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Improving Access to Justice in State Courts with Platform Technology

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Improving Access to Justice in State Courts with Platform Technology

*J.J. Prescott**

Access to justice often equates to access to state courts, and for millions of Americans, using state courts to resolve their disputes—often with the government—is a real challenge. Reforms are regularly proposed in the hopes of improving the situation (e.g., better legal aid), but until recently a significant part of the problem has been structural. Using state courts today for all but the simplest of legal transactions entails at the very least traveling to a courthouse and meeting with a decisionmaker in person and in a one-on-one setting. Even minimally effective access, therefore, requires time, transportation, and very often the financial wherewithal to miss work or to pay for child care. In this Article, I investigate the effects of altering this structural baseline by studying the consequences of introducing online platform technology to improve citizen access to justice. In courts that adopt the technology, citizens are able to communicate with law enforcement, prosecutors, and judges to seek relief or negotiate a resolution through an online portal at any time of day. Examining many months of data from half a dozen adopting state courts, I present evidence that introducing this technology dramatically reduces the amount of time it takes for citizens to resolve their disputes and satisfy any fines or fees they owe. Default rates also plummet, and court personnel, including judges, appear to engage constructively with citizens when using the platform. From the perspective of state courts, disputes end more quickly, the percentage of

* Professor of Law, University of Michigan Law School. I am very grateful to the Third Century Global Initiatives Grant Program at the University of Michigan for funding the UM Online Court Project, of which this research is a part; the staff at Court Innovations Inc. for sharing their data, expertise, and time; Max Bulinski and Kyle Rozema for their comments; and Facundo Bouzat, Grady Bridges, Troy Epstein, Joseph Gallmeyer, Jesse Hogin, Simmon Kim, M Moore, Marissa Perry, Joseph Piligian, and André Rouillard for excellent research assistance on work related to this Article. Conflict disclosure: I am a cofounder and equity holder of Court Innovations Inc., a University of Michigan startup that develops and implements online case resolution systems, including Matterhorn, which is evaluated in this Article.

payments received increases, and it takes less time for courts to receive those payments. Even citizens who do not use the platform may benefit from the technology's introduction, presumably because they find they face less congestion when they physically go to a courthouse.

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INTRODUCTION

The phrase “access to justice” means many things to many people.¹ It usually connotes having legal “rights” and the freedom to demand remedies for civil wrongs or, when faced with a criminal charge or a civil infraction, the existence of a fair and transparent forum in which to defend oneself and an opportunity to be heard by an impartial decisionmaker.² To others or in other contexts, access to justice is taken to mean the ready availability of specific law-related resources: a licensed attorney to represent one’s interests, clarifying instructional materials, or other legal assistance capable of distilling the complicated

1. See, e.g., Magdalena Sepúlveda Carmona (Special Rapporteur on Extreme Poverty and Human Rights), *Extreme Poverty and Human Rights*, ¶¶ 4–5, U.N. Doc. A/67/278 (Aug. 9, 2012) (describing “access to justice” as consisting of several legal rights, such as the right to legal assistance and the right to an effective remedy, that are important for addressing the “root causes of poverty”); Lisa R. Pruitt & Bradley E. Showman, *Law Stretched Thin: Access to Justice in Rural America*, 59 S.D. L. REV. 466, 497–98 (2014) (contrasting their “‘thicker’ conception of access to justice” with a thinner one, and arguing that their conception responds to “the lack of access to lawyers and courts in relation to underlying problems that also need attention”); Deborah L. Rhode, *Access to Justice: An Agenda for Legal Education and Research*, 62 J. LEGAL EDUC. 531, 532 (2013) (observing that participants in the debate over the meaning of “access to justice” hold “different conceptions of justice and of the strategies best able to secure it”).

2. See, e.g., Sepúlveda, *supra* note 1, at ¶ 5 (recognizing that “the inability of the poor to pursue justice remedies through existing systems increases their vulnerability to poverty and violations of their rights”); WASHINGTON STATE ACCESS TO JUSTICE TECH. PRINCIPLES, pmb. (WASH. STATE ACCESS TO JUSTICE BD. Feb. 2008) (utilizing a broad definition of access to justice that includes (1) a meaningful opportunity “to assert a claim or defense and to create, enforce, modify, or discharge a legal obligation in any forum” and (2) system transparency, or allowing “the public to see not just the outside but through to the inside of the justice system”); Stephen L. Pepper, *Access to What?*, 2 J. INST. FOR STUDY LEGAL ETHICS 269, 270 (1999) (giving one definition of “access to justice” that is centered on access to legal advice, e.g., concerning “one’s legal rights on the street” and “one’s rights under wage and hour laws or a union contract”).

processes and substantive rules of our justice system into something digestible.³ No one can gainsay the importance of these components of access to justice, particularly when the legal matter in question becomes more serious and the potential consequences to the litigant become graver. But in the context of today's thousands of state courts—in which a large majority of trial-level dockets involve small, relatively clear-cut cases and typically (and probably appropriately)⁴ unrepresented litigants⁵—the inability to access justice is rooted in something more physical, more mundane: the many and varied costs of getting to and physically using a brick-and-mortar courthouse.

Access to justice in state courts today is largely a function of access to physical courthouses and the in-person, real-time availability of justice system decisionmakers—e.g., law enforcement, prosecutors, and judges.⁶ Whenever someone reluctantly admits responsibility and submits to paying a traffic ticket, pleads guilty as charged by mail to a misdemeanor charge, or defaults on a court-imposed fine or fee, the key difficulty is typically *not* the complete absence of legal options, nor is it

3. See, e.g., Jonathan Lippman, *The Judiciary as the Leader of the Access-to-Justice Revolution*, 89 N.Y.U. L. REV. 1569 (2014) (utilizing this conception and describing these types of “access to justice” improvements in New York); Pepper, *supra* note 2, at 269 (“Because only lawyers are allowed to represent parties in litigated matters, ‘access to justice’ in this sense often refers to the distribution of lawyer services in regard to litigation, and in the attendant negotiations of disputes prior to litigation.”).

4. See J.J. Prescott, *The Challenges of Calculating the Benefits of Providing Access to Legal Services*, 37 FORDHAM URB. L.J. 303, 321–22 (2010) (arguing that representation requires social resources that could be deployed elsewhere, and that when the stakes are very low and when representation is unlikely to alter the outcome significantly nor provide any other significant social benefits, having a litigant proceed pro se may be optimal).

5. See, e.g., PAULA HANNAFORD-AGOR ET AL., NAT’L CTR. FOR STATE COURTS, THE LANDSCAPE OF CIVIL LITIGATION IN STATE COURTS, at iv (2015), <https://www.ncsc.org/~media/Files/PDF/Research/CivilJusticeReport-2015.ashx> [<https://perma.cc/Q9ZR-AD64>] (“A traditional hallmark of civil litigation is the presence of competent attorneys zealously representing both parties. One of the most striking findings in the dataset was the relatively large proportion of cases (76%) in which at least one party was self-represented, usually the defendant.”); ROBERT C. LAFOUNTAIN ET AL., NAT’L CTR. FOR STATE COURTS, EXAMINING THE WORK OF STATE COURTS: AN ANALYSIS OF 2010 STATE COURT CASELOADS 31 (2012), http://www.courtstatistics.org/other-pages/~media/microsites/files/csp/data%20pdf/csp_dec.ashx [<https://perma.cc/GND9-6VGU>] (“Each year [from 2001–2010], Traffic/Violations cases account for the largest share of the states’ trial court caseloads. In 2010, there were over 56 million incoming cases, equaling 54 percent of the aggregate trial court total.”); TASK FORCE ON SELF-REPRESENTED LITIGANTS, JUDICIAL COUNCIL OF CAL., STATEWIDE ACTION PLAN FOR SERVING SELF-REPRESENTED LITIGANTS 11 (2004), <http://www.courts.ca.gov/documents/selfreplitsrept.pdf> [<https://perma.cc/9SR8-NNXP>] (noting that “trial courts reported growing numbers of self-represented litigants in all areas of civil litigation” and the particularly high rate for family law and unlawful detainer proceedings).

