Expanding the Shadow of the Law: Designing Efficient Judicial Dispute Resolution Systems in a Digital World — An Empirical Investigation

Kathrin Eidenmüller,* Conor McLaughlin** & Horst Eidenmüller***†

ABSTRACT

This Article presents the results of an empirical study on the design of efficient judicial dispute resolution systems for business-to-business (B2B) commercial disputes in a digital world. To the best of our knowledge, we are the first to undertake such an inquiry after the pandemic, post-Brexit, and in the face of an artificial intelligence (AI) wave which has gained momentum on an unprecedented scale in the last three years and has passed an inflection point. We interviewed 24 senior legal practitioners and business leaders, and we conducted an online survey which returned 275 responses from dispute resolution professionals worldwide. The majority of survey participants practice in the United States, in the United Kingdom, in Germany, and in France. We argue that courts are also an indispensable part of the civil justice infrastructure for B2B commercial disputes. As far as stakeholder preferences are concerned, we find that the push for digitization and for using AI tools to improve the efficiency of judicial proceedings is strong. AI applications have already become a cornerstone of dispute resolution practice. "Online

* Judge, Munich Court of Appeals, and former Academic Visitor to the Institute of European and Comparative Law (IECL) at the University of Oxford.

** Barrister, Erskine Chambers, London.

*** Statutory Professor for Commercial Law, University of Oxford, and Professorial Fellow of St. Hugh's College, Oxford.

† For comments on earlier versions of this Article, we are grateful to participants in an Oxford University IECL Lunchtime Seminar on June 8, 2022, in a seminar at Vienna University on June 11, 2024, and in a seminar at Munich University on June 27, 2024. For excellent research assistance we'd like to thank Daniel Jukes and Niklas Wais.

courts" should be "on offer" in commercial disputes. Providing user-friendly and reliable digital/AI tools for information management and analysis, communication and decision-making is key, as are clear protocols for online hearings. But disputing parties do not want to be judged by machines. Rather, they request competent and specialized human decision-makers. Courts need to be on top of the game with respect to the subject matter of the dispute. Parties also request planning and efficient case management. A case management conference and a process plan are essential. Finally, courts should offer an "early neutral evaluation"—a non-binding preliminary evaluation be a third party, with or without (mediated) settlement discussions—if the parties agree to this in the case management conference.

TABLE OF CONTENTS

Introduction

Various factors are currently disrupting the landscape of commercial dispute resolution worldwide. Human decision-making in conflict is increasingly assisted or even replaced by innovative technological tools and systems. Digitization, blockchain technology, and artificial intelligence (AI) are fundamentally changing business transactions and the resolution of conflicts resulting from these transactions.[1] The COVID-19 pandemic accelerated and amplified this development. The pandemic brought lockdowns and forced dispute resolution providers to offer their services online. "Virtual hearings" became the *modus operandi* for courts, arbitral tribunals and mediators across the globe for extended periods from 2020 to 2022.

At the same time, courts face increasing challenges. Alternative Dispute Resolution (ADR) procedures are on the rise, in part because they are sponsored or even mandated by the law in many jurisdictions.[2] For example, arbitrations administered by the London Court of International Arbitration (LCIA) have increased by more than 70% from 2013 to 2020.[3] eBay and PayPal's dispute resolution system handles around sixty million disagreements a year, three times as many as the entire United States legal system.[4] 90% of these disputes are settled using technology alone.[5]

As a consequence, courts are facing increasing competitive pressure from private dispute resolution providers. The commercial case

1. *See* Horst Eidenmüller & Gerhard Wagner, Law by Algorithm 223-60 (2021) (discussing the impact of digitization, the blockchain, and artificial intelligence on dispute resolution procedures).

2. In Europe, for example, several key pieces of regulation have been enacted since 2008 which seek to strengthen the market for ADR services in the European Union (EU) Member States. *See, e.g.*, Directive 2008/52/EC of the European Parliament and of the Council of 21 May 2008 on certain aspects of mediation in civil and commercial matters, 2008 O.J. (L 136) 24; Directive 2013/11/EU of the European Parliament and of the Council of 21 May 2013 on alternative dispute resolution for consumer disputes and amending Regulation (EC) No 2006/2004 and Directive 2009/22/EC (Directive on consumer ADR), 2013 O.J. (L 165) 18; Regulation (EU) No 524/2013 of the European Parliament and of the Council of 21 May 2013 on online dispute resolution for consumer disputes and amending Regulation (EC) No 2006/2004 and Directive 2009/22/EC (Regulation on consumer ODR), 2013 O.J. (L 165) 18.

3. London Court of Int'l Arb., 2022 Annual Casework Report 7, https://www.lcia.org/media/download.aspx?MediaId=935 [https://perma.cc/8WT4-HZ74] (last visited Jan. 6, 2024) (stating that 2013 saw 236 referrals pursuant to the LCIA Rules and 2020 saw 407 such referrals).

4. Mustafa Suleyman, The Coming Wave: Technology, Power, and the Twenty-first Century's Greatest Dilemma 188-89 (2023).

5. *Id.*

load of courts in many jurisdictions, including in the United States,[6] is declining steadily.[7] The English courts must confront a further challenge post-Brexit: with the exit of the United Kingdom (UK) from the European Union, English court judgments need no longer be automatically recognized in continental Europe,[8] threatening London's position as a leading dispute resolution venue.[9] Data from 2018 to 2023 confirm a significant decline of international cases around the time when Brexit became effective (Feb. 1, 2020).[10]

Faced with competitive pressure from ADR providers and the judicial dispute resolution systems in other countries, jurisdictions worldwide are attempting to reform their court systems and civil procedure rules in order to make them more competitive—nationally and internationally. One noteworthy innovation is the introduction of specialized "International Commercial Courts."[11] Such courts seek to offer speedy, cost-efficient and expert judicial services in the English language for international litigants involved in high-stakes commercial

---

6. Total incoming civil cases in State Trial Courts decreased by 16% from 2009 to 2018. *See* Court Statistics Project, Nat'l Ctr. for State Courts, *State Court Caseload Digest 2018 Data* 8, https://www.courtstatistics.org/__data/assets/pdf_file/0014/40820/2018-Digest.pdf [https://perma.cc/ZX3M-7W22] (last visited Jan. 6, 2024). Civil case filings in the Federal District Courts have decreased by 6.5% from 2014 to March 21, 2023. *See* U.S. District Courts -- Criminal Federal Judicial Caseload Statistics, U.S. Courts, https://www.uscourts.gov/data-news/reports/statistical-reports/federal-judicial-caseload-statistics/federal-judicial-caseload-statistics-2023 [https://perma.cc/M8WE-DN2K] (last visited Jan. 6, 2024).

7. *See, e.g.*, GERHARD WAGNER, RECHTSSTANDORT DEUTSCHLAND IM WETTBEWERB: IMPULSE FÜR JUSTIZ UND SCHIEDSGERICHTSBARKEIT 243-47 (2017) (reviewing data from Germany, France, England and the United States).

8. Such recognition was provided for by Article 36 of the so-called Judgments (or Recast Brussels) Regulation 1215/2002 of 12 December 2012. *See* Regulation (EU) No 1215/2012 of the European Parliament and of the Council of 12 December 2012 on jurisdiction and the recognition and enforcement of judgments in civil and commercial matters (recast), 2012 O.J. (L 351) 20.

9. *See* Horst Eidenmüller, *The Rise and Fall of Regulatory Competition in Corporate Insolvency Law in the European Union*, 20 EUR. BUS. ORG. L. REV. 547, 560-63 (2019).

10. *See* PORTLAND, COMMERCIAL COURTS REPORT 2023, https://portland-communications.com/publications/commercial-courts-report-2023/ [https://perma.cc/J293-RXBP] (last visited Jan. 7, 2024) (finding that the share of international litigants in the London Commercial Courts fell from 54.7% in 2018–2019 to 53.2% in 2019–2020 and to 46% in 2021–2022; this share picked up again in 2021–2022 to 50.3% and in 2022–2023 to 59.7%, suggesting that international litigants have found ways to adapt to the "new world").

11. *See generally* STAVROS BREKOULAKIS AND GEORGIOS DIMITROPOULOS, INTERNATIONAL COMMERCIAL COURTS: THE FUTURE OF TRANSNATIONAL ADJUDICATION (2023); William Blair, *The New Litigation Landscape: International Commercial Courts and Procedural Innovation*, 2 INT'L J. PROC. L. 212 (2019).

disputes. "International Commercial Courts" have been introduced in the Netherlands,[12] France,[13] and Singapore,[14] for example.[15]

Another interesting innovation is the use of AI tools to streamline court proceedings. In Brazil, for example, a dataset was created from Brazil's Supreme Court of digitalized legal documents, composed of more than 45,000 appeals.[16] It is used for document type classification, lawsuit theme assignment and the triage of appeals. In Germany, the Universities of Cologne and Munich (TUM) were recently commissioned to develop a "legal" generative language model designed to speed up court proceedings.[17]

Technological innovation is also happening with respect to lower-stakes disputes. In England and Wales, for example, a pilot scheme allows certain lower-value claims to be brought online, and a new Online Procedural Rule Committee has been established to create an "end-to-end digital journey allowing people to resolve their disputes more quickly and efficiently."[18] In the United States (US), calls for a

---

12. *See Judgments*, NETH. COMM. CRT., https://www.rechtspraak.nl/English/NCC/Pages/judgments.aspx [https://perma.cc/YNG5-H4ET] (last visited Jan. 7, 2024).

13. "International Commercial Chambers" were established at the Paris Court of Appeal and the Paris Commercial Court on 7 February 2018 based on two procedural protocols between the Paris Court of Appeal and the Paris Bar. *See General presentation CCIP-CA / The ICCP-CA*, PARIS CRT. OF APP., https://www.cours-appel.justice.fr/paris/presentation-generale-ccip-ca-iccp-ca (last visited Jan. 7, 2024); *see also* Miren Lartigue, *The International Chambers of Commerce of Paris, four years later*, Dalloz Actualit (May 30, 2022), https://www.dalloz-actualite.fr/flash/chambres-commerciales-internationales-de-paris-quatre-ans-apres#.Y6SCrdXMI2x [https://perma.cc/JQ3R-SUEZ] (last visited Jan. 7, 2024) (providing an assessment of these courts).

14. The "Singapore International Commercial Court Rules 2021" came into operation on April 1, 2022. *See* Supreme Court of Judicature Act (ch. 322), Singapore International Commercial Court Rules 2021, https://sso.agc.gov.sg/SL/SCJA1969-S924-2021/Uncommenced/20211203094428?DocDate=20211202&ValidDt=20220401 (last visited Jan. 7, 2024).

15. Germany also plans to introduce International Commercial Courts. *See* Justizstandort-Stärkungsgesetz [Draft], https://www.bmj.de/SharedDocs/Gesetzgebungsverfahren/DE/2023_Commercial_Courts_Justiz_Staerkungsgesetz.html (last visited Jan. 7, 2024). *See also* Thomas Riehm, *Commercial Courts*, 44 ZEITSCHRIFT FÜR WIRTSCHAFTSRECHT (ZIP) 1561 (2023) (discussing this legislative proposal).

16. *See* Pedro H. Luz de Araujo et al., *VICTOR: a dataset for Brazilian legal documents classification*, *in* PROCEEDINGS OF THE 12TH CONFERENCE ON LANGUAGE RES. AND EVALUATION 1449, https://aclanthology.org/2020.lrec-1.181.pdf [https://perma.cc/H4ZM-NW4S] (last visited Nov. 24, 2023).

17. Bayerische Staatsregierung, *Einsatz Künstlicher Intelligenz in der Justiz*, https://www.bayern.de/einsatz-kuenstlicher-intelligenz-in-der-justiz-bayern-und-nrw-entwickeln-und-erproben-gemeinsam-juristisches-sprachmodell-wissenschaftlich-begleitet-von-der-tum-und-der-universitaet-zu-koeln-ant/ [https://perma.cc/F5CH-PZJQ] (last visited Nov. 28, 2023).

18. *See Practice Direction 51R - Online Civil Money Claims Pilot*, U.K. MINISTRY OF JUSTICE, https://www.justice.gov.uk/courts/procedure-rules/civil/rules/practice-direction-51r-online-court-pilot [https://perma.cc/5RNY-9BFF] (last visited Jan. 2,

comprehensive reform of the civil justice system are often driven by the goal of making the system more inclusive.[19] The overwhelming majority of litigants (70%) are self-represented.[20] Arguably, simple technological tools, such as those used in the UK, could improve access to justice significantly. A "Legal Sandbox" established by the Utah Supreme Court creates space for experimentation.[21]

Various factual and normative issues are relevant to legal experimentation and legal innovation with respect to judicial dispute resolution systems. Why are caseloads declining? Which dispute resolution preferences of stakeholders, especially users, are (not) met by current systems? What broader normative functions must civil justice systems fulfil? Law reform without a prior consideration of these questions and issues amounts to flying blind in stormy weather.

