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THE ROLE OF SMART COURTS AND ARTIFICIAL INTELLIGENCE IN ENHANCING CONSUMER PROTECTION: A COMPARATIVE ANALYSIS OF CIVIL LAW SYSTEMS

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ABSTRACT

This article examines how smart courts and artificial intelligence can strengthen consumer protection in civil law systems while also creating new risks for fair trial rights and equality before the law. It compares developments in the European Union, the United Kingdom, and China, focusing on online filing, virtual hearings, automated case management, AI-assisted document review, and judicial decision-support tools. The article argues that these technologies can improve access to justice for consumers by reducing delay, lowering costs, simplifying small claims procedures, and supporting cross-border dispute resolution. At the same time, it shows that algorithmic bias, black-box reasoning, automation bias, data protection concerns, and digital exclusion may undermine the very protective function that consumer law is meant to serve. The comparative analysis suggests that AI is most defensible in assistant functions, such as triage, translation, document organization, and procedural guidance, but is far more problematic when it approaches substantive adjudication. The article concludes that smart courts can contribute meaningfully to consumer justice only if they are designed around transparency, human oversight, inclusivity, and effective procedural safeguards.

KEYWORDS Smart courts; artificial intelligence; consumer protection; access to justice; digital justice

1. Introduction

Courts have not changed all that much in the last few centuries. The basic image of a courtroom – a judge at the front, parties and lawyers on either side, and stacks of papers on the table – has remained surprisingly stable even as the rest of society moved at remarkable speed int o the digital age. But that image is now shifting. In the last decade or so, and especially after the disruptions caused by the COVID-19 pandemic, the modernization of court systems has accelerated in

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ways that most legal observers did not expect to see quite so soon. Electronic filing, virtual hearings, algorithmic case management, and AI-assisted decision support have moved from pilot projects to mainstream infrastructure in several countries around the world (Susskind, 2019).

This change affects many areas of law, but it is especially important in consumer protection. Today, consumers often deal with businesses that operate across borders and use complex algorithms to set prices, handle complaints, and sometimes even reject claims. When a dispute arises over a faulty product, an unfair contract term, or a misleading advertisement, the consumer usually has to face a legal system that is slow, costly, and hard to understand without legal assistance. In small-value cases, the cost of going to court can be so high that seeking a remedy becomes unrealistic. This is the access-to-justice problem that smart courts and AI-assisted civil justice systems may help solve (Paterson & Maker, 2024).

The concept of the "smart court" was formally introduced in China around 2016, but similar ideas have been developing under different names across the EU, the UK, and beyond. What these systems share is an ambition to use digital technology and, increasingly, AI to make justice faster, cheaper, more consistent, and more accessible. For consumers, this holds real promise. Online dispute resolution platforms, AI-assisted document review, and automated case triage can reduce the practical barriers that currently prevent many consumers from enforcing their legal rights. At the same time, the use of AI in judicial processes raises serious concerns about fairness, transparency, and the protection of fundamental rights (Tang, 2025).

A few examples show how fast technology is changing the justice system. One clear example is online proceedings. Before the pandemic, they were used only to a limited extent, but now they have become a normal part of court practice, with millions of hours of hearings taking place online each month. Judges, court staff, lawyers, and litigants have already adapted to this shift, so it is likely that online hearings will remain an important feature of litigation. At the same time, online dispute resolution (ODR) platforms have also grown rapidly. Unlike live court hearings, these platforms provide online spaces where parties can communicate, often at different times, and try to reach a settlement. In the past, ODR was mainly associated with e-commerce platforms such as eBay, but after the COVID-19 pandemic it has expanded significantly and is now being used or tested in around 200 state and local court jurisdictions, with further expansion expected (Katsh & Rabinovich-Einy, 2017).

2. Concept and Development of Smart Courts

2.1. What Is a Smart Court?

The term "smart court" was officially introduced in China by Chief Justice Qiang Zhou, President of the Supreme People's Court (SPC), in a 2016 SPC Working Report. According to that report, Chinese courts were encouraged to make "the most of technologies including the internet, cloud computing, big data and AI" to enhance fairness and efficiency, improve judicial credibility, and achieve highly intelligent court management. As Zheng Sophia Tang explains in her 2025 book Smart Court: The Court of the Future, this term covers not just the digitization of court paperwork but the entire ecosystem of litigation services, adjudication, execution of judgments, case management, and court governance (Tang, 2025).