6. See, e.g., Maximilian A. Bulinski & J.J. Prescott, *Online Case Resolution Systems: Enhancing Access, Fairness, Accuracy, and Efficiency*, 21 MICH. J. RACE & L. 205, 227 (2016) (offering data indicating “that a large fraction of the population would find it more convenient to address their legal issues at times when courts are closed” and further describing how business hours–type availability can hamper “access to justice”).

usually the lack of legal representation or a failure to understand the substantive core of the legal matter.⁷ Rather, access to justice is subverted by the fact that courts continue to operate on the age-old model of in-person, face-to-face dispute resolution in which a litigant must physically go to a specific courthouse during business hours and meet with a specific decisionmaker, normally after waiting for hours in a long queue with others in exactly the same situation.⁸ Physically going to court costs money, takes time, creates fear and confusion, and presents both real and perceived risks.⁹ This model makes much more sense for complex litigation in which credibility determinations—and therefore the ability to “look someone in the eye”—and diverse forms of evidence are standard fare.¹⁰ For disputes of this character, the costs of physically using a courthouse (even day in and day out) are *relatively* modest, if not negligible, given the stakes of the lawsuit.¹¹ Moreover, the evidentiary and procedural advantages of an in-person, real-time forum in such lawsuits are clear and significant.¹² But for minor disputes in state court, in which the stakes are at least initially fairly low and decisions can be made on the basis of papers and are usually straightforward, the tradeoff cuts deeply the other way.¹³

7. *See id.* at 227–28.

8. *See, e.g.*, Maura Dolan, *Cutbacks in California Court System Produce Long Lines, Short Tempers*, L.A. TIMES (May 10, 2014, 5:23 PM), <http://www.latimes.com/local/la-me-court-cuts-20140511-story.html> [<https://perma.cc/9RBQ-9WD3>]:

Los Angeles County is down 80 courtrooms and has eliminated court reporters in civil cases. Getting a trial for a traffic case can take a year. Trials on civil matters may require a two-year wait. “The result of all this is delays and backlogs,” Presiding Judge David S. Wesley said. “I have long lines all over the county.”

9. *See, e.g.*, Bulinski & Prescott, *supra* note 6 (expounding upon this set of issues).

10. *See, e.g.*, Robert J. Condlin, *Online Dispute Resolution: Stinky, Repugnant, or Drab*, 18 CARDOZO J. CONFLICT RESOL. 717, 755–56 (2017) (describing the “complex legal and moral judgments at the heart of substantively complicated disputes” and arguing that if online dispute resolution (ODR) is to be expanded to cover all civil cases, “it will have to explain how it can resolve the legal, political, and moral questions present in disputes of any complexity, and it will have to do this with substantive arguments”); *see also* Bulinski & Prescott, *supra* note 6, at 215 (recognizing that minor cases “are much more amenable to the use of [Online Case Resolution] systems in the near term” than cases requiring complex litigation).

11. *Cf.* ONLINE DISPUTE RESOLUTION ADVISORY GRP., CIVIL JUSTICE COUNCIL, ONLINE DISPUTE RESOLUTION FOR LOW VALUE CIVIL CLAIMS 5 (2015) (U.K.), <https://www.judiciary.gov.uk/wp-content/uploads/2015/02/Online-Dispute-Resolution-Final-Web-Version1.pdf> [<https://perma.cc/X4AQ-KJAH>] (“ODR is not appropriate for all classes of dispute but, on the face of it, is best placed to help settle high volumes of relatively low value disputes . . .”).

12. *See, e.g.*, Condlin, *supra* note 10, at 736–38 (contending that most text-based ODR systems use a “‘little boxes’ format” that forces “partitioning” of claims and reductionism, i.e., making it so parties cannot always “describe all of the dimensions of their claims and proposals in even a moderately complex dispute”).

13. *Id.* at 723 (asserting that “it is not difficult to understand how routine, standardized, and uncomplicated disputes could be reduced to single issues . . . or how parties to disputes could choose software-driven systems over human ones”).

Until a few years ago, state courts seemed stuck with an in-person, face-to-face model designed for complex disputes, even though, in practice, an enormous fraction of their cases (and overall workload) have few or none of the traditional hallmarks of complexity. When a court uses this ill-fitting approach, the average experience of a litigant “going to court” amounts to showing up at the beginning of the day—one usually dictated by the court—and waiting in long lines to see the official with the power to resolve the matter in question.¹⁴ Sometimes unlucky litigants are instructed to return another day to try again.¹⁵ But if a litigant manages to see the right person, the decisionmaker will typically consult a few papers for a few moments, ask a question or two, and then make a proposal or announce a judgment—i.e., once a hearing actually begins, it is over almost at once.¹⁶ The outcome of the issue is generally predictable for experienced players, as the decision is determined by standard pieces of information contained in the case file

14. See, e.g., Kat Aaron, *The People’s Court?*, AM. PROSPECT (Nov. 21, 2013), <http://prospect.org/article/peoples-court> [<https://perma.cc/B7QY-RJNL>] (reporting from the 36th District Court in Detroit, Michigan: “I scooped my bag off the belt and joined the lawyer, who was standing where the entryway carpet meets the linoleum, near a line of people snaking through a rope maze, waiting to pay tickets.” And then, “[T]hey wait for their name to be called, and since there are a lot of [eviction, foreclosure, and real estate] cases, the wait can be long.”); see also Dolan, *supra* note 8; Sam Dolnick, *In Line at the Courthouse, an Everyday Scene of Drama and Duty*, N.Y. TIMES: CITY ROOM (Jan. 27, 2010, 7:30 AM), <https://cityroom.blogs.nytimes.com/2010/01/27/in-line-at-the-courthouse-an-everyday-scene-of-drama-and-duty> [<https://perma.cc/Q7K4-7WBW>] (noting the same issue of long lines at courthouses).

15. Megan Matteucci, *DeKalb Cracks Down on Unpaid Traffic Tickets*, AJC, <http://www.ajc.com/news/local/dekalb-cracks-down-unpaid-traffic-tickets/AqfAwx8cypVnemLkYRGr4N> (last updated Apr. 30, 2010, 7:06 AM) [<https://perma.cc/66NG-HWC6>] (“Turner said she, too, waited about five hours on Wednesday, and that was her third day at the courthouse because of complications with her paperwork. ‘All together this ticket is costing me more than \$900, including taking off time from work,’ she said.”).