To be sure, jurisdictions differ in their legal traditions and their general economic and political orientation. What works in one country does not necessarily work in another, given different traditions, framework conditions, path dependencies and (economic) policies. At the same time, the challenges for civil justice systems worldwide posed by new technologies and the rise of private ADR procedures are global. Civil justice systems must respond to these global challenges against the background of changing user preferences and within local framework conditions and constraints.

An important distinction to be made in this context is between business-to-business (B2B) and business-to-consumer (B2C) disputes. The focus of this Article is on B2B disputes. B2B disputes and B2C disputes differ significantly. Private autonomy is central to the former. Unequal bargaining power and mandatory laws protecting consumers are key features of the latter. As a consequence, the regulatory challenges of modernizing civil justice systems differ. Access to justice and guaranteeing fair outcomes are important goals of civil procedure

---

2024); Press Release, U.K. Ministry of Justice, New Online Procedure Rule Committee launched (Jun. 12, 2023), https://www.gov.uk/government/news/new-online-procedure-rule-committee-launched#:~:text=Today%20(12%20June%202023)%20the,litigants%20through%20online%20court%20procedures [https://perma.cc/G8Y8-CKTH].

19. *See, e.g.*, CCJ Civil Just. Improvements Comm., Call to Action: Achieving Civil Justice for All (NCSC 2016), https://iaals.du.edu/sites/default/files/documents/publications/cji-report.pdf [https://perma.cc/K46M-LM22] (last visited Jan. 7, 2024).

20. *See* Patrick Forrest & Binh Dang, *America needs civil justice reform. Unleashing technology is the first step*, Fortune (Feb. 14, 2022), https://fortune.com/2022/02/14/america-needs-civil-justice-reform-unleashing-technology-is-the-first-step-law/ [https://perma.cc/LJD2-FSFR].

21. *See* An Office of the Utah Supreme Court, Utah Off. of Legal Services Innovation, https://utahinnovationoffice.org/ [https://perma.cc/JCG6-TGBV] (last visited Jan. 7, 2024).

reforms with respect to B2C disputes. Efficient service delivery is central to resolving B2B disputes. International regulatory competition between different civil justice systems can be observed primarily with respect to B2B disputes. Sophisticated businesses have the resources, incentives and the freedom to shop for the most favorable dispute resolution venue and process. But they cannot do so vis-à-vis consumers, at least not on the same scale.

To assess the reform potential and needs for B2B civil justice systems, we engaged in a three-part empirical strategy.[22] First, we collected data on the development of caseloads in B2B disputes in select jurisdictions, especially in the US and in Europe, and with respect to leading arbitral institutions. We also identified major current civil procedure reforms in these jurisdictions. Second, we undertook an assessment of the dispute resolution preferences of key stakeholders. We did so with (1) twenty-four structured interviews with senior judges, academics, solicitors, barristers and business representatives/leaders and (2) an online survey. The interviewees included senior in-house counsel at multi-national companies such as semiconductor manufacturer Infineon, technology company Siemens, Unicredit bank, car-maker BMW, and international discount retailer Lidl. The online survey generated 275 responses from dispute resolution professionals worldwide.

To be sure, we are not the first to undertake an empirical investigation of stakeholder preferences for the resolution of B2B disputes.[23] But, to the best of our knowledge, we are the first to do this after the pandemic, post-Brexit, and in the face of an AI wave which has gained momentum on an unprecedented scale in the last three years, reaching and passing an inflection point. Today, we are living in a dispute

22. *See* Kathrin Eidenmüller et al., *Civil Procedure Reforms in Commercial Matters in a Post-Pandemic and Post-Brexit World*, Oxford Bus. Law Blog (May 9, 2022), https://blogs.law.ox.ac.uk/business-law-blog/blog/2022/05/civil-procedure-reforms-commercial-matters-post-pandemic-and-post [https://perma.cc/6MJY-SHQJ].

23. For prior empirical studies, see, e.g., Stefan Voigt, *Are International Merchants Stupid? Their Choice of Law Sheds Doubt on the Legal Origin Theory*, 5 J. Empirical Legal Stud. 1 (2008); Stefan Vogenauer et al., *The Oxford Study on Costs and Civil Litigation*, *in* The Costs and Funding of Civil Litigation: A Comparative Perspective (Stefan Vogenauer et al. eds., 2010); Queen Mary University of London & White & Case, 2010 International Arbitration Survey: Choices in International Arbitration, Introduction, https://arbitration.qmul.ac.uk/research/2010/ (last visited Dec. 19, 2023); Eva Lein et al., Factors Influencing International Litigants' Decisions to Bring Commercial Claims to the London Based Courts 27 (Ministry of Justice 2015), https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/396343/factors-influencing-international-litigants-with-commercial-claims.pdf [https://perma.cc/6TCY-TD4L].

resolution world which differs markedly from the one at the end of the last decade.

We argue that the courts are, and will continue to be, a cornerstone of the civil justice architecture, including in B2B disputes. States must not "outsource" the provision of dispute resolution services to private providers, at least not *in toto*. Courts are needed to generate precedents which provide guidance for structuring and negotiating private transactions. Arbitration is expensive. Powerful and sophisticated private parties can manipulate arbitral processes. Small and medium-sized enterprises (SMEs) need an affordable and truly neutral judicial system to resolve their disputes.

As far as stakeholder preferences are concerned, we find that the push for digitization and for using AI tools to improve the efficiency of judicial processes is strong. AI tools have become a cornerstone of dispute resolution practice. "Online courts" should be "on offer" in commercial disputes. Providing user-friendly and reliable digital/AI tools for information management and analysis, communication and decision-making is key, as are clear protocols for online hearings.

But disputing parties do not want to be judged by machines. Rather, they request competent and specialized human decision-makers. Courts need to be "on top of the game" with respect to the subject matter of the dispute. Parties also request planning and efficient case management. A case management conference and a process plan are essential. Finally, courts should offer an "early neutral evaluation"— a non-binding preliminary evaluation by a third party, with or without (mediated) settlement discussions—if the parties agree to this in the case management conference.

The remainder of this Article is structured as follows. In Part I, we argue that courts are and must be a cornerstone of the civil justice infrastructure in commercial B2B disputes. In Part II, we discuss stakeholder preferences and present the methodology and findings of our empirical investigation. We present key findings from the online survey and illustrate them with statements from the structured interviews. Part III develops key principles for designing efficient dispute resolution systems for commercial B2B disputes against the background of our empirical findings.

I. Courts as a Cornerstone of the Civil Justice Infrastructure in B2B Disputes

Could states responsibly outsource civil justice in B2B disputes to private service providers, i.e., to various forms of ADR such as arbitration, mediation, or conciliation? What goals should lawmakers pursue

when designing a civil justice system for B2B disputes? These are important normative issues and questions. If dispute resolution in B2B disputes could be completely outsourced to private service providers, the debate about reforming the court system for B2B disputes would be moot. If one is not clear about the goals for legal reform, one cannot rationally discuss specific reform proposals.

In this section, we argue that courts are, and should continue to be, a cornerstone of the civil justice infrastructure in the resolution of B2B disputes. We also discuss the goals which should guide lawmakers when reforming the judicial dispute resolution process. A key aim is to enhance the quality and efficiency of this process, i.e., to deliver high-quality judicial dispute resolution at affordable costs.

A. *The Case for the Courts*

The "case for the courts" in commercial B2B disputes is not straightforward. Party autonomy is central to most commercial B2B transactions and disputes. Parties decide whether to enter into a particular transaction, and on what terms. If they have a dispute, they are free to decide whether to use the courts to resolve it. Alternatively, they can attempt to negotiate a settlement with the help of a neutral third party or even without engaging a third party. They can also appoint private judges (arbitrators) to render a binding decision.

But sometimes businesses need the courts to resolve a particular dispute. Think of an insurance company which is confronted with a specific and unresolved legal problem which arises in many similar transactions—for example, whether disruption to a customer's business due to COVID-19 is covered under the terms of its standard policy. The company wants a binding legal precedent to resolve this uncertainty. Court precedents provide guidance for private negotiations. They reduce legal uncertainty and establish guideposts which parties can follow when structuring their transactions. If the "shadow of the law" is short, parties must incur high transactions costs to reduce legal risks; if the shadow is long, these transactions costs are lower.[24] Note that it is not only the parties to a specific transaction who benefit from the establishment of a judicial precedent. All market participants gain from increased legal certainty. In this sense, judicial precedents have characteristics of a public good.

---

24. We borrow the phrase "shadow of the law" from Robert H. Mnookin & Lewis Kornhauser, *Bargaining in the Shadow of the Law: The Case of Divorce*, 88 YALE L. J. 950 (1979).

Decisions of arbitral tribunals cannot provide the same guidance. The overwhelming majority of commercial arbitrations are confidential. Confidentiality is an important factor for stakeholders to choose arbitration as a dispute resolution mechanism in the first place.[25] It is only recently that arbitral institutions have undertaken steps to publish awards—at least anonymously.[26]

But that may not be enough in many cases. As much as companies value confidentiality, some may not be able to "afford" it. Large, listed companies in particular are subject to increasingly strict laws and regulations to combat money laundering and corruption. From this perspective, too, confidential arbitration procedures are increasingly viewed as risky. Compliance departments advise against them to avoid unnecessary problems on this front.[27]

Court proceedings have other advantages vis-à-vis arbitrations. In court proceedings, all decision-makers are neutral. In a typical commercial arbitration with a tribunal consisting of three arbitrators, only the president of the tribunal is truly impartial. By contrast, a certain degree of partisanship of party-appointed arbitrators is a well-known fact.[28]

The flipside of party autonomy in arbitrations is legal uncertainty about the conduct of the arbitration and the ability of powerful actors to manipulate the process or even derail it. "The parties play the game or not," as one of our interviewees put it.[29] By contrast, court proceedings offer less flexibility but greater procedural certainty. "Playing the court system" is much more difficult for sophisticated and resourceful private actors than manipulating a commercial arbitration. Courts can summon witnesses to appear before them more easily than arbitral tribunals. And litigants can bring in third parties to the disputes even without their consent.[30] In principle, this is impossible in commercial arbitration.

---

25. In a survey from 2016, more than 40% of those who responded (357) stated that the confidentiality of the proceedings was a "very important" factor when deciding to arbitrate, see Horst Eidenmüller, *Competition between State Courts and Private Tribunals*, 21 Cardozo J. of Conflict Resol. 329, 340 (2020).

26. *See, e.g.*, International Chamber of Commerce, "Note to Parties and Arbitral Tribunals on the Conduct of the Arbitration under the ICC Rules of Arbitration," Art. 23, https://iccwbo.org/wp-content/uploads/sites/3/2020/12/icc-note-to-parties-and-arbitral-tribunals-on-the-conduct-of-arbitration-english-2021.pdf [https://perma.cc/5PXF-5ZBZ] (publication requires the consent of the parties).

27. Interview with senior in-house counsel (Mar. 9, 2022).

28. For an extensive discussion, see Catherine A. Rogers, *Regulating International Arbitrators: A Functional Approach to Developing Standards of Conduct*, 41 Stan. J. Int'l L. 53, 113-17 (2005).

29. Interview with senior dispute resolution professional (Mar. 15, 2022).

30. *See, e.g.*, Fed. R. Civ. P. 14 (regarding Third-Party Practice).

Finally, arbitrations are not cheap. Of all ADR methods, they are probably the most expensive. Hardly anybody chooses to arbitrate these days because it is less costly than court litigation.[31] This is not to say that court litigation cannot be very expensive. High-stakes commercial litigation in popular venues such as the Commercial Court in London often is. But an important market segment societies need to concern themselves with is mid-range disputes with an amount in dispute lower than EUR 100,000 or even lower than EUR 10,000. In terms of numbers, this is the kind of dispute SMEs are usually facing. For this market segment, court litigation is and will likely continue to be the commercially most attractive route to achieving a binding decision.[32]

The discussion so far has focused on B2B commercial disputes in which private autonomy of the parties is central and in which applicable legal rules are primarily or even exclusively default provisions. In these disputes, the parties have the contractual freedom to design any settlement according to their needs and preferences. While the majority of B2B commercial disputes are of this nature, not all of them are. Sometimes, mandatory rules are relevant for the resolution of the dispute. For example, antitrust issues may arise in the context of vertical agreements; mandatory laws on safety or environmental protection may be relevant in (international) delivery contracts.

Courts must enforce these laws irrespective of whether the parties want them to. This is important as such laws usually reflect important public policies. We cannot trust arbitral tribunals to do likewise to the same degree. As every arbitration practitioner knows, parties sometimes deliberately choose arbitration to evade scrutiny of their transaction on the basis of applicable mandatory rules. For example,

---

31. *See* Eidenmüller, *supra* note 25, at 340–41 (noting that only approximately 5% in the survey considered it "very important" that arbitrations were less costly than court litigation).