Although the term may have Chinese origins, the idea itself is not limited to China. Similar developments can be seen in the EU under the concept of "e-justice", in England and Wales through the reform programme of His Majesty's Courts and Tribunals Service (HMCTS), and in other jurisdictions under names such as "online court", "digital court", or "internet court". Even though the technologies and institutional models are not the same everywhere, the main goal is largely similar: to use digital technology to make courts more efficient, more accessible, and more capable of using AI-based tools in judicial processes (HMCTS, 2018).

Tang identifies three features that distinguish smart courts from earlier, simpler forms of court digitization. The first is sophistication: smart courts use not just basic internet connectivity but advanced technologies including cloud computing, facial recognition, big data analytics, blockchain, and AI. The second is comprehensiveness: unlike early e-court systems that digitized only part of the process (usually filing and service of documents while leaving hearings and evidence assessment offline), smart courts can digitize the entire trial process. The third is automation: smart courts do not just move offline processes online; they automate aspects of those processes using AI and machine learning, reducing the level of routine human intervention required (Tang, 2025).

These three features together define a qualitative shift from what existed before. A court that allows electronic filing of documents is doing something useful, but it is not yet a smart court in the full sense. A smart court uses AI to automatically categorize and route incoming cases, alerts judges to relevant precedents, transcribes hearings in real time, detects inconsistencies in evidence, assists with scheduling, tracks deadlines, and, in the most advanced implementations, provides suggestions about likely case outcomes based on an analysis of past

decisions. Consumer disputes, which often involve relatively straightforward legal questions applied to a large volume of similar factual situations, are well suited to several of these applications (Tang, 2025).

2.2. The Development of Smart Courts Globally

China has taken the most ambitious steps in developing smart court technology. Since 2016, the Supreme People's Court has released several important policy documents that set out a plan for building smart courts. One of the most important documents for this discussion is the 2017 SPC text, Opinions on Accelerating the Building of Smart Courts, which presented a broad vision for introducing AI into the judicial process at all levels. In 2018, China also created three specialised Internet Courts in Hangzhou, Beijing, and Guangzhou to deal fully online with disputes arising from online activities. The Hangzhou Internet Court, established in August 2017, was the first court of this kind in the world. These courts hear cases such as e-commerce disputes, online copyright cases, and internet-related financial disputes, which makes them especially relevant in the field of consumer protection (Stern et al., 2021).

The COVID-19 pandemic gave further impetus to the development of smart courts everywhere. In England and Wales, data collected by HMCTS showed that the number of court hearings conducted by audio or video technology increased from fewer than 1,000 per week in late March 2020 to approximately 3,000 by mid-April of that year. On 24 April 2020, 90 per cent of the 3,200 hearings taking place that day were conducted through audio or video technology. What had been a marginal practice became the norm almost overnight, and much of that change has persisted since. Similar developments occurred in continental Europe, with courts in France, Germany, the Netherlands, and elsewhere rapidly expanding their use of video hearings and electronic communication (Susskind, 2019).

In the EU, digital justice has developed through a number of policy frameworks and legal measures. The European e-Justice Strategy and its Action Plans, which are updated from time to time by the Council of the EU, have provided a general roadmap for the digital transformation of justice systems in the Member States. In 2021, the European Commission stated in its Communication on the Digitalization of Justice in the EU that access to justice must remain effective in the digital age, and it suggested a set of measures to modernize judicial procedures. This later led to the proposal for a Regulation on the digitalization of judicial cooperation in civil and commercial matters, often called the Digitalization Regulation. Its purpose is to support the cross-border service of documents, the taking of evidence, and communication between courts and parties through digital tools (European Commission, 2021).

The UK's HMCTS Reform Programme, launched around 2016, committed to investing £1 billion in the modernization of the courts and tribunals system. This included the development of online services for a range of claim types, including the money claims online service (MCOL), which allows claimants to issue and manage straightforward money claims through a digital platform. The Online Civil Money Claims (OCMC) service, which expanded during the reform programme, is particularly relevant to consumers because it covers the type of small-value disputes that consumers most commonly bring. These reforms were influenced by the recommendations of Lord Justice Briggs in his 2016 Civil Courts Structure Review, which proposed the creation of a new Online Court for lower-value civil claims (HMCTS, 2018, Briggs, 2016).