16. See, e.g., Darryl K. Brown, Response, *Decriminalization, Regulation, Privatization: A Response to Professor Natapoff*, 69 VAND. L. REV. EN BANC 1, 8 (2016) (noting the “quick-and-dirty nature of much misdemeanor litigation” in state courts); Bruce Zucker & Monica Her, *The People’s Court Examined: A Legal and Empirical Analysis of the Small Claims Court System*, 37 U.S.F. L. REV. 315, 348 (2003) (“Based upon our study, an average small claims court calendar can consist of forty-five cases per day. Although many cases settle, default, or dismiss at trial, a large number are adjudicated. Given the volume of cases, a small claims court judge cannot allow more than a few minutes per case.”); see also Ashley Robertson, Note, *Revisiting Turner v. Rogers*, 69 STAN. L. REV. 1541, 1569–72 (2017) (describing South Carolina show cause hearings for nonpayment of child support before *Turner v. Rogers*, 564 U.S. 431 (2011), as typically short hearings entailing “virtually no interaction with the court,” and post-*Turner* as lasting about “five to ten minutes”); Rachel M. Cohen, *Welcome to the Courtroom That Is Every Renter’s Nightmare*, NEXT CITY (Sept. 14, 2015), <https://nextcity.org/features/view/rent-court-baltimore-tenant-rights-cities> [<https://perma.cc/8BBR-ER9F>] (describing the reality of adjudication in more court at the District Court of Maryland as cursory at best and noting that this reality can have systematic consequences for the parties: “Such a rapid system also gives tenants little time to prepare their defenses. . . . With hundreds of cases to hear in a day, the judges have little time to hear the details of a tenant’s situation. . . . [T]enants are generally unable to defend themselves against common [landlord] chicanery. . . .”).

or provided by answers the litigant supplies to a set of boilerplate questions.¹⁷ All of this sounds very inefficient and frustrating for those litigants who actually make it to court.¹⁸ But more significant from an access-to-justice perspective are the millions of people every year who are unable or just choose *not* to spend a day in court, despite having questions, concerns, or objections, and who accordingly feel themselves effectively shut out of the system.¹⁹ This is particularly true for those facing outstanding warrants for unpaid fines and fees.²⁰

Reforms aimed at improving access to justice have taken many forms over the years,²¹ but most are off the mark for these “access-to-courtroom” challenges, which I will describe in greater detail below. Mitigating access hurdles by adding courthouses or decisionmakers is

17. See, e.g., Robertson, *supra* note 16, at 1569–73 (describing the child support financial declaration “short form” instituted by South Carolina, finding that the forms are “rarely used or helpful,” providing some questions that the judges surveyed typically asked, and noting one judge’s use of “gut feeling” in ability-to-pay determinations).

18. See, e.g., John Montague Steadman & Richard S. Rosenstein, “*Small Claims*” *Consumer Plaintiffs in the Philadelphia Municipal Court: An Empirical Study*, 121 U. PA. L. REV. 1309, 1336 (1973):

Over 80% of the consumer plaintiffs who responded to the questionnaire gained either a judgment or a settlement in their favor. In light of this record of success, it is noteworthy that less than a majority of those answering the question, 73 out of 150, thought that justice was done in their case, and that only 102 out of 149 would use the small claims court again.

Cohen, *supra* note 16:

“The bare minimum allowable for any human dignity in the rental housing system is for this court to be fixed,” says Jessica Lewis, an organizer with RTHA [(Right to Housing Alliance)]. “Our members that go through rent court are just defeated,” she adds. “They feel there is no dignity. It’s just really, really dehumanizing for them.”

19. See e.g., John C. Allen IV, *Online Litigation and Adjudication of Local Ordinance Violations*, JUDGES’ J., Fall 2014, at 16, 16:

Within the realm of minor ordinance violations . . . [the] inconvenience [of making a physical appearance] graduates into an insurmountable obstacle in the mind of the respondent. . . . From our complacent positions [as judges and attorneys], it is hard to see the burden that is placed on the average layperson and the fear he or she feels when thrust, unwilling, into the legal system.

20. Sarah Brayne, *Surveillance and System Avoidance: Criminal Justice Contact and Institutional Attachment*, 79 AM. SOC. REV. 367, 371–72 (2014):

In her study of the impact of criminal justice surveillance in a Philadelphia neighborhood, Goffman concludes that due to the prevailing “climate of fear and suspicion in poor communities,” individuals wary of being apprehended for anything from technical parole violations to outstanding court fines and fees “avoid institutions, places, and relations on which they formerly relied. . . . The police and courts become dangerous to interact with”

(citation omitted) (quoting Alice Goffman, *On the Run: Wanted Men in a Philadelphia Ghetto*, 74 AM. SOC. REV. 339, 340, 353 (2009)).

21. See Frank S. Bloch, *Access to Justice and the Global Clinical Movement*, 28 WASH. U. J.L. & POL’Y 111, 117–21 (2008) (characterizing the “access-to-justice challenge” as a global one, and describing reforms that have taken place across the globe, including “legal aid schemes,” “legal literacy campaign[s],” and “Rule of Law projects”).

expensive and thus politically unrealistic,²² and other barriers limiting access seem inherent in the face-to-face model of dispute resolution (e.g., fear of public speaking). Moving beyond the face-to-face model of dispute resolution by reforming the way in which people “go to court,” however, has to date received much less attention—basically, for want of an alternative model that might serve as a substitute.²³ This is changing.²⁴ Advancements in online platform technology have made it possible to reimagine “going to court” as occurring online, and courts in a handful of states have attempted to improve access in precisely this way.²⁵ These courts have adopted online case resolution systems that permit litigants with minor disputes to engage with prosecutors and judges and even private parties through an online “platform.”²⁶ Parties can access an adopting court using the platform anytime and anywhere, and communication, negotiation, and resolution can occur asynchronously over hours or days.²⁷ Online platforms collect essential

22. See Louis S. Rulli, *Roadblocks to Access to Justice: Reforming Ethical Rules to Meet the Special Needs of Low-Income Clients*, 17 U. PA. J.L. & SOC. CHANGE 347, 362–63 (2014) (arguing that using the “traditional lawyering model” to determine how to best address the legal needs of low-income clients is unworkable).

23. See, e.g., Ayelet Sela, *Streamlining Justice: How Online Courts Can Resolve the Challenges of Pro Se Litigation*, 26 CORNELL J.L. & PUB. POL’Y 331, 332–33 (2016) (noting that the use of technology to aid pro se litigants has largely been limited to providing them with additional information).

24. See REBECCA LOVE KOURLIS & RIYAZ SAMNANI, INST. FOR THE ADVANCEMENT OF THE AM. LEGAL SYS., COURT COMPASS: MAPPING THE FUTURE OF USER ACCESS THROUGH TECHNOLOGY 12 (2017), http://iaals.du.edu/sites/default/files/documents/publications/court_compass_mapping_the_future.pdf [<https://perma.cc/LC45-4Q4W>] (asserting that, at a minimum, courts must provide certain online services to meet the needs of self-represented litigants); Veronica M. Cravener, *Resolve Your Case from the Comfort of Your Home*, COLUMBUS B. LAW. Q., Spring 2017, at 19, <https://issuu.com/columbusbarlawyersquarterly/docs/spring2017cblq-pages> [<https://perma.cc/XZ6Z-GMMR>]; Shamena Anwar, *Resolving Traffic Tickets Online in East Lansing, MI*, JUST. TECH. INFO. CTR., <https://www.justnet.org/about/jic-tech-highlights-tickets.html> (last visited Sept. 30, 2017) [<https://perma.cc/N2T6-X9LD>]; Marisa Hicks, *Students Address Conway’s Outstanding Warrants Issue*, CABIN.NET (Apr. 18, 2017, 4:33 PM), <http://thecabin.net/news/local/crime/2017-04-18/students-address-conway-s-outstanding-warrants-issue> [<https://perma.cc/W8ER-HFGP>] (explaining the Faulkner County District Court’s intention to “implement a web-based court system that allows users to pay tickets online”); see also Allen, *supra* note 19, at 17 (discussing pilot programs in Cook County, Illinois, that allow citizens to contest nonmoving traffic violations online and by mail).

25. J.J. Prescott, *In Michigan, Access to Justice a Click Away*, DETROIT NEWS (Mar. 12, 2015), <http://www.detroitnews.com/story/opinion/2015/03/11/prescott-court-innovations/70166738> [<https://perma.cc/E9H9-UMKY>]; see also Allen, *supra* note 19, at 17.