32. Arbitration institutions have very recently started to experiment with "Expedited Arbitration" (EA). This is "a streamlined and simplified procedure with a shortened time frame, which makes it possible for the parties to reach a final resolution of the dispute in a cost- and time-effective manner." *Expedited Arbitration Rules*, U.N. Comm'n on Int'l Law, https://uncitral.un.org/en/content/expedited-arbitration-rules [https://perma.cc/VMG9-3SQ9] (last visited Nov. 6, 2023). However, it appears that EA is not very popular. In 2022, it was used in 3% of the cases administered by the London Court of International Arbitration (LCIA) and in 5.81% of the cases administered by the Hong Kong International Arbitration Centre (HKIAC), for example. *See* Markus Altenkirch et al., *Arbitration Statistics 2022: the number of arbitration proceedings continues to drop*, Glob. Arb. News, https://www.globalarbitrationnews.com/2023/10/02/arbitration-statistics-2022-the-number-of-arbitration-proceedings-continues-to-drop-but-the-amount-in-dispute-increases/ [https://perma.cc/2M64-SCFX] (last visited Nov. 6, 2023). The reason for this is simple: the service providers do not have an incentive to promote this kind of procedure, as its widespread uptake would lower their fees.

they may have a dispute about price under a vertical agreement which is null and void, but they do not want the tribunal to investigate and rule on the antitrust issue.

To conclude, courts are, and should continue to be, a cornerstone of the civil justice infrastructure in B2B commercial disputes. Courts are needed to establish precedents which guide private parties when negotiating transactions and settling disputes. They guarantee a fair and robust dispute resolution process and one that is also accessible for SMEs in lower-stakes disputes. To the extent that a specific transaction is impacted by mandatory rules, courts will enforce them, thereby safeguarding important public policies.

B. *Goals of Civil Justice Reform*

What, then, should be the goals of civil justice reform with respect to resolving B2B commercial disputes? To the extent that B2B disputes arise out of transactions characterized by party autonomy and default rules, the goal must be to create a system which is capable of efficient "service delivery." That means: a speedy, low-cost and high-quality resolution of disputes by competent decision-makers. With respect to these types of disputes, stakeholder preferences are key. The resolution process should be designed such that these preferences are satisfied to the maximum degree—at the lowest possible costs.

The objective with respect to B2B commercial disputes which raise issues governed by mandatory rules is different. The central task of the courts in these disputes is not to provide efficient "service delivery." Rather, it is to enforce the applicable mandatory rules as effectively as possible—and with them the policies which they seek to implement. Satisfying the parties' dispute resolution preferences is not irrelevant in these cases but comes only second.

It is worth emphasizing (again) that the great majority of B2B commercial disputes belong in the former category, not in the latter. Hence, exploring in more detail what businesses demand from a modern judicial dispute resolution system in an age of swift and disruptive technological advances is important. This is the background to our empirical investigation to which we now turn.

II. Stakeholder Preferences for Dispute Resolution

What are the preferences of businesses as the "customers" of dispute resolution services for the design of court proceedings to resolve B2B commercial disputes? More specifically, how do businesses conceive of such proceedings against the background of rapid

technological advances (digitization, blockchain, AI, etc.)? We undertook an investigation of these and related questions empirically. Central to our investigation were structured interviews with senior legal practitioners and an online survey. In this section, we discuss our empirical research strategy and present our findings.

A. *Background and Empirical Research Strategy*

As already mentioned in Part I, jurisdictions differ in their legal traditions and their general economic and political orientation. At the same time, assessing stakeholder preferences for judicial dispute resolution on a worldwide basis is important to identify general trends. The technological challenges are global, and the dispute resolution preferences of businesses adapt to these challenges on a worldwide basis. When designing and implementing reforms, states must of course respect local constraints, framework conditions, and path-dependencies.

1. *Stakeholder Preferences and Agency Problems*

Different stakeholders are relevant when assessing the market for a judicial resolution of B2B commercial disputes. Judicial dispute resolution is supplied by states, and it is demanded by businesses. Businesses are not forced to use the court system to resolve their disputes. Hence, in order to stay competitive, states must adapt to changing dispute resolution preferences of businesses.

Simply describing states and businesses as suppliers and customers of judicial dispute resolution services would be too simplistic, however. B2B commercial dispute resolution involves and/or affects (the interests of) third parties such as service providers and institutions (for example mediators, arbitrators, ombudsmen, mediation and arbitration institutions, etc.), (business) communities and the general public. At the same time, relevant parties are usually represented by agents such as judges, civil servants, consultants, and lawyers. The incentives of these agents are not necessarily identical with those of their principals. Lawyers may seek to prolong disputes to increase their fees. Judges may look at a case not as Prometheans or saints but rather as ordinary people responding rationally to ordinary incentives, as a well-known Law & Economics scholar once observed.[33]

33. *See* Richard Posner, *What Do Judges and Justices Maximize? (The Same Thing Everybody Else Does)*, 3 Sup. Ct. Econ. Rev. 1 (1993).

Lawyers, in particular, perform a key gatekeeper role in dispute resolution. They advise on dispute resolution processes, plan them strategically, and guide their clients through them—recommending them to take or not to take certain steps. Because of the agency problems just mentioned, these steps may not (fully) reflect their clients' preferences. Hence, when assessing the dispute resolution preferences of businesses empirically, one must be aware of these agency problems and, if possible, reduce their distorting influence. This had an impact on our research design.

2. *Structured Interviews with Senior Practitioners*

In surveys amongst dispute resolution professionals, lawyers usually play an important role. The reason for this is simple: there are just so many of them, and they are keen to promote themselves and their services, making it easy to identify and include them in a study. Anticipating this problem, we decided that an important pillar of our empirical investigation should be structured interviews with senior dispute resolution practitioners, especially representatives of multinational businesses.

With these interviews, we hoped to achieve a number of things. First, we sought to gain a rich and multifaceted picture of the relevant issues and problems. In particular, we wanted to solicit the views of key business representatives and judges. Second, we wanted to explore the relevant issues and problems broadly, in detail and depth—something that is difficult if not impossible in a survey. At the same time, this approach would allow us to identify key issues and areas of concern and refine our approach as we went along. For this reason, we conducted the majority of the interviews prior to the online survey based on a draft set of possible survey questions and modified the questions in light of the interview process and results.

Overall, we conducted twenty-four interviews in the period from January 2022 to July 2022. Of this group, six interviewees are high-ranking appellate court judges, three are academics, six are solicitors or barristers, and nine are representatives of leading (multi-national) businesses. These businesses include the semiconductor manufacturer Infineon, the technology company Siemens, Unicredit bank, the car-maker BMW, and the international discount retailer Lidl. In terms of geographic location, eleven interviewees are based in Germany, nine in the UK, two in Brazil, and one each in France and Singapore. Some of our interviewees are actively involved in key reform projects such as the establishment of "International Commercial Courts" mentioned in the introduction.

We will weave in the results from our interviews when discussing the findings from the online survey in Section B below. We report that a "majority" of our interviewees support a particular proposal or make a particular point if at least 13 out of the 24 did so. A "clear majority" denotes at least 16 out of 24, i.e. two-thirds or more. We use "many," "often," or "frequently" to refer to at least 8 out of 24, i.e. one-third or more. Sometimes, we quote an interviewee (anonymously) verbatim to illustrate a particular point.

3. *Online Survey*

The second pillar of our empirical research is an online survey. The overall goal of the survey was to identify a broader empirical basis for reform proposals relating to the judicial resolution of B2B commercial disputes than could be derived from the structured interviews with senior practitioners.

We drafted the questionnaire in early 2022 and refined it during interviews with senior practitioners, as already mentioned. The published questionnaire[34] consisted of six blocks of twenty-nine questions in total: "Your Practice" (five questions), "Artificial Intelligence and Blockchain Technology" (four questions), "The Court and the Judiciary" (ten questions), "COVID-19 and Brexit" (two questions), "Choice of Jurisdiction, ADR, and Arbitration" (seven questions), and "Civil Procedure Reform" (one question). Most questions offered a choice of answers on a 1-5 scale, for example "strongly disagree" (1), "somewhat disagree" (2), "neither agree nor disagree" (3), "somewhat agree" (4), "strongly agree" (5). Some questions were open-ended and invited respondents to explore an issue in more depth.

In line with our goal for the survey, we aimed for a broad participation. We created a hand-collected dataset of approximately 1,900 dispute resolution lawyers and invited them via email to complete the survey. This dataset included mainly lawyers (solicitors) in law firms and mediators/arbitrators. The survey description and link were also included in newsletters circulated to barristers by the Bar Council ("BarTalk"), the Commercial Bar Association ("com*bar*"), and the Chancery Bar Association, reaching approximately 16,000 barristers and judges. We contacted senior German judges via the Bavarian Justice Ministry, and we circulated the survey using LinkedIn contacts.

34. The questionnaire is on file with the authors and will be made available upon request.

Finally, we described the project in a post for the Oxford Business Law Blog ("OBLB"),[35] inviting participation in the survey by the readers.

We started the survey on May 11, 2022, and closed it on February 12, 2023. Overall, we received 275 survey responses.[36] Clearly, we cannot make any claims to representativeness, which was not our goal to begin with. Rather, the aim of the survey was to continue our qualitative focus on established actors that we had already pursued with the structured interviews. Close to 80% of those participating have been professionally active in dispute resolution for more than ten years (Question 2). Hence, the views expressed are predominantly those of very experienced practitioners.

Those participating represent diverse professions: 56% were external lawyers, 17% were judges, 10% were arbitrators, 6% were in-house lawyers, 3% were mediators, and 8% were other professions (Question 1). They practice in more than twenty common law and civil law jurisdictions worldwide: 53% in Germany, 19% in the UK, 7% in the US, 4% in France, 3% in Austria, and 2% in both the Netherlands and Italy—to name the most represented countries (Question 3).[37] Participants practice in a wide range of commercial matters including commercial contracts (27%), company law (14%), negligence/product liability (9%), M&A (8%), and insolvency law (7%) (Question 4).

Overall, we are confident that the respondent group is sufficiently large and diverse enough to derive meaningful pointers to potential reforms of judicial systems for resolving B2B commercial disputes.

B. *Empirical Findings*

In the following section, we will present and discuss the results from the survey and the structured interviews. Our discussion will follow the six blocks of questions of the questionnaire mentioned above in Section II.A.3, starting with "Digital Communication, Artificial Intelligence, and Blockchain Technology."

---

35. *See* Eidenmüller et al., *supra* note 22.

36. However, not every respondent answered every question, and we did not require answers to every question for a response to be submitted.

37. When reporting the survey results, we will, for the most part, focus on overall responses. However, where jurisdictional differences appear to be significant and we have a non-trivial number of responses for a particular jurisdiction, we will also report country-level data.

1. *Digital Communication, Artificial Intelligence, and Blockchain Technology*

When asked about their mode of communication with clients (Question 5), respondents could indicate whether a particular mode was used "never," "sometimes," "about half the time," "most of the time," or "always." Respondents expressed a preference for digital communication. 45% of respondents use email "most of the time," and 26% use other Internet communication services (e.g. client portals, Zoom, Microsoft Teams) "most of the time"—more than any other form of communication. By contrast, only 14% communicate face-to-face with clients "most of the time," and 51% "never" use the post. These results reflect general trends which have been present for decades (email) and more recent ones which were accelerated by the pandemic (client portals, Zoom, Microsoft Teams). Overall, they are not surprising.

While digital communication tools are now firmly entrenched in legal and business practice, this cannot be said at present for more advanced technological tools such as AI applications or blockchain technology. But the situation is changing rapidly. With Questions 6 to 9 in our survey, we inquired about the use of AI tools and blockchain technology in the respondents' practice. As with different forms of communication, respondents could choose between the five categories "never," "sometimes," "about half the time," "most of the time," or "always" mentioned above. Respondents could indicate usage frequency with respect to various use functions specified in the survey.

Blockchain technology currently plays only a small role in respondents' practice. Regardless of functions ("storing of documents," "storing of communications," "fixing outcomes," "smart contracts," "executing/enforcing decisions"), approximately 85% of respondents "never" use blockchain technology for any of these functions, and only approximately 5% use it "sometimes" or more often. The main reason for this low usage level is probably the paucity of suitable and established applications such as, for example, "DocuSign" for recording transactions/smart contracts.[38]

AI applications are used more frequently. Negotiation is not a mathematical exercise, so the potential for true negotiation automation is limited.[39] But AI applications can help people achieve better

38. *How blockchain is transforming business processes like contracts and agreements*, DocuSign, https://web.archive.org/web/20240318153251/https://www.docusign.com/en-au/blog/how-blockchain-transforming-business-processes-contracts-and-agreements (last visited Nov. 11, 2023).

