity.

Categorizing civil cases by analysing the relationships between these and other indicators, and the effectiveness of case consideration, can significantly improve the procedures for their consideration, saving public funds, time, and money spent on trial.

Undoubtedly, one of the most important indicators of the justice system's effective functioning should be data regarding court costs and their distribution with the outcome of the trial.

Thus, identifying the main factors influencing the effectiveness of civil cases by the court, as well as the reasons for the risk of excessive length of court proceedings, non-enforcement of court decisions, and high court costs, will ensure the formation of an integrated system of effective dispute resolution.

<sup>20</sup> AV Potapenko, Determination by the court of an effective way of protecting a private right and interest that does not conflict with the law (LLC 7BC 2022).



#### 3 CONCLUSIONS

The current model of justice in Ukraine is characterized by a special focus on enforcement rather than the development of strong and peaceful institutions, the introduction of a comprehensive system for resolving civil disputes that do not meet the requirements of sustainable development, and the adaptation of Ukrainian legislation to EU law. Sustainable justice should ensure effective prevention and resolution of private law disputes in Ukraine with a special focus on disputes and groups of persons affected by war, increasing trust in the judiciary system and saving costs.

The algorithm for predicting risks and results of court proceedings and the methodology for processing the database of the Unified State Register of Court Decisions developed based on certain indicators of dispute resolution's effectiveness will be a solution to provide objective data as a result of processing large amounts of data.

The lack of objective information necessitates utilizing machine learning algorithms and other artificial intelligence capabilities for processing large amounts of data to provide more objective information for analysis and decision-making, improving the existing litigation system and out-of-court dispute resolution.

In the future, we consider it is promising to develop a catalogue of information on analysed cases, considering the performance indicators of the legal proceedings' implementation in civil cases, as well as identifying the main and significant factors influencing the effectiveness of legal proceedings, to derive quantitative performance indicators.

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