3. The Role of AI in Civil Justice Systems

3.1. The Role of AI in Civil Justice Systems

As can be seen from the formula system of ancient Roman civil proceedings, a judicial process is a procedure that is largely oriented towards form and formality. Of course, in the Roman era, the formality of court proceedings was necessary, as legal concepts were not yet established, but in the modern system of legal proceedings, the form of court proceedings has remained important in order to prevent arbitrary decisions by a powerful judge. As Rudolf von Jhering said in the 19th century, form is the sworn enemy of arbitrariness and the twin sister of freedom (Jhering, 1898). This did not change much in the legal and judicial system until the end of the 20th century, when communication via email became commonplace due to transformations in communication technologies. From that point onward, digital communication began to play an increasingly important role in legal practice.

Artificial intelligence (AI), as is well known, is difficult to define, but a useful brief description is that it is the machine's ability to imitate human rational behavior. One of the advantages of this definition is that it does not refer to any specific underlying technology, which is in constant and rapid development and is too diverse to be clearly formulated as a defining characteristic of AI. This concise definition also avoids the question of whether our machines are truly intelligent. Do they think? Most importantly, this definition serves as a useful reminder in the context of the remarkable productivity of modern generative artificial intelligence (GenAI) – the subject of this research guide in its connection with law. It reminds us that GenAI is a technology that generates results that look like – that is, imitate – people's intellectual works, from everyday speech to creative literary works (Merriam-Webster, n.d.).

According to P. M. Morkhat, assigning certain functions to artificial intelligence as a judge's "companion" in administering justice allows a human judge to relieve himself or herself of routine work, including internal control of the judge's activities, information-documentary, expert-analytical, linguistic-translational, and organizational support of court proceedings (Morkhat, 2018). Another study on the application of AI in court has led to the conclusion that it is impossible to separate a human judge from AI, especially in complex cases, and that cooperation between them is expedient, allowing a human judge to control AI. A key issue is the analysis of the algorithm for facilitating communication between artificial intelligence and humans (Buocz, 2018).

According to A. Hintze, a researcher and professor at Michigan State University, artificial intelligence (AI) can be categorized into four main types: reactive machines, limited memory, theory of mind, and self-awareness. Reactive machines are the simplest form of AI, designed to perform specific tasks without memory or learning capability. They respond to inputs with predetermined outputs and cannot use past experiences to improve future decisions (Hintze, 2017). For instance, IBM's Deep Blue chess computer defeated world champion Garry Kasparov in the 1990s by analyzing the current state of the chessboard but without learning from previous matches. Another example is Netflix's recommendation engine, which analyzes a user's viewing history to suggest new movies or shows but does not adapt beyond that data. Limited-memory AI represents a more advanced stage that can use historical data for short-term decision-making. These systems can observe, analyze, and adjust based on recent information, though they do not permanently store experiences as humans do. A good example is self-driving cars, which monitor surrounding vehicles' speed, direction, and position to make safe driving choices in real time. The next type, theory-of-mind AI, remains largely theoretical and aims to enable machines to understand human emotions, beliefs, and intentions – an essential step towards natural human–AI interaction. Finally, self-aware AI represents the most advanced and still hypothetical stage, where machines would possess consciousness, emotions, and an understanding of their own existence. Such AI would not only process information but also recognize its internal states, similar to human self-awareness. In this spectrum, ChatGPT falls under generative AI, a subset of limited-memory AI, capable of generating human-like text by predicting the most probable response from vast datasets – demonstrating linguistic intelligence without true understanding or consciousness (Coursera, n.d.).

3.2. AI Applications in Court Operations

AI is being applied in courts in a variety of ways, and it is important to distinguish between them because they raise different legal and ethical questions. The

applications can broadly be grouped into three categories: administrative and case-management tools, document-processing and legal-research tools, and decision-support tools that assist judges in substantive matters (Sourdin, 2018).

In case management, AI systems can automate many administrative tasks that currently take up a great deal of time in court work. These tasks include the automatic classification and transfer of incoming cases to the correct court or judge, tracking deadlines and sending alerts, scheduling hearings, and checking whether procedural rules have been followed. China's smart court system has introduced these kinds of administrative AI tools on a large scale. For example, the AI-assisted case-filing system used in Chinese Internet Courts can automatically check whether all necessary documents have been submitted, detect possible problems in the application, and guide the applicant on how to fix them. This kind of automated support is especially useful for people without legal representation, including many consumer claimants (Stern et al., 2021).