39. *See* Shaheen Fatima et al., Principles of Automated Negotiation (1st ed. 2015). However, large corporations are increasingly attempting to automate some of their

results, and they are increasingly being used: many of our interviewees confirmed that they use such applications systematically and frequently, from the conclusion of contracts to the conclusion of settlements, and that (their) legal practice changes rapidly under the influence of such applications. For security/confidentiality reasons, large multinational companies often develop and implement legacy applications internally,[40] and some have established "legal tech" divisions within their legal departments.[41] Some respondents representing such companies indicated that their internal processes regarding the use and applications of AI are more sophisticated than those of the law firms they work with.[42]

The increased use of AI applications was also confirmed by our survey. Approximately 47% of respondents state that they use AI applications "sometimes" or more often for "discovery/disclosure," 40% for "due diligence/review of documents," 37% for "document classification and management," 34% for "document generation," and 19% for "decision analysis." Often used applications are "Kira"[43] (for document/contract analysis), "Relativity"[44] (for e-discovery/e-disclosure), "iManage"[45] (for knowledge search), "HighQ"[46] (for document classification and AI systems integration), "Brainspace"[47] (for data analysis), "Lawlift"[48] (for document automation), "Contract Express"[49]

---

negotiation processes. *See* Horst Eidenmüller, *Game Over: Facing the AI Negotiator*, U. Chi. L. Rev. Online, https://lawreview.uchicago.edu/online-archive/game-over-facing-ai-negotiator [https://perma.cc/3Q2W-4X6W] (last visited Nov. 19, 2024).

40. Interview with senior in-house counsel (Mar. 9, 2022).

41. Interview with senior in-house counsel (Apr. 27, 2022); interview with senior in-house counsel (May 2, 2022); interview with senior in-house counsel (May 4, 2022).

42. Interview with senior in-house counsel (May 2, 2022). This is consistent with the findings of John Armour et al., *Unlocking the potential of AI for English law*, 28 Int. J. Legal Prof. 65, 73 (2021) ("[S]olicitors working in law firms are significantly less likely to work as part of a multi-disciplinary team than those working inhouse in a corporation.").

43. *Kira*, Kira, https://kirasystems.com/ [https://perma.cc/FY2P-LQTM] (last visited Nov. 11, 2023).

44. *Relativity*, Relativity, https://www.relativity.com/ [https://perma.cc/2K9D-9RN6] (last visited Nov. 11, 2023).

45. *iManage AI*, iManage, https://imanage.com/imanage-products/the-imanage-platform/ai/ [https://perma.cc/NS4R-AXPS] (last visited Nov. 11, 2023).

46. *AI Hub overview*, Thomson Reuters, https://knowledge.highq.com/help/getting-started/ai-hub-overview [https://perma.cc/8SRT-VR9S] (last visited Nov. 13, 2023).

47. *Reveal for AI Analytics*, Reveal, https://www.revealdata.com/use-case/analytics-visualization [https://perma.cc/S5U7-LN7C] (last visited Nov. 13, 2023).

48. *Create document automation templates with ease.* Lawlift, https://www.lawlift.com/ [https://perma.cc/9L8W-FVDH] (last visited Nov. 11, 2023).

49. *Contract Express: Harness the power of automation*, Thomson Reuters, https://www.thomsonreuters.com.hk/en/products-services/legal-overview/contract-express.html [https://perma.cc/DG3P-JXFV] (last visited Nov. 13, 2023).

(for document drafting), "Luminance"[50] (for negotiations and contract drafting), and "TreeAge"[51] (for decision analysis).[52, 53]

Two things are noteworthy about these results. First, compared to a survey amongst UK solicitors roughly two and a half years earlier,[54] the usage of AI tools has increased quite dramatically. At the time, only approximately 14% used AI tools for "eDiscovery/eDisclosure/technology-assisted review," 16% for "due diligence," 10% for "contract analytics," and 2% for "predictive analytics for litigation."[55] If one breaks down our survey results to UK-based practitioners, approximately 39% state that they use AI applications "sometimes" or more often for "discovery/disclosure," 30% for "due diligence/review of documents," 32% for "document classification and management," 37% for "document generation," and 8% for "decision analysis."

Hence, usage by UK practitioners has more than doubled across different functions of AI tools within the period from 2019/2020 to 2022/2023. Given the most recent advances in AI technology and applications—ChatGPT was launched on November 30th, 2022—and the observed exponential growth, it is likely that the majority of dispute resolution professionals now use various AI tools consciously at least "sometimes" or even more often.[56] In our interviews, an English High Court Judge observed that "technology-assisted discovery/disclosure is now standard practice in commercial litigation." AI tools can therefore already be seen as a cornerstone of dispute resolution

---

50. *Legal-Grade AI*, Luminance, https://www.luminance.com/ [https://perma.cc/G3Q2-ZQE2] (last visited Nov. 13, 2023).

51. *Make Decisions with Confidence*, TreeAge Software, https://www.treeage.com/ [https://perma.cc/VCB5-8HA5] (last visited Nov. 13, 2023).

52. *See* Horst Eidenmüller & Faidon Varesis, *What is an Arbitration? Artificial Intelligence and the Vanishing Human Arbitrator*, 17 NYU J. L. & Bus. 49, 55–64 (2000) (providing an overview of frequently used tools). We also learned from our interviewees that many multi-national firms have developed or are developing their own applications, for example for information management and data analysis. This may be because of in-house legacy applications, for security reasons, or because of specific functionality requests.

53. Another tool which, based on our experience, is often used for case preparation and hearings is "Opus 2," *OPUS2*, Opus2, https://www.opus2.com/en-us/ [https://perma.cc/ESC2-SXMJ] (last visited Nov. 24, 2023). We were surprised that it was not mentioned by survey participants.

54. Armour et al., *supra* note 42, at 68–69. The survey was conducted in the period from November 2019 to January 2020.

55. *Id.*

56. Another question would be how often they unconsciously use these tools, for example in the context of translation services or chatbots powered by large language models. *See Generative AI could radically alter the practice of law*, The Economist (Jun. 6, 2023), https://www.economist.com/business/2023/06/06/generative-ai-could-radically-alter-the-practice-of-law [https://perma.cc/MZB6-7VX2] (discussing the influence of generative AI on legal practice).

practice. Even more significantly, if this trend continues—and our results give us no reason to believe otherwise—in two years almost everyone will be using them, at least in jurisdictions which rely heavily on document disclosure in civil proceedings.

Second, the survey results also show clearly that AI tools which assist humans in search or classification, i.e. in "organizing their workspace," are in higher demand and use than tools which assist them in decision-making. To put it differently: dispute resolution professionals are happy to delegate "formal" tasks to AI tools but would like to retain control over the decision-making process. The "spread" in usage is ten to twenty percentage points both in our survey and the prior survey cited above. Humans have come to realize that machines are better (more accurate and efficient) in search and categorization. At the same time, they still do not trust machines when it comes to judgment. We will return to this pattern when discussing respondents' preferences for the design of modern court proceedings to resolve B2B commercial disputes.

2. *The Courts and the Judiciary*

An important block of questions in our survey relates to court proceedings and the judiciary (Questions 10 to 17a). The main issues in this block are electronic case management, virtual (online) court hearings, and the quality of civil judgments.

As a starting point, we wanted to investigate the communication patterns of dispute resolution professionals vis-à-vis courts, judges and their clerks in the jurisdiction in which they principally practice (Question 10). The results confirm what we have already learned about trends in modes of communication by dispute resolution professionals with their clients (see above Section III B 1). "Most of the time" respondents communicate with courts, judges and clerks face-to-face (31%), followed by the web-based services (e.g. client portals, Zoom, Microsoft Teams, 29%), and email (19%). (Regular) "post" is used "most of the time" only by 12% of respondents, and it is "never" used by 37%—the lowest and highest values in these two categories for all modes of communication, respectively. Hence, respondents communicate either face-to-face or digitally. Paper-based forms of communication are disappearing.

Given current advances in digital technologies, we expect a further increase in electronic forms of communication and case management. Such deployment promises significant efficiencies and improved access to justice, particularly for less experienced and well-resourced plaintiffs. Some of our interviewees expressed great interest in an

electronic data room operated by the judiciary and a common digital file that enables the parties to the dispute and the court to work simultaneously. Therefore, we wanted to investigate this issue further.

Communication between parties/counsel and courts/judges/clerks is increasingly embedded in electronic communication and case management systems. Such systems go beyond the e-filing of documents. They are software tools which provide features such as data entry, storage, retrieval, analysis, reporting, collaboration, and security. An example is the "Case Management/Electronic Case Files program" in the US, a joint program of the Administrative Office of the U.S. Courts and the federal courts.[57] In the UK, an "Electronic Working Pilot Scheme" was introduced in select courts (including the Commercial Court) in 2015.[58]

Respondents report that they encounter such systems in 54% of cases in the jurisdictions in which they principally practice (Question 11). The figure for respondents based in the U.S. is 96%, for those based in the UK 62%, for those based in France 47%, and for German participants 40%. Hence, "e-files" or similar systems appear to be becoming the norm, especially in the common law world.

So far, the experiences respondents have had with electronic case management systems are mixed. Respondents could rate various functions of such systems on a scale from 1 ("very unsatisfactory") to 5 ("very satisfactory"). Most functions were rated primarily as 2 or 3 ("unsatisfactory" or "neither unsatisfactory/satisfactory"). Best rated (as 5) were "delivery of judgments and orders" (26%), "notification of receipt of documents by the court" (24%) and "quicker process" (23%). Worst rated (as 1) were "ability to communicate with the judge (where applicable)" (30%) and "ability to communicate with the court's officers" (28%).

One can interpret this as follows: dispute resolution professionals have come to appreciate the efficiency gains associated with electronic case management systems regarding more formal aspects of the process such as document delivery or notifications. For sure, technical

57. *FAQs: Case Management / Electronic Case Files (CM/ECF)*, U.S. Cts., https://www.uscourts.gov/court-records/electronic-filing-cmecf/faqs-case-management-electronic-case-files-cmecf [https://perma.cc/63MG-7GQZ] (last visited Nov. 10, 2023).

58. *See Practice Direction 51O, The "Electronic Working Pilot Scheme,"* U.K. Ministry of Justice, https://www.justice.gov.uk/courts/procedure-rules/civil/rules/part51/practice-direction-51o-the-electronic-working-pilot-scheme [https://perma.cc/VBP6-YT93] (last visited Nov. 24, 2023). The Scheme has since been extended to further courts, and electronic filing is likely to be made permanent following the end of the pilot in April 2024.

glitches occur,[59] and current systems do not meet all user expectations. But the overall experience regarding the organizational functions of current case management systems is positive, and with increased usage will come even greater reliability, stability and further increased functionality.

At the same time, respondents feel that the systems currently in use do not offer them enough in terms of being able to communicate with key officers or decision-makers. This is an important deficit. We know that the feeling of being heard has a significant impact on the acceptance of the process and its results as legitimate.[60] So, electronic case management systems should be improved primarily by enhancing the quality of their communication functions. The rapidly improving performance of chatbots may be relevant in this context as long as, ultimately, parties or their counsel are able to contact the human decision-maker personally if they wish.

Many respondents also remarked that the variety of electronic case management systems currently in use causes problems and that increased uniformity across jurisdictions would be desirable. We expect some convergence from the bottom up, i.e., superior functionality and performance of certain systems should translate into increased market share of providers and system usage across jurisdictions. A top-down regulation of this issue is neither feasible nor desirable.

The key change brought about by the pandemic with respect to judicial processes are "virtual hearings," i.e. hearings which are conducted online, using videoconferencing software (e.g. Zoom, Microsoft Teams, etc.).[61] During strict lockdowns in 2020-2021, this was the only possible format for a court hearing. Week-long trials were conducted entirely online, with witnesses and experts from around the world

59. Many respondents complained about the lack of stability/reliability of electronic case management systems.

60. This goes beyond the conception of "Legitimation durch Verfahren" ("Legitimacy through Procedures") as analyzed by NIKLAS LUHMANN, LEGITIMATION DURCH VERFAHREN (1969). For Luhmann, the *functional* property of procedures of "reducing complexity" is crucial. In contrast, the right to be heard is a *substantive* procedural requirement. It is linked to procedural legitimacy in Article 41 of the EU Charter of Fundamental Rights, for example.

61. The term "virtual hearings" is a misnomer. Online hearings are, of course, "real hearings." Nevertheless, we used the term "virtual hearings" in the survey as, at least in the English-speaking world, this term has come to be the technical term to describe "online hearings" in government and policy documents. *See, e.g.*, *Virtual Hearings Access and General Information*, BANKR. D. MD., https://www.mdb.uscourts.gov/general-info/virtual-hearings [https://perma.cc/QJ9X-3M7R] (last visited Nov. 11, 2023); *United States Coast Guard Virtual Hearing Information*, U.S. COAST GUARD, https://www.uscg.mil/Resources/Administrative-Law-Judges/Virtual-Hearing/ (last visited Nov. 11, 2023).

taking part.[62] And virtual hearings came to stay. Overall, respondents report that 34% of hearings are conducted virtually in the jurisdictions in which they principally practice (Question 14). The figures for the US, the UK, and Germany are even higher, namely 64%, 50%, and 62%, respectively.