26. Anna Stolley Persky, *Home Court Advantage*, A.B.A. J., Dec. 2016, at 16, 17 (reporting that several Michigan state courts use online case resolution systems for a “wide breadth” of civil and criminal matters).

27. See, e.g., Bulinski & Prescott, *supra* note 6, at 244 (“[T]he asynchronicity of . . . [online] proceedings [allows] judges . . . to more efficiently manage their time, perhaps resolving traffic issues early in the morning before a day-long civil trial, rather than sticking to a pre-set schedule, which might require interrupting a trial, despite the considerable inconvenience of doing so.”); Persky, *supra* note 26, at 17 (noting that litigants in certain Michigan and Ohio counties can use

information efficiently and can be individualized for each type of case to improve litigant understanding and comfort.²⁸

There are many a priori reasons to believe that using platform technology to “open up” state courts will make using courts easier and faster for litigants, which in turn will make it much more likely that individuals will exercise their legal options in the first place.²⁹ To date, however, there has been little rigorous empirical evidence to support this proposition.³⁰ And even if adding an online platform as an access opportunity seems unlikely to make things worse, getting a handle on the potential magnitude of any improvements in access or efficiency is important. Policymakers and judges can use this information as they gauge the attractiveness of such innovation and can then weigh those benefits in light of implementation costs and other spending priorities as well as alternative access-to-justice reform proposals.³¹

The goal of this Article is to examine the access consequences of introducing dispute resolution platform technology in state courts. An evaluation of a range of outcomes in tens of thousands of cases in a half-dozen representative state courts over a couple of years reveals substantial improvements on metrics that relate directly to access to justice and efficiency.³² I focus on case duration (i.e., the time it takes for a case to be closed or for all fines or fees to be paid), the percentage

the internet “to resolve a handful of legal issues online, at any time, even the middle of the night”); Sela, *supra* note 23, at 348 (“The asynchronous text-based [judicial online dispute resolution] process design model . . . was implemented and further developed . . . [by] several counties in the United States and Canada . . .”); Monroe News, *Online Payments a New Option for Monroe County Traffic Tickets*, NEWSBANK (Aug. 2, 2016), infoweb.newsbank.com/resources/doc/nb/news/1601EABB401FDC40?p=AWNB [<https://perma.cc/5RSQ-XNXL>] (“[C]itizens [of Monroe County, Michigan] can access the court 24 hours a day, seven days a week using their smartphones, tablets or computers to resolve traffic violations.”).

28. James E. Cabral et al., *Using Technology to Enhance Access to Justice*, 26 HARV. J.L. & TECH. 241, 259–60 (2012) (describing an interactive platform, I-CAN!, that helps pro se litigants draft court documents; explaining that I-CAN! contains thirteen individualized modules, each addressing a different legal issue; and commenting that “Orange County judges noted that they could help six I-CAN!-assisted litigants in the time it typically took to assist a single [self-represented litigant]”); Condlin, *supra* note 10, at 756 (“[Online dispute resolution] software . . . does a better job than humans of collecting, organizing, and processing information . . .”).

29. See, e.g., Bulinski & Prescott, *supra* note 6, at 215 (“By facilitating a citizen’s ability to interact and communicate with courts and officials, well-designed [online case resolution] systems will keep litigants better informed about their rights, remedies, and the ongoing status of their disputes.”).

30. In large part, this gap is the result of the facts that platform technology is still rare and that court data are often difficult to obtain. Causal inference is difficult under these conditions. As platform technology spreads, court systems should select an implementation strategy that will facilitate careful study of the technology’s effects, including more robust data collection.

31. See Cass R. Sunstein, *Is Cost-Benefit Analysis for Everyone?*, 53 ADMIN. L. REV. 299, 314 (2001) (arguing against old approaches, and on behalf of a modern, cost-benefit “approach that attempts to assess the magnitude of problems and the need for good priority-setting”).

32. See *infra* Part III.

of fines and fees due that are paid at case closure, and the case default rate. There are many other measurable outcomes that an exhaustive analysis would incorporate, including the amount of effort and time it takes for a litigant to resolve a dispute and whether the resolution of the dispute is accurate or satisfactory. While I am unable to observe outcomes of this sort in my data, there are good reasons to believe that the outcomes I can analyze are valuable proxies for pivotal dimensions of access to justice (not to mention court efficiency). It is also true that there are other “softer” considerations a comprehensive assessment of access-to-justice reforms ought to include.³³ But the evidence I offer in this Article should nonetheless nudge policymakers toward adopting platform technology, at least for minor cases, even while they remain open-minded to advocates who contend for better access to attorneys and greater availability of materials furnishing legal guidance.³⁴

The balance of this Article has the following structure: Part I details the economic, physical, and psychological barriers to accessing justice through brick-and-mortar courts and relates recent relevant access-to-justice reform attempts, particularly technological ones. Part II depicts how online platform technology has the potential to open up courts by summarizing how online case resolution software operates in the district courts I study in this Article. Part III presents the study’s data and empirical approach and discusses the results of the analysis and their implications. The final Part concludes briefly.

I. CONTEXT

Minor legal disputes—in particular, lesser misdemeanors and civil infractions (e.g., traffic violations)—account for significantly more than half of state trial court caseloads in the United States.³⁵ Almost invariably, individuals who wish to dispute or negotiate traffic charges

33. See, e.g., Jeffrey Selbin et al., *Access to Evidence: How an Evidence-Based Delivery System Can Improve Legal Aid for Low- and Moderate-Income Americans*, in *Closing the Justice Gap: How Innovation and Evidence Can Bring Legal Services to More Americans*, CTR. FOR AM. PROGRESS 51, 62 (2011), https://cdn.americanprogress.org/wp-content/uploads/issues/2011/06/pdf/prose_all.pdf [<https://perma.cc/B7Y2-THS2>] (“Researchers will . . . need to think carefully about how to engage client communities in design and implementation of studies, so as not to exploit vulnerable populations, impose added burdens on them, or raise unwarranted expectations.”). See generally Prescott, *supra* note 4.

34. Examples of ongoing access-to-justice reform efforts include attempts to establish a civil right to counsel, to allow limited-scope representation, and to increase the availability of litigant self-help programs, pro bono representation, and attorney’s fees. See, e.g., Pamela Cardullo Ortiz, *Courts and Communities: How Access to Justice Promotes a Healthy Community*, 72 MD. L. REV. 1096, 1101–03 (2013) (discussing access-to-justice reform in Maryland).

35. See LAFOUNTAIN ET AL., *supra* note 5, at 31 (“In 2010, there were over 56 million incoming cases, equaling 54 percent of the aggregate trial court total.”).

are unrepresented by an attorney, and state trial courts administer a “huge percentage of small claims, landlord/tenant, and minor criminal matters [in which] at least one of the parties appears without counsel.”³⁶ Advocates understandably focus on this pervasive lack of representation in state courts as the primary hindrance to access to justice,³⁷ and indeed litigants without an attorney appear to face a steep uphill battle, at least in complex cases.³⁸ They must navigate an intricate legal system dominated by lawyers, judges, clerks, and other repeat players accustomed to the constant use and meaning of legal terminology and a set of procedures that are generally foreign to those who are not members of this tightly knit community.³⁹ Unrepresented litigants—tenants,⁴⁰ consumers,⁴¹ and debtors⁴²—are thus said to “fare

36. John M. Greacen, *Self-Represented Litigants and Court Legal Services Responses to Their Needs: What We Know* 6, <http://www.courts.ca.gov/partners/documents/SRLwhatweknow.pdf> (last visited Sept. 30, 2017) [<https://perma.cc/YQ44-TRPC>] (unpublished white paper prepared for the Center for Families, Children & the Courts, California Administrative Office of the Courts); see also John M. Greacen, *Self-Represented Litigants, the Courts, and the Legal Profession: Myths and Realities*, 52 FAM. CT. REV. 662, 663 (2014) (“Empirical data supports the views of SRLs that they are choosing to represent themselves in less complicated cases.”).