Document processing represents another important application of AI in courts. Natural language processing (NLP) tools can extract key information from large volumes of documents, identify relevant precedents, flag inconsistencies between documents submitted by different parties, and assist in the translation of documents in cross-border cases. In the EU context, where consumer disputes frequently cross-national boundaries and involve parties communicating in different languages, AI-assisted translation and cross-border document management could significantly reduce the practical barriers to effective redress. These tools are already being used to some extent in commercial arbitration and in the management of large class-action-style proceedings, and there is no technical reason why they could not be applied in consumer disputes.

The third and most sensitive category of AI applications is that of decision-support tools that assist judges in making substantive decisions about the outcome of cases. In China, AI systems like "206" (used in criminal cases) and similar tools in civil proceedings can analyze the facts of a case and suggest likely outcomes based on an analysis of similar past cases. These systems do not make binding decisions – the final judgment remains with the human judge – but they provide a form of algorithmically generated guidance that can influence how the judge approaches the case. Similar, if less developed, tools are being explored in various European jurisdictions, though generally with greater caution (Sourdin, 2018).

4. Smart Courts and Consumer Protection: Opportunities

4.1. Improving Access to Justice

Perhaps the most important opportunity that smart courts offer for consumer protection is the improvement of access to justice. Access to justice is both a fundamental human right, recognised in Article 47 of the EU Charter of Fundamental Rights, Article 6 of the ECHR, and the Universal Declaration of Human Rights, and a practical prerequisite for effective consumer protection. If consumers cannot realistically enforce their rights, those rights have limited value, regardless of how well drafted the underlying legislation may be (Hagan, 2018).

The barriers to access to justice for consumer claimants are well documented. They include financial costs (court fees, lawyers' fees, and the cost of time spent pursuing a claim), geographical barriers (the need to attend court hearings in person), informational barriers (difficulty in understanding complex legal processes and legal rights), and psychological barriers (unfamiliarity and intimidation associated with formal legal proceedings). Smart courts can address all of these barriers to varying degrees. Online filing eliminates the need to travel to a court office in order to initiate a claim. Virtual hearings eliminate the need to be physically present in court. AI-guided processes reduce the informational demands placed on unrepresented litigants. Reduced administrative costs can also translate into lower court fees (Hagan, 2018).

Research on the Chinese Internet Courts provides some evidence of these effects. As Meirong Guo notes in a 2021 study published in the Computer Law and Security Review, the Internet Courts in China were able to reduce average case-resolution time significantly when compared with traditional courts, while also handling a growing volume of cases. In their early years of operation, the Hangzhou Internet Court was reportedly resolving cases in an average of fewer than 30 days from filing to judgment, a fraction of the time typically required by traditional courts. While these figures must be interpreted with caution, given that the cases handled by Internet Courts are relatively simple and standardised compared with the full range of civil disputes, they nevertheless suggest that AI-assisted processing can genuinely increase efficiency (Guo, 2021).

In the EU context, the development of the European Small Claims Procedure under Regulation (EC) No 861/2007 represents an attempt to create a simplified and accessible process for cross-border consumer claims of up to €5,000, later expanded to €10,000 by Regulation (EU) 2015/2421. The procedure is designed to be usable without a lawyer and relies heavily on standardised forms. Smart-court tools, including AI-guided form completion, automated translation, and digital evidence submission, could significantly improve the usability and

effectiveness of this procedure, which has been criticised for remaining underutilised in practice due to persistent practical barriers (European Small Claims Procedure Regulation).

4.2. Reducing Costs and Time in Consumer Disputes

Consumer disputes are often low in absolute monetary value, even when they are significant from the consumer's perspective. A defective appliance worth €300, an unauthorised bank charge of €150, or a holiday booking that failed to deliver what was promised for €500 are all disputes that are real and significant for the individuals affected, yet the cost of conventional litigation is often disproportionate to the amount at stake. This is one reason why alternative dispute resolution (ADR) mechanisms have been promoted so strongly in EU consumer policy through frameworks such as the ADR Directive (2013/11/EU) and the ODR Regulation (EU) 524/2013, which created the EU Online Dispute Resolution platform (Paterson & Maker, 2024).