Of the total number of "virtual hearings," 43.2% are "procedural hearings such as case management conferences," 39.4% involve the "substantive determination of the dispute at trial where no witness evidence is given," and 17.4% the "substantive determination of the dispute at trial where witness evidence is given" (Question 15). The figures for the US, the UK, and Germany are 43.75% / 40.63% / 15.63%, 51.61% / 32.26% / 16.13%, and 34.21% / 46.49% / 19.30%, respectively.

These results are noteworthy for two reasons. First, they reflect the situation after the end of lockdowns. Respondents' views in 2022-2023 may be influenced to a certain degree by their experience a year or two earlier. But, with constant technological advances, one should not expect that virtual hearings will be used less in the future—the opposite trend is more likely. Second, while virtual hearings are currently used primarily for procedural matters, they also have a role to play with respect to substantive determinations, even where witness evidence is given. This may surprise many. But positive experiences during the pandemic, where high-stakes litigation and arbitrations with the taking of evidence could only be conducted online, may have dispelled some theoretical objections against taking evidence online which were voiced by scholars and practitioners.[63]

Looking at the respondents' experience with virtual hearings in more detail, it is clear that they are currently appreciated primarily because of their efficiency benefits. On a scale from 1 ("very dissatisfied") to 5 ("very satisfied"), the mean value of respondents' ratings for "professionalism," "accessibility for participants," "speed of progress," "cost advantages," and "logistical advantages" is 4 ("satisfied"). By contrast, the mean value for "verbal and non-verbal communication with the court and the other party," "self-confidence in your own surroundings," and "management of e-bundles" is only 3 ("neither dissatisfied nor satisfied"), and the value for "examination of witnesses and experts" is 2 ("dissatisfied").

This confirms prior observations: respondents appreciate the efficiency benefits of virtual hearings, and they want those benefits to

62. Interview with senior counsel (Mar. 15, 2022).

63. *See, e.g.*, Saniya Mirani, *Due Process Concerns in Virtual Witness Testimonies: An Indian Perspective*, Kluwer Arb. Blog (Nov. 17, 2020), https://arbitrationblog.kluwerarbitration.com/2020/11/17/due-process-concerns-in-virtual-witness-testimonies-an-indian-perspective/ [https://perma.cc/3GJY-YKWB] (last visited Dec. 20, 2023).

stay.[64] At the same time, dispute resolution professionals are not yet fully comfortable with the mode of communication and communication tools in virtual hearings, especially when it comes to important and stressful communication in the context of evidence gathering, such as the (cross-)examination of witnesses. Respondents also stressed this point in a number of individual comments[65] and in our interviews. "You just do not have the same feeling for the mood and dynamics in the room," as one of our interviewees put it.[66] A judge remarked that the "[i]nteraction between advocates and clients/witnesses in an online hearing is difficult to manage, a complex communication exercise."[67] Efforts to improve the experience with virtual hearings have the greatest potential when focusing on the communication dimension. Enhancing the experienced fluidity of virtual hearings through innovative technological tools is an important reform challenge.[68]

Finally, respondents were asked about their experience with civil judgments in the jurisdictions in which they principally practice (Question 17). Overall, respondents are very satisfied with the quality of judgments.[69] Approximately 91% state that "judgments have a clear structure setting out relevant facts and applicable law" either "most of the time" or even "always." Approximately 85% come to a similar

64. Here are a couple of individual comments: "Digital hearings are very effective;" "The pandemic has forced all participants to embrace change and virtual hearings, and I am hoping that these will stay where appropriate;" "I suspect that the courts will generally return to in-person meetings after the pandemic, but I hope that for hearings without the provision of evidence virtual hearings will remain possible (to save time for travel);" "I have found that they work better than I had expected for witness handling. I see few disadvantages in them compared to conventional hearings for most types of case."

65. Two respondents made the following individual comments: "[Virtual hearings] are never as fluid as in person, and especially so as to witness examination;" "It's always better 'to be in the room where things happen' and to be able 'to read the room', and that can only be done in person."

66. Interview with barrister (Feb. 9, 2022).

67. Interview with senior judge (Jan. 14–21, 2022).

68. *See 16 Best Virtual Team Communication Tools (Pros, Cons & Pricing) – 2023*, APPLOYEE: APPLOYEE BLOG, https://apploye.com/blog/virtual-team-communication-tools/ [https://perma.cc/BC89-B4Y2] (last visited Nov. 13, 2023) (providing an overview of certain innovative applications).

69. With Question 17, we also asked about the speed of delivery of judgments. However, we decided not to include the participants' responses in this discussion, for two reasons. First, there was an ambiguity in the question which confused some participants (and was noted in a number of comments), namely, whether the options given (< 6 months, 6-12 months, 12-24 months, > 24 months) referred to the commencement of proceedings or the conclusion of the trial. Second, very few participants dealt with the > 24 months option, probably because they (mistakenly) thought that they needed to do so only if this was relevant in their jurisdiction. However, as with the other options, they could and needed to choose from "never", "sometimes", about half the time", "most of the time" and "always".

conclusion when assessing whether "judgments are clear in the judge's results and reasons given." One respondent summed it up as follows: "Nearly always better than arbitration awards in nearly all respects."

With respect to this issue in particular, one would expect significant jurisdictional differences. Breaking down the numbers for the US, the UK, and Germany yields the following results: 86% of US respondents are satisfied with the quality of judgments "most of the time" or even "always." The corresponding numbers for the UK and Germany are 97% (UK) and 90% (Germany), respectively.

Satisfaction with judgments quality is clearly highest in the UK. This is not surprising. UK respondents are mostly commercial barristers and lawyers working in prominent law firms in the City of London. They primarily deal with high-stakes B2B litigation in the London Commercial Court[70]—a venue known for offering the highest-class judicial services for those who can afford them.[71] "We all read each other's judgments and discuss the 'big lines'—we do not want discrepancies between judgments," as one of the Court's senior judges noted in our interviews.[72] The demand for the judges' services is so strong—and the settlement rate is so high (approximately 70%)—that hearing dates are significantly "overbooked" in advance by listing officers. In the US, the Delaware Court of Chancery has a similar stellar reputation for the resolution of corporate disputes and was explicitly mentioned in respondents' comments.[73]

---

70. *See* THE COMM. CRT. OF ENG. & WALES, https://www.commercialcourt.london/ (last visited Nov. 12, 2023); *see also* Sir Geoffrey Vos, Master of the Rolls, The McNair Lecture: The future of London as a pre-eminent dispute resolution centre: opportunities and challenges (Apr. 19, 2023), https://www.judiciary.uk/wp-content/uploads/2023/04/The-Master-of-the-Rolls-McNair-Lecture-The-future-of-London-as-a-pre-eminent-dispute-resolution-centre-opportu.pdf [https://perma.cc/LZH6-RNBL] (last visited Jan. 7, 2024) (discussing the reasons for the popularity of London as a dispute resolution venue in commercial matters, especially the flexibility of English law to adapt to new developments).

71. TOM BINGHAM, THE RULE OF LAW 86 (2011) ("It has been said, with heavy irony, that justice in the UK is open to all, like the Ritz Hotel.").

72. Interview with a senior U.K. judge (July 7, 2022). The "network" effects work not only horizontally, but also vertically: English judges are often barristers before they become judges, and many will continue to serve as arbitrators after retiring from the bench. Interview with an academic (Jan. 31, 2022).

73. On its website, the Court describes itself self-consciously as follows: "The Delaware Court of Chancery is widely recognized as the nation's preeminent forum for the determination of disputes involving the internal affairs of the thousands of Delaware corporations and other business entities through which a vast amount of the world's commercial affairs is conducted. Its unique competence and exposure to issues of business law are unmatched." *Court of Chancery*, DELAWARE COURTS, https://courts.delaware.gov/chancery/ [https://perma.cc/AC8Q-2VF6] (last visited Nov. 13, 2023).

3. *COVID-19 and Brexit*

With Questions 18 and 19, we wanted to explore in more detail changes brought about by the COVID-19 pandemic and Brexit. More specifically, we wanted to know whether either or both of these events had, in the respondents' practice, influenced key case variables such as the amount in dispute, the degree of cross-border elements, risk awareness, and involvement of parties regarding issues such as cost-effectiveness, time-effectiveness, correspondence/discussions between parties, and their legal advisors and/or technical equipment and support.

Regarding the effects of the pandemic, respondents did not recognize any significant change except one: 40% "somewhat agreed" that risk awareness and party involvement regarding "technical equipment and support (e.g. online conferences, hearings, e-filing)" had increased, and 46% even "strongly agreed" that it had increased.[74] This reflects prior survey results on the increased use of AI tools, electronic case management systems, and virtual hearings during and after the pandemic. The pandemic operated as a catalyst for the global technological revolution of dispute management which is now in full swing.

In contrast, Brexit is a different type of event. The departure of the UK from the European Union (EU), which became effective on February 1, 2020, should be felt primarily by the EU Member States and, of course, the UK. As set out in the Introduction to this Article, UK courts must confront a significant challenge post-Brexit: with the exit from the EU, UK court judgments need no longer be automatically recognized in continental Europe, threatening London's position as a leading dispute resolution venue. Data from 2018 to 2023 confirm a significant decline of international cases around the time when Brexit became effective, but the share of international cases has picked up again since 2021–2022.[75]

Our survey data from May 11, 2022, to February 12, 2023, confirm this story. The key question is whether there are "fewer cross-border cases" than one would expect. Overall, only 8.8% of respondents "somewhat" or "strongly agree" with this proposition.[76] The figure for

74. Some of our interviewees noted that the pandemic has resulted in fewer class action lawsuits in the United States and slowed the rate of large-scale litigation overall. Interview with senior in-house counsel (Apr. 27, 2022); Interview with senior in-house counsel (May 4, 2022). These views are not reflected in the survey results.

75. *See* PORTLAND, COMMERCIAL COURTS REPORT, *supra* note 10.

76. This was confirmed in some of our interviews. One respondent noted that post-Brexit, more UK business had been "re-localized" by using UK subsidiaries for a particular type of transaction, and that UK law and courts were avoided if suitable alternatives exist. Interview with senior in-house counsel (Apr. 27 and May 4, 2022).

UK-based respondents is even lower: 6.25%. The only hint that Brexit has changed something in the long run are the 25% (both overall and UK-based respondents) who "somewhat" or even "strongly agree" that Brexit has generally increased the risk awareness and involvement of parties. So, it is only a slight feeling of increased unease, risk or uncertainty that, in the respondents' perception, Brexit has brought about. This is consistent with views expressed in our interviews according to which transaction costs and legal risks/uncertainty have risen because of Brexit.[77]

At the same time, respondents still believe they have as many cross-border cases as before. This is not a self-delusional belief. The objective reduction in cross-border cases appears to have been only a temporary phenomenon. Brexit may have created extra risks and conflicts which the parties now wish to resolve in court and/or parties may have found ways to deal with the enforcement uncertainty created by Brexit. Alternatively, or in addition, the majority of our respondents may practice in a high-profile but niche market segment which has not felt Brexit's impact yet. Only time will tell whether we will see a sustained downward trend in cross-border cases involving the UK.

4. *Choice of Jurisdiction, ADR and Arbitration*

Parties to B2B commercial disputes have an extensive menu of options to choose from when considering the resolution of their dispute. They can go to court, and they are usually able to choose the jurisdiction in which they will litigate. But they can also try alternative methods of dispute resolution such as mediation, conciliation, or arbitration. Parties' preferences for certain forms and fora of dispute resolution and the specific reasons why and when they choose them are crucially important when assessing potential reforms of civil justice systems. With Questions 20 to 26 of our survey, we attempted to explore these preferences.

The first of these questions (Question 20) asked about the various factors that parties consider when choosing a particular jurisdiction for dispute resolution.[78] Survey participants could rank factors on a

77. Interview with senior in-house counsel (Apr. 20, 2022).

78. The question aimed at preferences for *litigation* fora. It could theoretically also be understood as a question about *places of arbitration*. The two possible interpretations have a common core: both methods of dispute resolution lead to binding decisions by a third party. Hence, in essence, the question sought to explore the weight survey participants give certain factors when choosing a jurisdiction/venue/forum for some form of—private or public—adjudication.

scale from 1 ("not important") to 5 ("extremely important"). Overall, the following five factors came out at the top (highest mean value): "perceived neutrality of the forum" (4.13), "ease of enforceability of the judgment" (4.09), "law applicable to the substance of the dispute is the law of the jurisdiction" (4.08), "familiarity of the parties with the legal system of the jurisdiction" (4.07), and "judges possess the necessary expertise/specialisation" (3.97).[79]

These preferences can be summed up as follows: parties want to be judged by impartial/independent and competent decision-makers based on laws they are familiar with. And they seek a jurisdiction in which assets of the defendant are located so that a judgment has currency. Many of our interviewees also emphasized the importance of judges' competence and experience in the dispute area as a relevant factor when choosing a particular jurisdiction for dispute resolution.