37. Jessica K. Steinberg, *Demand Side Reform in the Poor People’s Court*, 47 CONN. L. REV. 741, 744–45 (2015) (“The prevailing view among scholars and advocates is that ‘supply side’ remedies will best improve access to justice. That is, among poverty lawyers, scholars, courts, and the organized bar, the dominant belief is that supplying more lawyers will best address the problems of the unrepresented poor.”).

38. *Id.* at 744 (“The literature is rife with empirical evidence that represented parties achieve favorable outcomes anywhere from two to ten times more often than pro se litigants.”).

39. Russell Engler, *Connecting Self-Representation to Civil Gideon: What Existing Data Reveal About When Counsel Is Most Needed*, 37 FORDHAM URB. L.J. 37, 58 (2010) (“When repeat players [e.g., landlord suits against tenants] sue individuals in small claims courts, representation dramatically increases the defendants’ likelihood of success.”).

40. Tenants as a group tend to benefit greatly from obtaining legal representation. See *id.* at 48–49 (noting that once tenants obtain representation, “the likelihood of eviction drop[s] precipitously,” making tenants “three, six, ten, or even nineteen times” more likely to win against their landlords).

41. A consistent line of studies originating in the 1970s and 1980s and running through today shows the negative impact on small claims litigants that results from the lack of an attorney representative. See *id.* at 55–57:

The studies consistently show a high rate of default among debtors. Debtors who do not default often are pressured into settling their cases without trial. Whether the cases were resolved by settlement or trial, representation played a crucial role in impacting which party obtained favorable judgments, and the size of the award for plaintiffs. . . . The problems persist for the typical unrepresented individual in small claims courts in the 21st century, despite the inordinate attention garnered by the courts in the 1970s and early 1980s and repeated calls for reform.

Engler describes several 2000s studies confirming the 1970s and 1980s studies. See *id.* at 58.

42. See Dalié Jiménez et al., *Improving the Lives of Individuals in Financial Distress Using a Randomized Control Trial: A Research and Clinical Approach*, 20 GEO. J. ON POVERTY L. & POL’Y 449, 450–51 (2013) (“[A] great many consumers in financial distress eventually face debt collection lawsuits, in which they proceed—unrepresented—against attorneys specializing in collection matters.”).

poorly in the courts,” and often have no workable alternative, because they cannot afford and have no other access to a lawyer.⁴³

But the value of an attorney to a litigant varies with the type of case,⁴⁴ and realistically, for minor, low-stakes cases, many litigants will have no choice but to attempt to address their legal issues without legal counsel.⁴⁵ This is probably socially optimal, given that the very low stakes of many of these cases might otherwise be dwarfed by the resources society would expend to resolve them.⁴⁶ Luckily, for minor cases (e.g., civil infractions), lack of legal representation is unlikely to matter very much at the margin to the disposition of a dispute: judges and prosecutors are often predisposed to take a few minutes to explain a litigant’s options and the potential consequences of certain choices,⁴⁷

43. See also LEGAL SERVS. CORP., DOCUMENTING THE JUSTICE GAP IN AMERICA: THE CURRENT UNMET CIVIL LEGAL NEEDS OF LOW-INCOME AMERICANS 13 (2d ed. 2007), <https://www.lsc.gov/sites/default/files/LSC/images/justicegap.pdf> [<https://perma.cc/4V2Q-R9FK>] (“[A]t least 16 million legal problems experienced by low-income people—and probably more—are addressed without any legal help whatsoever.”); Engler, *supra* note 39, at 47:

Tenants rarely are represented by counsel, while the representation rate of landlords varies from low rates in some courts, to highs of 85–90% in others; where landlord representation is high, the typical case pits a represented landlord against an unrepresented tenant. The demographics of the tenants reveal a vulnerable group of litigants, typically poor, often women, and disproportionately racial and ethnic minorities.;

Russell Engler, *Reflections on a Civil Right to Counsel and Drawing Lines: When Does Access to Justice Mean Full Representation by Counsel, and When Might Less Assistance Suffice?*, 9 SEATTLE J. SOC. JUST. 97, 99 (2010):

Most tenants, many landlords, and most debtors appear in court without counsel. Unrepresented litigants are disproportionately minorities and are typically poor. They often identify an inability to pay for a lawyer as the primary reason for appearing without counsel. Unrepresented litigants often fare poorly in the courts, which can have devastating consequences.

44. See Drew A. Swank, *The Pro Se Phenomenon*, 19 BYU J. PUB. L. 373, 379 (2005) (“According to one survey in Idaho, thirty-one percent of pro se litigants consulted counsel before trial and were advised that they did not need an attorney either because their case was uncontested or simple enough to handle on their own.”).

45. See LEGAL SERVS. CORP., *supra* note 43, at 4 (“Only a very small percentage of the legal problems experienced by low-income people (one in five or less) are addressed with the assistance of either a private attorney (pro bono or paid) or a legal aid lawyer.”); Ronald W. Staudt, *All the Wild Possibilities: Technology That Attacks Barriers to Access to Justice*, 42 LOY. L.A. L. REV. 1117, 1130 (2009) (finding that self-represented litigants “reported cost as the primary barrier to achieving their objectives in court. They could not afford a lawyer to help them navigate the courts, or the potential benefit to their case was not worth hiring a lawyer”).

46. Prescott, *supra* note 4, at 321:

We can probably safely assume that individuals who were turned away [from publicly funded legal services providers] would have benefited, at least in some small amount, from . . . having received legal assistance. After all, the price of the service to someone who is qualified is close to zero. But looking at client benefits rather than *net* social benefits ignores many of the social costs of providing these services . . .

47. See, e.g., Rebecca A. Albrecht et al., *Judicial Techniques for Cases Involving Self-Represented Litigants*, JUDGES’ J., Winter 2003, at 16, 18 (citing a proposed protocol to be used by

and well-done, standardized “self-help” legal resources seem capable of filling most of the experience and knowledge gaps for those litigants motivated to take advantage of their legal rights.⁴⁸

Unfortunately, for minor disputes, there are more fundamental structural challenges that preclude many, if not most, litigants from benefiting from publicly provided counsel, legal aid, or self-help legal resources: the everyday *nonlegal* costs of using state courthouses (e.g., transportation and time costs).⁴⁹ When the stakes of a dispute are low, and despite the fact that millions of minor injustices can produce large systemic harms,⁵⁰ individuals often do not find it worth their while to go to court in person.⁵¹ To provide a simple example, if an individual believes he was issued a traffic ticket or other citation in error, and he wishes to challenge it or would like to discuss the allegation with a prosecutor or city attorney and hopefully negotiate a lesser charge, he has to weigh the costs and benefits of going to court. On the one hand, there are significant costs: the individual might need to take off work, secure child care, or arrange and pay for transportation to and from the courthouse. On the other hand, presenting oneself at court affords the litigant the potential upside of influencing the outcome of the case (especially if the alternative is defaulting)—typically, increasing the likelihood of success. Multiplying the change in the chance of success by the difference between winning and losing gives an estimate of the

judges in Minnesota in cases involving pro se litigants that includes explaining the process of the proceeding, the elements of the case, which party has the burden, and the evidentiary rules).