Smart-court technologies can lower the cost of formal legal proceedings and make court-based dispute resolution more realistic even for small-value consumer claims. Automated case management can reduce the amount of time court staff need to spend on routine tasks. AI-assisted document review can ease part of the workload of judges. Standardised online procedures can make the filing and processing of claims cheaper and more efficient. Virtual hearings can also save parties time and money by removing the need to travel to court or miss work. Taken together, these changes can make formal adjudication more accessible to consumer claimants who might otherwise abandon their claims or settle for less than they deserve (ADR Directive; ODR Regulation; Susskind, 2019).

It is important to note, however, that cost reduction in court operations does not automatically translate into cost reduction for consumers. Court fee structures, lawyers' costs, and the practical complexity of procedures are shaped not only by the underlying costs of operating the system but also by policy choices. For the efficiency gains of smart courts to benefit consumers specifically, they must be accompanied by deliberate policy measures, such as simplified procedures, capped fees, and accessible self-help tools, that channel those gains towards the people who most need them. The mere existence of online filing or AI-assisted case management does not, by itself, make a justice system more accessible to vulnerable consumers (Paterson & Maker, 2024).

4.3. Handling Small Consumer Claims More Effectively

The small-claims dimension of consumer protection is crucial and deserves particular attention. In many jurisdictions, small-claims procedures have been established precisely to handle the type of everyday consumer dispute that

would otherwise be economically unviable to pursue through ordinary civil proceedings. In England and Wales, the small-claims track, for claims of up to £10,000, is designed to be accessible to self-represented litigants, with simplified procedural rules and a cap on the costs that can be recovered from the losing party. In the EU, the European Small Claims Procedure performs a similar function for cross-border disputes (European Small Claims Procedure Regulation).

Smart-court tools can be particularly valuable in this small-claims context. An AI system that guides consumers through the process of completing and filing their claims, identifies defects before submission, flags relevant legal provisions that support the consumer's position, and provides clear information about the evidence required can meaningfully improve the likelihood that consumers will successfully pursue legitimate claims. In jurisdictions where small-claims hearings are now conducted online, the technological infrastructure that enables this also allows consumers to present their cases from home, thereby significantly reducing practical barriers (Hagan, 2018).

The interaction between AI-powered case triage and small consumer claims also deserves attention. In courts handling large volumes of similar cases – for example, airline passenger compensation claims under EU Regulation 261/2004, utility billing disputes, or housing deposit disputes – AI tools can identify patterns across cases, flag potential mass-harm situations, and suggest consistent approaches to recurring legal questions. This has the potential not only to speed up individual case resolution but also to improve the consistency and quality of outcomes across similar cases, which is a significant fairness benefit from the consumer's perspective (Tang, 2025).

4.4. Cross-Border Consumer Disputes

E-commerce has made cross-border consumer transactions routine, but it has also created a level of jurisdictional complexity that makes dispute resolution difficult. When a consumer in Hungary purchases goods from an online retailer based in the UK, which law applies? Which court has jurisdiction? How does the consumer actually pursue a claim in a foreign jurisdiction? These questions are real and practically significant, and they have not been adequately resolved by the existing legal framework, despite considerable effort (Consumer Rights Directive; ODR Regulation).

Smart courts equipped with AI-assisted tools offer some hope of progress in this regard. The EU ODR Platform, established by Regulation (EU) 524/2013, was an early attempt to create a pan-European online mechanism for resolving cross-border consumer disputes through ADR. Its effectiveness has been limited by a number of factors, including uneven trader participation and the variable

quality of the ADR entities connected to it. However, the technological infrastructure it represents – a digital platform for submitting, routing, and resolving cross-border consumer disputes – is a building block on which more effective systems could be developed (ADR Directive; ODR Regulation).

The Digitalisation Regulation proposed by the European Commission could significantly strengthen the framework for cross-border judicial cooperation in civil and commercial matters. It would support the electronic service of documents, the digital transfer of evidence, and the use of video hearings across EU Member States. In consumer disputes, these changes could remove some of the practical difficulties involved in cross-border enforcement and make it easier for consumers to bring genuine cross-border claims. AI tools for automatic translation, document verification, and jurisdictional assessment could reduce even further the friction that currently makes cross-border consumer justice slow and difficult (European Commission, 2021).

Z. S. Tang's analysis of smart courts and transnational access to justice highlights the cross-border dimension as a key area for future development. She argues that smart courts should be capable of addressing "transnational challenges" while preserving accessibility and fairness in an increasingly "interconnected world". This point is especially relevant in the consumer-protection context, where digital markets have expanded more rapidly than accessible dispute-resolution mechanisms designed to manage cross-border conflicts (Tang, 2025).