There is obviously a positive feedback loop built into these preferences. The neutrality of the forum attracts "customers." In the process, the disputing parties become even more familiar with the laws of the forum, enticing them to come back—provided their experience was good. Over time, certain dispute resolution forums may emerge as "hot spots" where the parties naturally converge. This applies, for example, to London as an international center for financial dispute resolution, as confirmed in many of our interviews. And there is a connection between the jurisdiction/venue for dispute resolution and the applicable law. "You can 'sell' a credit facility better when English law applies," as one of our interviewees put it.[80, 81]

The main variable jurisdictions can and should work on is the perceived neutrality and competence of their judges. Establishing a reputation for being a neutral and competent forum for resolving disputes is a key success factor in the international competition for cases.

With the following Questions 21 through 24, we wanted to explore respondents' preferences regarding various forms of non-binding

79. The ranking in various jurisdictions does not differ fundamentally. At the top of the list in the US and in the UK is "perceived neutrality of the forum" (means of 4.80 and 4.64, respectively—in the UK, "expertise of judges" receives the same score), in France it is "familiarity of the parties with the legal system of the jurisdiction" (4.5), and in Germany it is "law applicable to the substance of the dispute is the law of the jurisdiction" (4.22).

80. Interview with senior in-house counsel (Apr. 20, 2022).

81. The positive feedback loop described in the text explains the "stickiness" of parties' choices with respect to popular contract laws such as English or Swiss law. *See* Gilles Cuniberti, *The International Market for Contracts: The Most Attractive Contract Laws*, 34 NW. J. INT'L L. & BUS. 455 (2014); *see also* Blair, *supra* note 11, at 224 ("London as a commercial and financial hub with an ecosystem in which commercial dispute resolution is an integral part.").

ADR, especially mediation. Question 21 asked about the frequency with which respondents have used mediation by private providers, mediation by specially trained judges[82]/judicial settlement attempts, ombudsman proceedings or "Early Neutral Evaluations."[83]

The most popular of these proceedings is mediation by private providers. 53.2% of respondents state that they use it "sometimes," but only 13.5% use it most of the time. Judicial mediations/settlement attempts are used "sometimes" by 48.4% (and "most of the time" by 4.8%). The corresponding figures for "Early Neutral Evaluations" are 22.8% and 1.6%.

One would assume that jurisdictional differences matter with respect to this issue, and the data confirm this. 40% of US-based and 27.59% of UK-based respondents state that they use mediation by private providers "most of the time." This is not surprising: modern mediation became popular in commercial matters in the common law world, especially in the US. Civil law countries never experienced a similar "mediation boom." However, judicial mediations/settlement attempts have nevertheless become a cornerstone of the civil justice infrastructure in civil law countries such as Germany. Judges are encouraged or even required to promote settlement during all stages of the proceedings.[84] The data reflects this: 60% of Germany-based respondents state that they use judicial mediations/settlement attempts at least "sometimes," and many of our interviewees stressed the beneficial effects of judicial steers as to relevant points or even likely case outcomes.

Overall, non-binding forms of ADR are not used very frequently. One of the reasons for this could be the somewhat underwhelming experience users are having with ADR. We asked survey participants to rate their experience on a scale from 1 ("never") to 5 ("always") with respect to whether ADR can "accelerate the process," "improve the relationship with the opposing party," "reveal new aspects of the conflict,"

---

82. In the EU, this is a form of mediation recognized by the Mediation Directive. *See* Directive 2008/52/EC of the European Parliament and of the Council of 21 May 2008 on certain aspects of mediation in civil and commercial matters, *supra* note 2 ("'Mediation' means a structured process, however named or referred to, whereby two or more parties to a dispute attempt by themselves, on a voluntary basis, to reach an agreement on the settlement of their dispute with the assistance of a mediator. . . . It includes mediation conducted by a judge who is not responsible for any judicial proceedings concerning the dispute in question.").

83. We did not specify whether these were early neutral evaluations by judges or (out-of-court) private providers.

84. *See* Zivilprozessordnung [ZPO] [Code of Civil Procedure], § 278, para. 1, https://www.gesetze-im-internet.de/englisch_zpo/englisch_zpo.html [https://perma.cc/2LMM-MCCB].

"produce better outcomes," and "solve the conflict" (Question 22). The mean values with respect to all these dimensions/features are lower than 2.8, suggesting that respondents can identify them more than "sometimes" (2) but less than "about half the time."

We tried to dig deeper with mediation which is the most popular of the non-binding ADR proceedings. In our interviews, many interviewees had noted various advantages mediation may have compared to court proceedings, such as lower costs, a broader, interest-based approach to conflict resolution, a more structured negotiation process, a speedy outcome, and the preservation of business relationships.

Question 23 of the survey asked respondents to consider various circumstances which would prompt them to prefer mediation/conciliation to litigation/court proceedings, again on a scale from 1 ("strongly disagree") to 5 ("strongly agree"). The amount in dispute does not play a significant role.[85] The only factor with a mean value higher than 4 ("somewhat agree") is the "preservation of the (business) relationship between the parties." Adversarial proceedings, including arbitration, are not well-suited in settings in which the parties want or even must work together in the future. This factor has long been highlighted in mediation scholarship.[86]

Do survey participants support the idea of a mediation stage or process in civil litigation (Question 24)? This could be before litigation is initiated, but mediation could also take place right after a suit is filed, or after a first round of briefs have been exchanged. The last option was preferred by many of our interviewees as parties and their counsel will usually have a better idea of the available evidence and the likely litigation outcome. Survey participants were given four options to rate ("as a mandatory feature," "as a default feature," "upon the ad hoc advice of the judge," and "only in specific cases, please specify"), applying a scale from 1 ("strongly disagree") to 5 ("strongly agree"). The only option with a mean value greater than 3.5, i.e. closer to 4 ("somewhat agree") is "upon the ad hoc advice of the judge." Respondents apparently put a lot of faith in the expertise and experience reflected in a judge's recommendation.

This survey result is another manifestation of a sentiment we encountered earlier: despite all the technical advances we are witnessing, human participants in disputes seek independent, impartial,

85. We asked respondents to state their preferences with respect to four categories: < GBP 100,000; GBP 100,000-250,000; GBP 250,000-1,000,000; > GBP 1,000,000. The mean values for all categories range from 3.59 (highest) to 3.28 (lowest), and they decline step-by-step with an increasing amount in dispute, i.e., respondents are more inclined to use mediation the lower the amount in dispute is.

86. *See, e.g.*, CHRISTIAN DUVE ET AL., MEDIATION IN DER WIRTSCHAFT 304 (2d ed. 2011).

competent and experienced human decision-makers to guide them through the process and adjudicate on their dispute. They trust the competent and experienced human experts but not the machines—or, at least, not yet.

We explored this and related issues further with our survey Question 25. Survey participants were asked to rate the relevance of twelve factors on a scale from 1 ("not important") to 5 ("extremely important") when deciding to arbitrate rather than to litigate a case. Respondents' views on this question are strong indicators for effective approaches to reforming civil justice systems with a view towards making them more competitive vis-à-vis arbitration.

In our interviews, many participants highlighted the ease of enforceability of arbitration awards, the confidentiality of the proceedings, and the availability of neutral and expert arbitrators as important advantages of arbitration. This was confirmed in the survey. The only three factors which received a mean rating above 4 ("important") are "confidentiality of the proceedings" (4.19), "expertise of arbitrators" (4.07), and "enforceability of awards" (4.07). The least relevant of the twelve factors is "lower costs of arbitration" (2.28), i.e., survey participants do not decide to arbitrate because it is less costly than litigation (41% think this is "not important").

These results allow a number of interesting interpretations. First, the "arbitration industry" apparently is "digging its own grave" by pushing for less confidentiality of arbitrations.[87] Confidentiality is the main reason why disputing parties choose arbitration in the first place.

Second, costs are not relevant when businesses decide to arbitrate rather than to litigate a case. That does not mean that the court system should not attempt to provide a low-cost service for SMEs. We have argued that it should or even must do so.[88] It does mean, though, that courts should not and cannot compete for the "big cases" with lower costs.

Third, and maybe most importantly, the two second-most valued factors are the "expertise of arbitrators" and "enforceability of awards." Arbitration has a competitive advantage vis-à-vis litigation regarding the *international* enforcement of awards: the New York Convention provides a strong framework for enforcing arbitral awards internationally.[89] No similar worldwide framework for court judgments is in

87. *See supra* Section I.A.

88. *Id.*

89. *See* Convention on the Recognition and Enforcement of Foreign Arbitral Awards, June 10, 1958, 21 U.S.T. 2517, 330 U.N.T.S. 4739.

place. The best individual jurisdictions can do is join an existing local framework—or not leave one, as the UK did with Brexit.

But individual jurisdictions can do a lot more to improve the expertise of decision-makers in court cases. If parties choose arbitration instead of litigation, the "expertise of arbitrators" is a crucial factor. Hence, jurisdictions should think about what they can potentially improve regarding the qualifications and experiences of judges who handle B2B commercial disputes. Against this background, it becomes clear what is driving the experiment with "International Commercial Courts" which we are witnessing in many jurisdictions.[90] Jurisdictions have come to realize and appreciate that sophisticated litigants in high-stakes commercial disputes demand experienced expert adjudicators when it comes to managing a complex commercial dispute resolution process and formulating a judgment.

The answers to Question 26 shed some additional light on these issues. With this question, we wanted to know from respondents how important certain factors are when deciding on the *seat* of an arbitration where it was favored over litigation. The arbitral seat is very important as a "connecting factor": among other things, it determines the main rules that govern the conduct of the arbitration and the judicial supervision of the arbitral proceedings.[91]

In the respondents' view, the three most important factors are "ease of enforceability of the arbitral award" (mean value of 4.19), "perceived neutrality of the state courts at the seat of arbitration" (3.92), and "arbitration friendliness" of the applicable procedural law (3.82). These results are not surprising. The more impartial, professional and arbitration-friendly the courts in a particular jurisdiction act vis-à-vis arbitrations in that jurisdiction, the more attractive as a place of arbitration the jurisdiction becomes.

The regulatory challenge for a jurisdiction is, of course, to attract additional cases to arbitration without "cannibalizing" one's litigation market. However, we doubt that viewing the issue through the lens of some form of internal competition is really the right way to approach the matter. Jurisdictions might come to enjoy a (much) bigger slice of the international market for dispute resolution if they have a reputation for providing excellent adjudicatory services—through the state courts or private arbitration. The popularity of arbitration in a jurisdiction might have a positive feedback effect on litigation in that jurisdiction and vice versa.

---

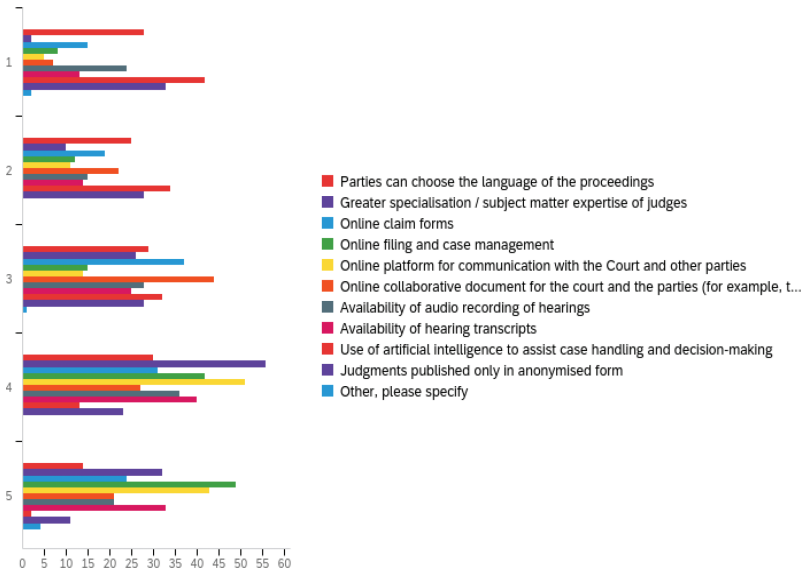
90. *See supra* Introduction.

91. *See, e.g.*, Gary B. Born, International Arbitration: Cases and Materials 599-669 (2d ed. 2015).

5. *Civil Procedure Reform*

Many ideas for reforming the court system to make it more competitive can be derived from respondents' answers to the questions we discussed in the previous section. Nevertheless, we considered it would be instructive to conclude the survey with a direct question on potential civil procedure reforms. We presented the respondents with ten potential reforms and also gave them the opportunity to identify others not on our list. As with other survey questions, we asked respondents to express the degree of their support on a scale from 1 ("strongly oppose") to 5 ("strongly support") (see Figure 1).

FIGURE 1: SUPPORT FOR "CIVIL PROCEDURE REFORMS."