48. See Nina Ingwer VanWormer, Comment, *Help at Your Fingertips: A Twenty-First Century Response to the Pro Se Phenomenon*, 60 VAND. L. REV. 983, 1018 (2007) (“Pro se clinics, unbundled legal services, and Internet-based resources have positively impacted the ability of pro se litigants to successfully pursue their claims.” However, these programs’ “insular focus on *either* procedural or substantive assistance” leaves room for improvement.). But see Bruce D. Sales et al., *Is Self-Representation a Reasonable Alternative to Attorney Representation in Divorce Cases?*, 37 ST. LOUIS U. L.J. 553, 601 (1993):

When people who self-represent had problems with legal forms or the legal process, 50% of them did not obtain help for their problems, 19% only obtained help for some of their problems, and only 31% obtained help with all of the areas in which they had problems. Clearly this portends problems for the quality of self-representation and for justice in these cases.

49. See Bulinski & Prescott, *supra* note 6, at 208 (observing that “[b]ringing two people together, in person, at the same time, with both parties suitably informed about the dispute is costly and difficult”).

50. See, e.g., CIVIL RIGHTS DIV., U.S. DEP’T OF JUSTICE, INVESTIGATION OF THE FERGUSON POLICE DEPARTMENT 68 (Mar. 4, 2015), https://www.justice.gov/sites/default/files/opa/press-releases/attachments/2015/03/04/ferguson_police_department_report.pdf [https://perma.cc/964X-TG5Z] [hereinafter FERGUSON REPORT] (finding that “once a charge is filed in Ferguson municipal court, a number of procedural barriers imposed by the court combine to make it unnecessarily difficult to resolve the charge,” and that these procedural barriers “exert a disparate impact on African Americans”).

51. See generally Bulinski & Prescott, *supra* note 6, at 217–35 (discussing economic and noneconomic barriers preventing people from litigating minor issues such as traffic tickets).

benefits of accessing the courts. Millions of litigants each year weigh these costs and benefits and conclude that the costs of accessing the court system to dispute or negotiate a claim of a few hundred dollars are too high to justify, even when ignoring the matter causes fines and fees to accrete to thousands of dollars years later.⁵²

There is an extensive list of nonlegal costs to using a brick-and-mortar courthouse.⁵³ They can be grouped roughly as economic costs, physical costs, and psychological costs. Economic costs stem from the fact that courts are open during typical “business” hours.⁵⁴ Employed litigants who must go to court during business hours to meet with a prosecutor or have a hearing before a judge, invariably for at least half a day after taking into account travel, often face important economic opportunity costs.⁵⁵ For individuals paid hourly, missing a half day of work can amount to a large percentage of or even exceed the stakes of the litigation: suffering, say, fifty or even a hundred dollars in forgone earnings to challenge a \$150 ticket will rarely make economic sense. A litigant might also miss a court hearing due to workplace pressures to avoid absences of any sort.⁵⁶ Moreover, a pro se litigant may struggle to find child care,⁵⁷ and the cost of transportation may prove to be yet

52. *Id.* at 235 (“[M]illions of poor, minority citizens live without the protection of the law because they cannot pay an outstanding fine and because they cannot easily access the courts to identify a workable solution . . .”).

53. *See id.* at 209, 209 n.23 (contending that physical courts impose large and nonobvious costs on the public and offering that “societal costs that stem from the public and police officers waiting in lines for hours in courthouses . . . are analogous in many respects to the societal costs of traffic jams”).

54. James W. Meeker & John Dombrink, *Access to the Civil Courts for Those of Low and Moderate Means*, 66 S. CALIF. L. REV. 2217, 2228 (1993) (“A major barrier to utilizing the courts for . . . those with low and moderate incomes involves the courts’ hours of operation. [Such a] person . . . must take time off of work, usually uncompensated, in order to use the courts during business hours.”).

55. *See, e.g.*, Susan J. Lambert, *Making a Difference for Hourly Employees*, in *WORK-LIFE POLICIES* 169, 169–70 (Ann C. Crouter & Alan Booth eds., 2009) (“[M]any employers condition eligibility for employee benefits, such as health insurance and paid time off, on seniority, job status, and the number of hours worked—all qualities on which hourly workers come up short.”).

56. *See, e.g.*, Rachel Abrams, *Walmart Is Accused of Punishing Workers for Sick Days*, N.Y. TIMES (June 1, 2017), <https://www.nytimes.com/2017/06/01/business/walmart-workers-sick-days.html> [<https://perma.cc/YH4N-G22N>]; Franz Strasser, *America’s National Vacation Problem*, BBC NEWS (Sept. 7, 2015), <http://www.bbc.com/news/world-us-canada-34123906> [<https://perma.cc/SE3E-LZC6>]; Eve Tahmincioglu, *More Workers Facing a Sick Leave Conundrum*, NBC NEWS, <http://www.nbcnews.com/id/39346051/ns/business-careers/t/more-workers-facing-sick-leave-conundrum> (last updated Sept. 27, 2010, 3:38 PM) [<https://perma.cc/5ER8-D665>]; Martha C. White, *It’s the Millennials’ Fault You Can’t Take a Vacation*, TIME (Aug. 17, 2016), <http://www.time.com/money/4455911/millennial-workers-vacation-shame> [<https://perma.cc/MMD8-C39P>]; Martin Williams, *Workers Are Being Put Under Pressure Not to Take Sick Leave, MPs Warn*, GUARDIAN (May 13, 2013), <https://www.theguardian.com/careers/work-blog/workers-under-pressure-not-to-take-sick-leave> [<https://perma.cc/X3W9-MDEV>].

57. HANNAH LIEBERMAN, *OVERCOMING BARRIERS THAT PREVENT LOW-INCOME PERSONS FROM RESOLVING CIVIL LEGAL PROBLEMS: A STUDY PREPARED FOR THE LEGAL ASSISTANCE TO THE*

another financial burden to accessing courts.⁵⁸ The barriers emanating from economic need that affect pro se litigants are usually exacerbated by other structural hurdles associated with poverty status, including poor literacy, few educational opportunities, little political influence, stigmatization, and discrimination.⁵⁹

Related to economic costs, many physical obstacles—sometimes referred to as costs of the “built environment”⁶⁰—systematically limit courthouse access. For example, an individual’s lack of proximity to a courthouse, combined with little or no access to dependable public or private transportation, amounts to a major impediment to attending a court proceeding or successfully meeting with a decisionmaker.⁶¹ In a study of legal services in Minnesota, 95% of legal services providers identified “transportation” as an area in which their clients had unmet needs.⁶² These transportation difficulties derive “both from structure problems (lack of public transport) and from an individual’s personal

DISADVANTAGED COMMITTEE OF THE MINNESOTA STATE BAR ASSOCIATION 65 (2011), <https://www.lsc.gov/sites/default/files/attach/resources/LegalNeedsStudy-MinnesotaBarAssociation.pdf> [<https://perma.cc/MF3P-MP26>] (“As respondents in the Study and focus group participants confirmed, affordable child care is a significant barrier for many of the low-income respondents trying to get or keep jobs.”).

58. Bulinski & Prescott, *supra* note 6, at 222 (reporting that those “who do not own cars or whose licenses have been suspended may have difficulty getting to a courthouse, particularly in rural areas or areas lacking in public transportation options”; adding that “[c]ars also do not run on water”; and concluding that “when the law requires that a citizen appear in person to access justice, it effectively taxes citizens for using the courts.”)

59. JULINDA BEQIRAJ & LAWRENCE MCNAMARA, INT’L BAR ASS’N, INTERNATIONAL ACCESS TO JUSTICE: BARRIERS AND SOLUTIONS 14 (2014), https://www.biicl.org/documents/485_iba_report_060215.pdf?showdocument=1 [<https://perma.cc/6CS3-ABBS>] (“Moreover, poverty as a barrier to access to justice is exacerbated by other structural and social obstacles generally connected to poverty status, such as reduced access to literacy and information, limited political say, stigmatisation and discrimination.”).