5. Risks and Challenges of AI in Consumer Justice

5.1. Algorithmic Bias and Discrimination

One of the most serious risks associated with the use of AI in judicial processes is the risk of algorithmic bias – that is, the risk that AI systems will systematically produce outcomes that disadvantage certain groups of people in ways that are unjustified and potentially unlawful. This risk is particularly acute in consumer protection because the groups most at risk of unfair outcomes – including consumers from lower-income backgrounds, elderly consumers, consumers with disabilities, and consumers whose first language is not the language of the court – are also those who are most dependent on fair and effective legal protection. This risk is especially serious in consumer justice because the people who rely most heavily on legal protection are often the most vulnerable to hidden bias.

Algorithmic bias in AI systems usually stems from bias in the historical data used to train them. If past judicial decisions have unfairly disadvantaged consumers from certain backgrounds, an AI system trained on that data may reproduce the same pattern. This is not merely a theoretical concern. In the United States,

research has shown clear racial disparities in AI-based risk-assessment tools used in criminal sentencing, especially in relation to the well-known COMPAS system. Similar concerns have also appeared in civil contexts, including credit scoring, insurance pricing, and employment screening, where discriminatory effects on protected groups have been identified (Citron & Pasquale, 2014).

In the judicial context specifically, Molbæk-Steensig and Quemy draw on research by Kahneman, Sibony, and Sunstein on "noise" in human judgment in order to argue that AI tools might actually reduce certain types of bias and inconsistency in judicial decision-making. There is some force in this argument: AI systems are at least consistent in the sense that they apply the same algorithm to all cases, whereas human judges are subject to fatigue, mood, and a range of other factors that introduce variability into their decisions. However, consistency in applying a biased algorithm is not the same as fairness, and the apparent objectivity of an algorithmic recommendation may actually make it harder for judges and litigants to identify and challenge underlying biases (Molbæk-Steensig & Quemy, 2023).

The problem is compounded by the fact that training data for AI systems in judicial contexts may be systematically incomplete. If certain consumer groups have historically been less likely to bring claims because the barriers to access to justice have been too high, they will be underrepresented in the datasets of resolved cases on which AI systems rely as training data. An AI system trained on such data may then produce recommendations that reflect the outcomes those groups have historically received, rather than the outcomes they would receive if barriers to justice were removed. This is a subtle but important form of bias that could perpetuate and entrench existing inequalities, even if the AI system is technically well designed (Molbæk-Steensig & Quemy, 2023).

5.2. Transparency and the Black Box Problem

A related challenge is the lack of transparency that characterizes many AI systems, particularly those that use deep learning or complex machine-learning algorithms. These systems are sometimes described as "black boxes" because it is difficult, or even impossible, to understand from an external perspective how a particular input – the facts of a case – leads to a particular output – a recommendation or prediction. This lack of explainability creates serious problems for the rule of law and, more specifically, for consumer rights (Molbæk-Steensig & Quemy, 2023).

The right to a fair trial under Article 6 ECHR includes the right to know the reasons for a judicial decision. If a court relies significantly on an AI-generated recommendation in reaching its decision, and the workings of that AI system are opaque, then the requirement of reasoned decision-making is effectively

undermined. A consumer who receives an adverse judgment has a legitimate interest in understanding why, and in being able to challenge the reasoning if it is flawed. This becomes difficult if the judge's decision is materially influenced by an algorithm whose internal logic is inaccessible (ECHR, art. 6; Öcalan v. Turkey, 2005).

The EU AI Act (Regulation (EU) 2024/1689), which entered into force in August 2024, addresses this concern to some extent. It classifies AI systems used in the administration of justice and in democratic processes as "high-risk" systems (Annex III, point 8), subject to stringent requirements regarding transparency, documentation, human oversight, accuracy, and robustness. Developers of high-risk AI systems must provide detailed technical documentation on how the system works, keep logs of system operation, and ensure that the system can be appropriately monitored by human overseers. However, the Act does not require full algorithmic transparency in the sense of making the internal logic of the system publicly intelligible, and the technical-documentation requirements may not be practically accessible to judges, litigants, or consumer advocates (AI Act).