The following three proposals received the strongest support (mean value): "online platform for communication with the court and other parties" (3.94), "online filing and case management" (3.89), and "greater specialisation/subject matter expertise of judges" (3.84). In contrast, respondents (weakly) oppose the "use of artificial intelligence to assist case handling and decision-making" (2.18).

These results are consistent with the answers to other questions. Respondents have come to appreciate the efficiency advantages of conducting proceedings online. They are happy with online filing and case management and online communication with the court and other parties. At the same time, they would like to be judged by a competent and experienced human decision-maker, and they are not happy

with an increased use of AI applications to assist case handling and decision-making.

Hence, against the background of these preferences, the "robo judge" is nowhere near on the horizon anytime soon.[92] At the same time, stakeholders' preferences do not appear to be fully consistent. They approve of online case management but disapprove of an increased use of AI to assist case handling. Do survey participants know how much AI is used in sophisticated modern case management systems? One way to resolve the issue could be to interpret respondents' preference against the use of AI applications as having a focus on substantive decision-making as opposed to the more formal management of the process.

III. Principles for Designing Efficient Judicial Dispute Resolution Systems

In the preceding section, we presented our empirical findings on stakeholders' preferences for resolving commercial B2B disputes. We summed up some key takeaways from our online survey and the interviews when discussing the survey and interview results. At the same time, we did not explore the potential policy implications of our empirical investigation systematically and comprehensively.

We attempt such an exploration in this section. We develop principles for designing efficient judicial dispute resolution systems for B2B commercial disputes. Given the global scope of our online survey and interviews, these principles will necessarily be cross-jurisdictional and generic. Rather than suggesting specific measures, we formulate guidelines which must be concretized and adapted to the requirements of individual jurisdictions. The overall goal is to develop a high-quality, high-speed and low-cost judicial resolution process for B2B commercial disputes.[93]

A. *Embracing the Digital Transformation*

Both the survey and our interviews provide strong support for embracing the digital transformation to increase the efficiency of judicial proceedings.[94] Out of court, dispute resolution professionals

92. On "robo judging," see generally Eidenmüller & Varesis, *supra* note 52, at 61–72; Hans-Patrick Schroeder, *Robot Justice in the Resolution of Civil Disputes in Germany?*, 2 Zeitschrift für das Recht der digitalen Wirtschaft 109 (2022).

93. *See supra* Part I.

94. There is broad support in the literature for this goal. See, for example, Richard Susskind, Online Courts and the Future of Justice (2019); Marek Świerczyński, *Critical evaluation of new Council of Europe guidelines concerning digital courts* 48(1)

communicate predominantly electronically. They express a preference for digitizing at least the more formal aspects of the judicial process. One factor which is clearly influencing this preference is sustainability goals of law firms: traveling is discouraged unless there is a very good reason for moving people and resources over long distances from A to B and back.[95]

Against this background, not only e-filing but, more generally, online case management via an online platform should become the default *modus operandi* of courts when resolving B2B commercial disputes. On a more granular level, the Master of the Rolls of England and Wales (Sir Geoffrey Vos) has recently rightly suggested that "the utility and necessity of pleadings, expert[s] report[s] and witness statements all need to be considered afresh. They are each analog concepts rooted in an analog age, which may be in need of a digital makeover."[96]

Hearings raise special issues. Survey participants and interviewees have come to appreciate the efficiency advantages of online hearings. They prefer online hearings at least for procedural matters such as for case management conferences. The days when disputing parties and/or their counsel were willing to fly thousands of miles to the courthouse for a three-hour organizational meeting are over.

Hearings on substantive matters are viewed somewhat differently. Many dispute resolution professionals push for online hearings also when it comes to the taking of evidence, including witness and expert examination. Some emphasize the tactical flexibility in terms of hearing participants and team organization or the opportunity for simultaneous private (online) conversations that online hearings offer.[97] Others voice concerns. A key driver of these concerns is the worry of lawyers that they might not be as effective as advocates in an online setting compared to a traditional face-to-face hearing.[98] Surely there is an agency issue here: older colleagues in particular might hesitate to learn a new set of online skills which come naturally for digital natives. However, the concern cannot be attributed solely to an

---

Review of European and Comparative Law 133 (2022); Blair, *supra* note 11, at 230–32; Göttinger Kolloquien zur Digitalisierung des Zivilverfahrensrechts: Band 1 (Philipp Reuss and Benedikt Windau eds., 2022).

95. For example, one of the leading London law firms has committed to a "35% reduction in business travel-related emissions by 2027." *People, planet, prosperity*, Freshfields Bruckhaus Deringer, https://www.freshfields.com/en/about-us/environment [https://perma.cc/2JUR-3N2U] (last visited Nov. 22, 2023).

96. Vos, *supra* note 70.

97. Interview with senior in-house counsel (Apr. 20, 2022); interview with senior in-house counsel (Apr. 27, 2022); interview with senior in-house counsel (May 2, 2022); interview with senior in-house counsel (May 4, 2022).

98. This was explicitly stated by many of the lawyers we interviewed.

agency problem. Communicating in an online environment is, by its very nature, less rich than communicating in person. But with rapid technological progress, the added value of personal communication over online communication is shrinking.

We draw two conclusions from these observations. First, parties should always have an *option* to conduct hearings online in a commercial B2B dispute if they so wish, including hearings which involve the giving of evidence. If parties and their counsel are happy with proceeding online, the courts should offer them this possibility. Given the disruptive force of the digital transformation and the rapidly changing nature of stakeholders' dispute resolution preferences, it even seems justified to set online hearings as a general default which applies unless the parties opt out. Nudging parties towards a more digital future pushes them to learn skills faster which they need anyway—not just in the courtroom.

Second, moving proceedings online (to a greater degree) works well only if parties and their counsel trust the new digital environment. This trust is fostered if parties and counsel are equipped with user-friendly and reliable digital/AI tools for information management and analysis, communication, and decision-making in an online setting. Providing the necessary technological infrastructure, and doing so fast, is a key challenge for policymakers who wish to reform their domestic court system. Experience in many jurisdictions suggests that it is not a good idea to develop new tools from scratch. Rather, states should partner with the leading private providers and use cutting edge tools which have already been tried and tested in a competitive private environment.

The emphasis should be on tools to improve the communication experience of hearing participants. One aspect of this are live hearing transcripts ("real-time transcription") which allow hearing participants to follow a hearing verbatim as it moves along. This is an important tool especially for witness and expert examination, and it has become standard practice in international commercial arbitrations and in the specialized commercial courts around the world. It is also a field in which sophisticated AI applications will soon replace even the most experienced human court reporters.[99]

99. A key technology here is "Natural Language Processing" (NLP). The Supreme Court of India has launched live transcription services early in 2023. The start was bumpy. *See* R. Sai Sandana, *SC's Live Transcription Project: A Failed Experiment?*, Supreme Court Observer (May 18, 2023), https://www.scobserver.in/journal/scs-live-transcription-project-a-failed-experiment/ [https://perma.cc/ZJ5T-GKWP] (last visited Nov. 24, 2023).

Trust is also a function of transparency and certainty. Disputing parties and their counsel want clarity on the rules and procedures which govern their online interactions. This goes beyond the laws of civil procedure which are in place in a jurisdiction. "Protocols" for online hearings comprise issues such as (1) a pre-hearing plan, scope and logistics, (2) technical issues, specifications, requirements and support staff, (3) (potential) confidentiality, privacy and security, (4) online etiquette and due process considerations, and (5) the presentation of evidence and examination of witnesses and experts.[100]

B. *Competent and Experienced Judges*

Should policymakers invest in the automation of judicial decision-making with the aim of developing "robo judges?" Based on our survey and interviews, the answer to this question is "No." Lawyers increasingly use AI tools in their practice. However, the tools used least often are those related to decision-making based on predictive analytics. Parties and lawyers trust *human* mediators when considering mediation to settle their dispute. One of the most important reasons to arbitrate a dispute instead of litigating is the possibility of selecting expert and experienced *human* arbitrators. Accordingly, parties and counsel oppose the increased use of AI tools to assist decision-making in court proceedings. The conclusion is clear: parties want to be judged by competent and experienced human judges and not by machines.

This preference is probably shaped by various factors and considerations. AI applications are certainly becoming increasingly good at predicting outcomes correctly.[101] Judging, however, is a complex process which goes far beyond getting the outcome right. It involves reasoning and persuasion, and it takes place within an elaborate set of rule of law (due process) constraints which aim to bestow legitimacy to the outcome. With the advent of generative AI, arguing and delivering reasons by machines can also no longer be dismissed as science fiction. But even advanced generative AI applications simply extrapolate

100. We take this list of issues from a memorandum by the International Chamber of Commerce (ICC) in Paris. In international commercial arbitration, such "protocols" became a standard for managing virtual hearings during the pandemic. *See Checklist for a Protocol on Virtual Hearings and Suggested Clauses for Cyber-protocols and Procedural Orders Dealing With the Organisation of Virtual Hearings*, ICC International Court of Arbitration, https://iccwbo.org/wp-content/uploads/sites/3/2020/12/icc-checklist-cyber-protocol-and-clauses-orders-virtual-hearings-english.pdf [https://perma.cc/SCZ6-ZQTG] (last visited Nov. 27, 2023).

101. It should be noted that the impressive accuracy of some prediction models proves to be hardly meaningful in practice due to systematically contaminated training and test data. *See* Masha Medvedeva et al., *Rethinking the field of automatic prediction of court decisions*, 31 A.I. & L. 195 (2023).

from existing knowledge/text, building a new text which reflects "received wisdom." These models do not capture the innovative aspect of sophisticated legal reasoning which goes beyond existing knowledge and possibly even moves in a completely different direction into uncharted territory.

Further, hearing the parties and their concerns and delivering justice takes more than rational discussion. Feelings are important, also in a commercial setting, and parties obviously trust humans to better recognize and validate them than machines.[102]

The preference for human decision-makers may also be partly driven by advocacy considerations. The art of persuasion is not a mechanistic exercise. Skilled lawyers aim to convince as much as to manipulate. But how do you manipulate a machine? What remains of oral advocacy if the "psychology of persuasion"[103] is taken out of the equation? For the skilled advocate, engaging with a human judge is more complex and more "promising" than interacting with a machine. In contrast, the manipulation of decision models through so-called adversarial attacks—targeted inputs that cause the model to output something unintended—requires technical expertise.

But it is not only the preference to be judged by *some* human judge which was voiced clearly by our survey respondents and interviewees. Parties and dispute resolution professionals request *competent* and *experienced* human decision-makers.[104]

This preference has straightforward implications for the reform of civil justice systems in relation to the resolution of B2B commercial disputes. Jurisdictions must make a strategic decision regarding the segments in which they want to increase their competitiveness vis-à-vis the courts in other jurisdictions and arbitral institutions.

---

102. Machine learning applications for "emotion recognition" are becoming increasingly more sophisticated. But the potential for misreading human emotions is still significant. *See, e.g.*, Kate Crawford, *Artificial Intelligence is Misreading Human Emotion*, THE ATL. (Apr. 27, 2021), https://www.theatlantic.com/technology/archive/2021/04/artificial-intelligence-misreading-human-emotion/618696/ [https://perma.cc/4F8K-4Y4Q] (last visited Nov. 21, 2023).

103. ROBERT B. CIALDINI, INFLUENCE: THE PSYCHOLOGY OF PERSUASION (2021).

104. One further piece of evidence to support this proposition comes from the United States. Within a couple of years, speed and competence have made the Southern District of Texas (SDTX) federal bankruptcy court in Houston the most important court for large Chapter 11 cases. *See* Sujeet Indap, *The downfall of the judge who dominated bankruptcy in America,* FIN. TIMES (Nov. 21, 2023), https://www.ft.com/content/574f0940-d82e-4e4a-98bd-271058cce434 [https://perma.cc/BN6K-ZZQR] (last visited Nov. 22, 2023) ("Houston had become popular for two reasons. First, [the two key judges] were sophisticated in law as well as finance; both had MBA degrees and years of experience. Second, they had a unique intensity in processing cases. In the instance of retailer Belk in 2021, the court confirmed a bankruptcy plan within 24 hours of filing . . . .").

High-stakes commercial B2B disputes which bring in high court fees and revenues are obvious "targets." Establishing "International Commercial Courts" staffed with competent and experienced judges with a specialized expertise in international commercial law is a sensible move for jurisdictions which currently do not have such courts.[105] Alternatively, a jurisdiction could seek to establish specialized courts for an even narrower segment of the dispute resolution market, such as antitrust or IP litigation.

But we have argued that jurisdictions also have a public duty to provide a functioning civil justice infrastructure for resolving smaller-stakes commercial disputes which SMEs face daily.[106] Hence, states must think about the qualifications, selection, and training of commercial judges more generally. Jurisdictions which hire judges straight from law school, such as Germany, should reconsider their schemes for recruiting and for allocating novice judges to various types of courts. Not only grades, but also subject matter expertise and work experience, should be relevant factors. Jurisdictions such as the UK, where senior (commercial) judges are appointed to the bench after a long and successful career in private practice (either at the Bar or, increasingly, as a solicitor), have a competitive advantage in this regard.