60. Wendy C. Perdue, *Obesity, Poverty, and the Built Environment: Challenges and Opportunities*, 15 GEO. J. POVERTY L. & POL’Y 821, 822 (2008) (arguing that the main features making up the “physical environment are man-made, and encompass everything from land use patterns and urban planning, to the design, location, uses and interrelations among buildings, to transportation systems. All of these man-made physical features are known collectively as the ‘built environment.’”).

61. LIEBERMAN, *supra* note 57, at x (“Lack of transportation . . . is a barrier to employment, health care, day care, social services, the courts and legal aid. . . . Transportation barriers include . . . unaffordable public transit, the inability to get a drivers’ [sic] license and the expense of private transport, including car repairs, fees for licenses and the cost of insurance.”); *see also* BEQIRAJ & MCNAMARA, *supra* note 59, at 21 (“Where justice institutions are physically remote, the barriers to justice will be greater especially if transport is poor or unaffordable. As survey responses confirmed, these effects will be felt more acutely by people living in rural areas.”); LEGAL SERVS. CORP., *supra* note 43, at 6 (“Other barriers, such as geographical distance and isolation, low literacy, physical or mental disability, limited English proficiency, culture and ethnic background, and apprehension about the courts and the legal system, also pose impediments.”).

62. LIEBERMAN, *supra* note 57, at 13, 22–24 (finding that transportation needs affected low-income rural and urban residents, who are often isolated from public transportation services).

circumstances (lack or loss of a driver's license)."⁶³ Moreover, people with physical or mental disabilities or who belong to more vulnerable groups—like the elderly⁶⁴—often experience additional deprivations and constraints that can make physically going to a courthouse from home and back again even more onerous.⁶⁵

Psychological barriers also limit access to a state's courthouses. Presenting oneself in person at court can invoke debilitating emotions such as anxiety, fear about the outcome (potentially including arrest), stigma, confusion, and shame.⁶⁶ These common emotional responses may begin early—when an individual is notified of a charge—and last beyond any hearing or final disposition.⁶⁷ Even if feelings of anxiety or

63. *Id.* at 68–70 (recounting the many ways that transportation barriers affect low-income Minnesota residents).

64. *Cf. id.* at 32:

It is possible that, in identifying seniors as an underserved population, low-income respondents were reflecting their concern that seniors may tend to become isolated as their mobility decreases and they lose close familial ties and community connections. . . . [L]ow-income persons interviewed tended to emphasize the risk of isolation facing the aging poor, noting that seniors may be “alone” or “left out.”

65. LEGAL SERVS. CORP., *supra* note 43, at 6 (“Other barriers, such as geographical distance and isolation, low literacy, physical or mental disability, limited English proficiency, culture and ethnic background, and apprehension about the courts and the legal system, also pose impediments.”); *see also* LIEBERMAN, *supra* note 57, at viii (finding that “[p]ersons who reported suffering from a mental disability reported having experienced a significantly higher rate of problems, particularly those related to housing, transportation, access to social services, education, family, domestic violence, health care and discrimination”).

66. Debt-collection lawsuits provide one example, currently being studied, where the feelings of pro se litigants may frequently infect their ability to self-represent and cause them to be more likely to default on payments due. *See* D. James Greiner et al., *Engaging Financially Distressed Consumers*, COMMUNITIES & BANKING, Summer 2015, at 24, <https://www.bostonfed.org/publications/communities-and-banking/2015/summer/engaging-financially-distressed-consumers.aspx> [<https://perma.cc/J32B-UFEP>]:

Our first hypothesis is that notification of a debt-collection suit produces feelings of shame, guilt, and anxiety, along with uncertainty about sources of help. Even if the individual overcomes any emotional challenges and takes action such as accessing helpful information, feelings of threat and impending disaster may trigger performance-minimizing and solution-inhibiting mental states. Such debilitating emotions might explain why such a high percentage of consumer debt-collection defendants do nothing in response to lawsuits and simply default.

(citing Rebecca L. Sandefur, *The Importance of Doing Nothing: Everyday Problems and Responses of Inaction*, in *TRANSFORMING LIVES: LAW AND SOCIAL PROCESS* (Pascoe Pleasence et al. eds., 2007)).

67. Bulinski & Prescott, *supra* note 6, at 219 (“Walking into a courthouse to resolve an outstanding legal issue can also be emotionally daunting.”); Roger C. Cramton, *The Future of the Legal Profession: Delivery of Legal Services to Ordinary Americans*, 44 CASE W. RES. 531, 596 (1994) (“Numerous studies indicate that many . . . forego the use of legal services because of cost, inconvenience, or fear of becoming involved in the legal machinery.”); Sela, *supra* note 23, at 339 (“[Self-represented litigants] often report they are confused, overwhelmed, scared, frustrated, and bitter with the judicial process.”); Steinberg, *supra* note 37, at 755 (“[U]nrepresented litigants feel nervous, bewildered, and emotionally overwhelmed in charting their course through the court system.”).

fear are deemed irrational by the experienced lawyer, pro se litigants facing a failure-to-pay warrant for unpaid fines might understandably fear incarceration or having their children taken away from them and, consequently, avoid communicating with the courts.⁶⁸ Furthermore, although having one's day in court is often praised,⁶⁹ many people find speaking in public to an official like a judge to be disagreeable if not terrifying,⁷⁰ and it is not uncommon for someone to come away from the experience having failed to make the points they intended to make or unclear about what just transpired.⁷¹

These nonlegal costs, while somewhat obvious upon reflection, are often overlooked because commentators tend to emphasize less common but individually more meaningful "complex cases" in which the individual stakes are relatively high and so the costs of "going to court" are rarely dispositive of whether an individual has adequate access to justice.⁷² Consequently, a familiar access-to-justice refrain is that reform should target encouraging public and private institutions to make available more (quantity) or better (quality) representation.⁷³

68. Bulinski & Prescott, *supra* note 6, at 219 ("[Pro se] litigants may (rationally or irrationally) fear being arrested, especially if they are uncertain of the legal nature of the claim against them."); see also Alexandra Natapoff, *Misdemeanors*, 11 ANN. REV. L. & SOC. SCI. 255, 262 (2015) ("[A]n outstanding failure-to-pay warrant can deter a person from interacting with numerous civic institutions [M]isdemeanor punishment derails the lives of millions of Americans every year in deep and lasting ways that have yet to be fully appreciated in the public discourse on punishment.").

69. See, e.g., Taylor v. Sturgell, 553 U.S. 880, 892–93 (2008) (arguing that it is a "deep-rooted historic tradition that everyone should have his own day in court" (internal quotation marks omitted) (quoting Richards v. Jefferson Cty., 517 U.S. 793, 798 (1996))).

70. See, e.g., Bulinski & Prescott, *supra* note 6, at 229 ("[C]ourtrooms are intimidating places—even attorneys with years of experience find themselves anxious when presenting to judges. For an individual unfamiliar with the process, it is likely to be much worse.").

71. See, e.g., *id.* ("In one compelling anecdote, a *pro se* tenant came to her eviction hearing armed with damning photographic evidence and knowledge of favorable law, but she mentioned neither the evidence nor the law to opposing counsel or the court." (citing Erica L. Fox, *Alone in the Hallway: Challenges to Effective Self-Representation in Negotiation*, 1 HARV. NEGOT. L. REV. 85, 85 (1996))).

72. Cf., e.g., Natapoff, *supra* note 68, at 256 ("The petty offense process is underregulated and largely invisible; criminal law scholarship has long privileged serious offenses and federal practice to the exclusion of petty crimes.").