The CEPEJ Ethical Charter specifically addresses the transparency requirement in judicial AI. It calls for AI systems used in courts to be developed in a transparent manner, with clear documentation that enables evaluation of the quality and appropriateness of the data used, the methodology of the algorithm, and the potential impact on the rights of the parties. It also calls for the right of parties to obtain explanations of AI-generated recommendations and to challenge those recommendations. These principles represent an important normative standard, but their practical implementation remains challenging (CEPEJ, 2018).

5.3. Data Protection and Privacy Concerns

Courts handle some of the most sensitive personal data that exists. Case files contain information about parties' health, financial circumstances, family situations, employment history, and, in some cases, past criminal records. The processing of this data by AI systems raises serious data-protection concerns that are directly regulated by the General Data Protection Regulation (GDPR, Regulation (EU) 2016/679) in the EU, as well as by national data-protection laws in the UK and other jurisdictions (GDPR; PIPL).

The GDPR is particularly relevant to AI-assisted judicial processes in several respects. Article 22 of the GDPR gives individuals the right not to be subject to decisions based solely on automated processing where those decisions produce legal or similarly significant effects. While this provision is subject to exceptions

– including where the processing is authorized by EU or Member State law – it establishes an important principle: automated decision-making in legally significant contexts requires special justification and safeguards. Court decisions, and the algorithmic recommendations that may influence them, clearly fall within the category of legally significant effects (GDPR, art. 22).

The principle of data minimization under the GDPR (Article 5(1)(c)) requires that personal data be collected and processed only to the extent necessary for the specified purpose. AI systems that process large volumes of case data to generate predictions or recommendations may struggle to demonstrate that all the data they use is strictly necessary. The purpose-limitation principle (Article 5(1)(b)) raises further questions about the permissibility of training AI systems on historical case data when that data was originally collected for the purpose of resolving individual cases (GDPR, art. 5).

In the consumer-protection context, these data-protection concerns are particularly acute because consumers may be interacting with smart-court systems without fully understanding the extent to which their personal information is being processed by automated systems. The right to information under the GDPR (Articles 13–14) requires that individuals be told how their data will be processed, but the information provided in practice about AI processing in court systems may not be sufficiently detailed or accessible for consumers – particularly those who are not digitally literate – to make genuinely informed choices (Paterson & Maker, 2024).

5.4. The Risk of Over-Reliance on AI

Perhaps the most insidious risk associated with AI in courts is the possibility that judges and other actors in the justice system will come to rely too heavily on AI-generated recommendations, gradually surrendering their capacity for independent judgment. This phenomenon, sometimes called "automation bias" in the cognitive-psychology literature, is well documented in other fields where humans work alongside algorithmic decision-support systems, including medicine, aviation, and security screening. It poses a particular threat to the integrity of judicial decision-making because the appearance of independent human judgment is preserved – the judge formally makes the decision – while the substantive process of reasoning may increasingly be shaped by the algorithm (Sourdin, 2018).

In the context of consumer disputes, where cases often involve relatively standardised factual situations and recurring legal questions, the risk of automation bias may be particularly high. If an AI system consistently recommends outcomes in a certain category of consumer claim, judges handling large volumes of such claims may find it easier and quicker to follow

the recommendation than to engage in independent analysis. Over time, the AI's patterns may become the court's patterns, regardless of whether those patterns reflect the correct application of the law (Sourdin, 2018).

This risk is recognized in the CEPEJ Ethical Charter, which emphasizes that AI should be used to "assist" rather than "replace" judicial decision-making, and that judges must retain "the capacity to act otherwise than an AI system recommends". However, the Charter acknowledges that achieving this in practice requires not only formal rules but also appropriate training, institutional culture, and careful system design. If AI tools are designed in ways that make it inconvenient or difficult to deviate from their recommendations, the formal right to exercise independent judgment may become effectively meaningless (CEPEJ, 2018).

For consumers, the consequences of excessive judicial reliance on AI are significant. If a defective AI system consistently underestimates the damages to which consumers are entitled, or consistently classifies consumer claims into categories that attract less favourable legal treatment, and judges routinely follow these recommendations, the cumulative harm may be substantial even if no single case involves an obvious injustice. This is precisely the kind of systemic harm that is difficult to detect and challenge through conventional means, because no single case provides a sufficiently clear picture of the pattern.