More generally, jurisdictions need to factor in technical/computing skills in their recruiting, training, and promotion processes for judges. Our survey respondents' clear preference for competent human judgment is consistent with the use of predictive analytics tools to triage cases or arrive at prima facie assessments for settlement purposes.[107] More broadly, a recent in-depth analysis of the evolving role of the judge in digitally assisted adjudication argues that the "… judge should participate as a co-designer in the design of legal technologies that are used to decide on specific court cases; must integrate the output of legal technologies in the individual legal case whilst respecting the narrative of the parties; and oversee or control the quality of digital technologies."[108]

It is obvious that this role is very different from the role judges perform now. It requires a lot of knowledge and skills in computer

105. Whether they can emulate the highly successful business model of the London Commercial Court is a different question, of course.

106. *See supra* Part I.

107. *See also* Vos, *supra* note 70 ("It may be that the power of AI could identify, from a mass of complex facts and transactions, the real issues that divide the parties and that require resolution. If that could be done, the actual resolution process itself could become shorter and less costly . . . .").

108. Geneviève Vanderstichele, The Evolving Role of the Judge in Digitally Assisted Adjudication (2023) (unpublished dissertation) (on file with authors).

science and "legal technologies." Currently, these are usually not taught as a mandatory component of legal education in law schools. But we expect this to change.[109] Jurisdictions wishing to build the commercial judiciary of the future are well-advised to place a heavy emphasis on technical knowledge and competencies.

C. *Efficient Planning and Case Management*

Negotiations are a *process* in which *people* try to solve a *problem* (PPP model).[110] A well-designed process with clear rules helps the negotiators find good solutions. Likewise, careful planning and case management are key for a speedy and productive judicial resolution of disputes. The process can and must be adapted to the specific conflict which is to be resolved.[111] Planning creates certainty and fosters trust, and it disciplines all participants to work towards a defined endpoint, i.e., the main hearing followed by the judgment.

Survey participants and interviewees stressed the importance of case management conferences as a planning device. They help to develop a "road map" for the further proceedings, as one of our interviewees put it,[112] and they facilitate an efficient allocation of dispute resolution resources. In international commercial arbitrations, case management conferences are a key step in the process and an established management tool. Some arbitration institutions even require arbitral tribunals to hold a case management conference and develop a process plan/procedural timetable during or following the conference.[113]

---

109. At the University of Oxford, for example, "Law and Computer Science" is currently an optional course on the BCL/MJur program for graduate students. It brings together law students and students from the Department of Computer Science. Similar optional courses for graduate students exist at other law schools. It is probably only a matter of time before teaching modules on this subject are integrated into undergraduate curricula.

110. Horst Eidenmüller & Andreas Hacke, *The PPP Negotiation Model: Problem, People, and Process*, Oxford Bus. Law Blog (Mar. 17, 2017), https://blogs.law.ox.ac.uk/business-law-blog/blog/2017/03/ppp-negotiation-model-problem-people-and-process [https://perma.cc/KH8R-BGTB] (last visited Nov. 22, 2023).

111. Frank Sander & Stephen Goldberg, *Fitting the Forum to the Fuss: A User-Friendly Guide to Selecting an ADR Procedure*, 10 Neg. J. 49 (1994).

112. Interview with a barrister (Feb. 9, 2022).

113. *See, e.g.*, *Article 24 of the Rules of the International Chamber of Commerce*, Int'l Chamber of Com., https://library.iccwbo.org/content/dr/RULES/RULE_ARB_2017_EN_24.htm?l1=Rules&l2=Arbitration+Rules [https://perma.cc/8F38-M3TW] (last visited Nov. 22, 2023) ("When drawing up the Terms of Reference or as soon as possible thereafter, the arbitral tribunal shall hold a case management conference to consult the parties on procedural measures that may be adopted . . . . During such conference, or as soon as possible thereafter, the arbitral tribunal shall establish the procedural timetable that it intends to follow for the efficient conduct of the arbitration.").

This should become standard practice in commercial litigation too. For parties in a B2B commercial dispute, initiating litigation is like embarking on a potentially long and costly journey. They need to know the destination and the route, and the court must take the lead in proposing and justifying a reasonable process plan. A key element of such a plan should be limits on the number and volume of documents, including briefs and witness statements, which may be requested, produced and/or submitted.[114] Courts should discuss with parties and counsel a draft process plan in a case management conference. The case management conference should be held online as discussed above.

The plan should then be agreed upon during or immediately after the conference. In international commercial arbitrations, the parties are free to agree on the procedure to be followed by the arbitral tribunal in conducting the proceedings (however, certain due process guarantees must always be observed).[115] Failing such agreement, the arbitral tribunal may conduct the arbitration in such manner as it considers appropriate.[116] In essence, party autonomy reigns supreme in international commercial arbitrations.

This principle cannot simply be transferred from arbitrations to court litigation. The courts have a public duty to conduct the proceedings within applicable constitutional constraints and other mandatory laws and with a view towards an efficient use of public resources. Ultimate decision-making power with respect to procedural matters should also lie with the courts. In practice, the differences from arbitration should not be overstated. The cases in which the courts would want to override an agreement of the parties on process matters should be very rare.

It goes without saying that a process plan/procedural timetable is just that: a plan. It must be adapted as the process moves forward if required by changing circumstances. The process for adaptation should follow that for adoption.

D. *Optional "Early Neutral Evaluation" and Mediation*

Common law and civil law jurisdictions traditionally differ in their approach to judicial directions, evaluations or assessments prior

---

114. *See also* Blair, *supra* note 11, at 226–28.

115. *See, e.g.*, *Article 19. Determination of rules of procedure*, *in UNCITRAL Model Law on International Commercial Arbitration*, U.N. Comm'n on Int'l Law, https://uncitral.un.org/sites/uncitral.un.org/files/media-documents/uncitral/en/19-09955_e_ebook.pdf [https://perma.cc/S2QS-3YPN] (last visited Nov. 23, 2023).

116. *Id.*

to the case having been heard in full. In the former (as in international commercial arbitration), such preliminary normative statements by courts are the exception and not the rule. In the latter, it is the other way round. Some civil law jurisdictions such as Germany even require judges to work towards settlement during every stage of the proceedings.[117] Section 278, para. 2 of the German Code of Civil Procedure further stipulates that "… [t]he oral hearing is preceded by a conciliation negotiation for the purpose of settling the dispute amicably, unless an attempt to reach an agreement has already taken place before an out-of-court conciliation body or the conciliation negotiation appears to be clearly hopeless."

An early neutral evaluation by the court has advantages and disadvantages. An advantage is that it saves costs and might lead to a speedy resolution of the dispute. We should remind ourselves of the agency issues discussed in a previous section.[118] Lawyers have an incentive to drag out proceedings to increase their fees at clients' expense. The "search for the truth" should end where marginal costs begin to exceed marginal benefits (greater accuracy of the judgment). Arguably, in many jurisdictions this is well before the point in time at which judgment is given right now. If the evaluation comes from the presiding judge, i.e. from a neutral person tasked with deciding on the matter if there is no settlement, it will also carry more weight compared to a normative assessment by another neutral person such as a private mediator.

On the other hand, a neutral evaluation of case prospects early in the proceedings comes at a point in time when parties have not yet been able to present and argue their case fully. Hence, it may compromise their right to be heard. It might also compromise the judge's impartiality. The judge might be biased (consciously or subconsciously) to uphold the initial assessment in the final judgment should the parties not settle. The judge might also become less effective in leading settlement discussions during later stages of the proceedings. Another negative effect could be that parties and counsel, anticipating an early neutral evaluation, "frontload" the proceedings with very detailed submissions—reducing the positive efficiency effects of this procedural device.

Similar considerations apply to a "mediation window" during civil proceedings. In many cases, this will be a useful step, and the parties will be grateful to attempt mediation to resolve their dispute. But sometimes a "mediation window" will only result in unnecessary

117. *See supra* Section III.D.
118. *See supra* Section II.A.1.

delays—which could be exploited strategically—and undermine a party's legitimate desire to have their case decided.

Against this background, it would not be prudent to provide for an early neutral evaluation and/or a court-annexed mediation in every case.[119] But survey respondents and interviewees are clear that they welcome suggestions by the judge of a potential "mediation window" in appropriate cases. They are also clear that a case management conference and a process plan are key elements of an efficient dispute resolution design and that each plan needs to be tailored to the specifics of a concrete dispute ("fitting the forum to the fuss").

Hence, judges should assess the specifics of a case when organizing the case management conference and developing a draft process plan.[120] If they believe that the case would benefit from an early neutral assessment and/or from a "mediation window," they should suggest this in the draft process plan. A key factor here will also be the structure of the civil proceedings in a particular jurisdiction, particularly the evidence available at an early stage.

The assessment and mediation could be performed by different persons: the judge, a judicial mediator, or a private mediator. Many different combinations are feasible, and their suitability will depend on the specifics of the case, the procedural "background rules" in a particular jurisdiction, and the judge's view of the matter. Given the trust survey participants and interviewees place in the expertise and experience of specialized human judges, and given his or her familiarity with the case, the early assessment should usually come from the judge and not from a judicial or private mediator. In contrast, a potential mediation might well be performed better by a trained public or private mediator.

Conclusion

We began this Article by observing that the landscape of commercial dispute resolution is rapidly changing. The main driver of this change is technological innovations. With the advent of generative AI in 2022, the legal profession and dispute resolution are experiencing

119. In England and Wales, the Government plans to introduce a compulsory one-hour mediation session for small claims (i.e. those under GBP 10,000). *See* U.K. Ministry of Justice, *Increasing the use of mediation in the civil justice system: Government response to consultation*, https://www.gov.uk/government/consultations/increasing-the-use-of-mediation-in-the-civil-justice-system/outcome/increasing-the-use-of-mediation-in-the-civil-justice-system-government-response-to-consultation [https://perma.cc/3W7T-KPB2] (last accessed Jan. 7, 2024).

120. *See supra* Part III.

a disruptive transformation. AI applications are used along the entire "value chain," from contract negotiation to the resolution of disputes through judgment or settlement. Innovation comes primarily from the private sector: private actors have the resources, incentives and flexibility to "move fast and break things."[121] Private alternative forms of dispute resolution such as internal company complaint procedures, mediation and arbitration are booming. In contrast, the burden of commercial cases on courts is steadily decreasing in many jurisdictions, including the US.

We have argued that jurisdictions need to modernize their civil justice infrastructure for B2B commercial disputes as well. The courts are, and should continue to be, a cornerstone of this civil justice infrastructure for a variety of reasons. The courts are needed to establish precedents which guide private parties when negotiating transactions and settling disputes. They guarantee a fair and robust dispute resolution process and one that is also accessible to SMEs in lower-stakes disputes. To the extent that a specific transaction is impacted by mandatory rules, courts will enforce them, thereby safeguarding important public policies.

But what exactly should jurisdictions do—how should they modernize their processes for resolving B2B commercial disputes in the light of rapid technological advances? It seems obvious that the preferences of the disputing parties are relevant to guide reform efforts. For this reason, we attempted to assess these preferences with an empirical study. To the best of our knowledge, we are the first to undertake such an inquiry after the pandemic, post-Brexit, and in the face of an AI wave which has gained momentum on an unprecedented scale in the last three years, passing an inflection point.

We interviewed twenty-four senior legal practitioners and business leaders, and we conducted an online survey which returned 275 responses from dispute resolution professionals worldwide. The majority of survey participants practice in the US, the UK, Germany and France.

We find that the push for digitization and for using AI tools to improve the efficiency of judicial proceedings is strong. AI applications have already become a cornerstone of dispute resolution practice. "Online courts" should be "on offer" in commercial disputes. Providing user-friendly and reliable digital/AI tools for information management

121. This was Facebook's internal motto until 2014. *See* Hannah Kuchler & Tim Bradshaw, *Facebook looks to dominate mobile web*, FIN. TIMES (Apr. 30, 2014), https://www.ft.com/content/8956a450-d08e-11e3-8b90-00144feabdc0 [https://perma.cc/MZR6-WDYE] (last visited Dec. 31, 2023).

and analysis, communication and decision-making is key, as are clear protocols for online hearings.

But disputing parties do not want to be judged by machines. Rather, they request competent and specialized human decision-makers. Courts must be well-versed with respect to the subject matter of the dispute. Parties also request planning and efficient case management. A case management conference and a process plan are essential. Finally, courts should offer an "early neutral evaluation"—a non-binding preliminary evaluation by a third party, with or without (mediated) settlement discussions—if the parties agree to this in the case management conference.

Our empirical research confirms the requirement that humans should be "in the loop" when AI applications perform functions that, until a few years ago, were performed exclusively by humans. Certainly, the role of the human judge will change, as will the functions they perform and their training and skills. And there will probably be fewer judges in the future, not more. But policymakers should not aim to replace human judges with robots. That is not what disputing parties want.