5.5. The Digital Divide and Inclusion

Smart courts are premised on digital access and digital literacy. They assume that parties can file documents online, participate in video hearings, and interact with AI-powered tools. But this assumption is not valid for all consumers. A significant proportion of consumers – particularly the elderly, persons with disabilities, those in rural areas with poor internet connectivity, and those from lower-income backgrounds who may lack access to suitable devices – cannot effectively participate in digitized court processes. If smart courts are designed primarily around the capabilities of digitally competent and well-resourced consumers, they risk excluding precisely those consumers who are most vulnerable and most in need of effective protection (Tang, 2025).

Tang identifies inclusivity as one of the three main pillars of a smart justice system, together with transparency and judicial independence. She argues that an inclusive system should reflect the community it serves and help build public trust and confidence. This idea is highly important for consumer protection. A smart-court system cannot be seen as a genuine improvement if it helps well-informed and digitally skilled consumers bring cross-border claims, but at the same time makes it more difficult for elderly or less technologically confident

consumers to pursue simple domestic cases. Even if such a system improves overall efficiency, it may still fail from an access-to-justice perspective.

Addressing this inclusion problem requires careful design and clear policy choices. Smart-court systems should offer accessible alternatives for people who cannot fully participate in digital procedures. This may include support staff who help users complete online steps, in-person options for those who are genuinely unable to use digital tools, accessible design for persons with disabilities, and multilingual interfaces for consumers whose first language differs from the language of the court. Some jurisdictions have started to respond to these concerns more directly. For example, the UK's HMCTS Reform Programme included an Assisted Digital scheme aimed at helping users who could not use online services on their own, although its implementation has not always been fully consistent (Hagan, 2018).

6. Conclusion

The digital transformation of civil justice systems is not simply a matter of technological change; it is a transformation of the institutional arrangements through which societies resolve disputes, enforce rights, and distribute justice. Smart courts and AI-assisted judicial processes offer genuine and significant opportunities to improve consumer protection: by reducing the costs and time of dispute resolution, by making court processes more accessible to unrepresented consumers, by enabling more consistent application of consumer protection rules across similar cases, and by facilitating the resolution of cross-border disputes that currently fall into practical enforcement gaps.

These opportunities are real and should be pursued. The access-to-justice gap in consumer protection is a genuine problem with real consequences for real people. Consumers who cannot practically enforce their rights against businesses that exploit them are not protected by legislation alone. If smart courts and AI tools can help to close this gap by making it easier and cheaper for ordinary consumers to pursue legitimate claims, then they represent a genuinely valuable contribution to the rule of law and to the fairness of market relations (Paterson & Maker, 2024).

But the risks are equally real and cannot be downplayed. Algorithmic bias can reproduce and entrench existing inequalities. Lack of transparency can undermine the right to a fair trial and make it impossible for parties to challenge the reasoning behind decisions that affect them. Data protection violations can expose parties' most sensitive personal information to unauthorized processing. Automation bias can gradually hollow out genuine judicial deliberation, replacing it with the appearance of human judgment backed by algorithmic determination. The digital divide can mean that the benefits of smart courts flow

primarily to the digitally confident, while the most vulnerable consumers are effectively excluded (CEPEJ, 2018).

The comparative analysis in this article shows that different jurisdictions have taken meaningfully different approaches to managing these risks. The EU has developed the most comprehensive regulatory framework, with the AI Act, the GDPR, and the CEPEJ Ethical Charter together providing a multi-layered governance structure that addresses transparency, human oversight, non-discrimination, and data protection. China has deployed the most ambitious AI tools in its smart court programme, achieving significant efficiency gains but with governance challenges and transparency limitations that make independent evaluation difficult. The UK has pursued pragmatic reform under significant fiscal and institutional constraints, with a regulatory approach that is more permissive than the EU's but also less comprehensively developed. The research demonstrates a clear consensus: AI's benefits (efficiency, access, data analysis) are concentrated in its "assistant" functions, while its profound procedural challenges (due process violations, bias, inexplicability) are concentrated in its "adjudicative" functions. The future of a just and efficient civil legal system depends on successfully harnessing the former while procedurally barring the latter.

In closing, the central message is this: the future of justice is not a choice between human judges and artificial intelligence. The future lies in a smart, effective partnership between them. The goal is not to replace human wisdom, experience, and compassion. The goal is to augment these human qualities with the speed, accuracy, and analytical power of modern technology. AI may handle the calculations; the judge must remain responsible for justice.

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