73. See, e.g., Lippman, *supra* note 3, at 1569:

New York's judiciary has taken a leadership role in the access-to-justice reform—securing substantial funding in the judiciary budget for civil legal services; encouraging pro bono work by the bar; asking aspiring lawyers to provide legal assistance to those most in need; harnessing the legal talents of baby boomers and corporate counsel; and exploring novel methods of delivering legal services

Emily A. Spieler, *The Paradox of Access to Civil Justice: The "Glut" of New Lawyers and the Persistence of Unmet Need*, 44 U. TOL. L. REV. 365, 366 (2013):

To the extent we talk about access to justice at all, deans' conversations tend to focus on the need to expand the availability of pro bono legal services by instilling in our students a commitment to some form of public service. Sometimes . . . we think more

This type of thinking assumes that litigants and courts lack *only* what lawyers have to offer; in other words, if there were enough lawyers to go around, access-to-justice problems would cease to exist. The legal services sector can always make use of additional pro bono lawyers; the legal needs to be satisfied and the social benefits to be garnered by satisfying them are likely to be significant.⁷⁴ But narrowing the scope of reform efforts to those that focus exclusively on enhancing lawyer involvement risks blindness to nonlegal factors and may lead society to overlook technological solutions that can effectively reduce barriers to access in minor but systematically important cases.⁷⁵

Technology has the potential to play a positive role in the years ahead in reducing the economic, physical, and psychological costs of accessing courthouses and therefore justice.⁷⁶ The ability of litigants to communicate and resolve disputes remotely can cut the transportation costs and level the playing field for individuals with disabilities who would otherwise struggle to attend a hearing. Access that transcends normal business hours can reduce the opportunity costs of attending court during the week. The freedom to converse with decisionmakers from the comfort of one's home in a low-pressure, safe environment may lessen the anxiety and emotional burden of making one's case to a judge.⁷⁷ Together, these possibilities suggest that a low-cost or free

broadly to include concerns regarding the inadequacy of funding for legal services programs.

74. John M.A. DiPippa, *Peter Singer, Drowning Children, and Pro Bono*, 119 W. VA. L. REV. 113, 116 (2016) ("The persistent level of unmet legal needs . . . means that pro bono must be seen as a fundamental strategy to close the justice gap.").

75. It may be worth emphasizing that technological solutions to modern legal problems are unlikely ever to eliminate *all* access-to-justice barriers. See Staudt, *supra* note 45, at 1122:

Usually the predictions are not completely wrong but are almost always overblown or mistimed. Overheated expectations and early unbridled enthusiasm for breaking technologies have contributed to disappointment when projects in law and information technology produced only modest improvement or even resulted in failure. Only on rare occasions do predictions significantly undershoot the changes and rapid penetration of new technologies.

76. The LSC's launching of its "Technology Initiative Grants" to fund proposals for innovative uses of technology to deliver legal services serves as an example of an alternative approach to closing the wide divide between the legal system and unrepresented litigants. Unfortunately, funding for such grants decreased throughout the first decade of the twenty-first century. See *id.* at 1124–25.

77. See Philippe Gilliéron, *From Face-to-Face to Screen-to-Screen: Real Hope or True Fallacy?*, 23 OHIO ST. J. ON DISP. RESOL. 301, 337–38 (2008) (observing that these kinds of advantages arise out of the use of comparable technology:

The relative anonymity of [computer-mediated and online communications] allows a democratization and equalization of the whole process. . . . "Eliminating surveillance and social feedback, like laughter or a frown, reduces any embarrassment over being considered foolish and eliminates a feeling of obligation to respond in a certain way. Hence even busy, shy, or obnoxious people can communicate comfortably."

online interface through which an unrepresented litigant could rapidly obtain information or guidance, attend a hearing, or asynchronously communicate, negotiate, and resolve an outstanding legal matter with a judge, prosecutor, city attorney, or private third party could reduce many of the barriers to justice associated with the built environment and the economics and psychology of using the court system.

In fact, technology-enhanced access is already on the minds of some state court reformers who see the part that court-access barriers play in denying people justice, even in more complex cases.⁷⁸ Recently, the public and private sectors have introduced a variety of technology-based solutions in different jurisdictions that aim to provide rural and low-income individuals better access to justice.⁷⁹ The most significant advances to date—only some of which directly target reducing access-to-court barriers—fall into a few buckets: remote and online legal aid, online form completion and video technology, triage services, mobile access, and online case resolution systems. While the theory behind deploying tools of this sort is sound, the challenge regularly lies in the details of implementation and in ensuring that access does not come at the cost of court efficiency or increased court expenditures.⁸⁰

Perhaps the most obvious way to leverage online technology to expand access to justice in the traditional sense is the provision of legal guidance or other services over the internet.⁸¹ While these efforts do not

(quoting Sara Kiesler, *The Hidden Messages in Computer Networks*, HARV. BUS. REV., Jan. 1986, at 46, 58)). There is no doubt that there are advantages to in-person process—even in small cases—including the fact that people may be less confrontational when interacting in person and may be more amenable to resolution in the face of the “majesty” of the courthouse, courtroom, and judge. See Richard Michael Victorio, *Internet Dispute Resolution (iDR): Bringing ADR into the 21st Century*, 1 PEPP. DISP. RESOL. L.J. 279, 292–94 (2001) (describing the benefits of human interaction in mediation). But the share of cases in which these benefits will be significant is likely to be small, and there are significant disadvantages to requiring in-person process in just about every case. See Bulinski & Prescott, *supra* note 6, at 229–31; Joseph W. Goodman, *The Pros and Cons of Online Dispute Resolution: An Assessment of Cyber-Mediation Websites*, 2003 DUKE L. & TECH. REV. 4, 7–9, <http://scholarship.law.duke.edu/cgi/viewcontent.cgi?article=1073&context=dltr> [<https://perma.cc/K6JH-X2P2>] (discussing advantages of cyber-mediation).

78. See, e.g., KOURLIS & SAMNANI, *supra* note 24.

79. See Michael J. Wolf, *Collaborative Technology Improves Access to Justice*, N.Y.U. J. LEGIS. & PUB. POL’Y 759, 771–75 (2012) (describing new online technologies that improve court accessibility for low- and moderate-income litigants).

80. See KOURLIS & SAMNANI, *supra* note 24, at 10.

81. See, e.g., Margaret Hagan, *The User Experience of the Internet as a Legal Help Service: Defining Standards for the Next Generation of User-Friendly Online Legal Services*, 20 VA. J.L. & TECH. 394, 459 (2016) (“[T]he Internet has great promise to be a vehicle for access to justice for middle class populations. . . . [But,] this promise is not realized.”); VanWormer, *supra* note 48, at 1013–15 (calling for a “centralized system of pro se assistance” that exploits “the broad reach and easy accessibility and navigability of the Internet”); *ABA Launches Free Legal Q&A Service to Broaden Access to Justice Opportunities*, A.B.A. (Sept. 22, 2016), https://www.americanbar.org/news/abanews/aba-news-archives/2016/09/aba_launches_freele.html [<https://perma.cc/97GP-RWVR>] [hereinafter A.B.A.].

address *court* access directly, they do validate the viability of similar platform approaches to improve the accessibility and efficiency of courts. One example of this type of platform—Illinois Legal Aid Online—allows clients to submit legal queries confidentially through an online portal and have a pro bono lawyer on the other side of the portal offer an answer.⁸² The technology was originally developed in Tennessee in 2011,⁸³ and the American Bar Association adopted and distributed it to seven other states, viewing it as a successful model for online legal services delivery.⁸⁴ Beyond the fact that licensed attorneys answer litigants’ real-life legal questions, these online advice services seem especially likely to help rural clients connect with urban legal offices without traveling—saving both time and money.⁸⁵

As the technology gap—or the “digital divide”—has decreased among the U.S. adult population,⁸⁶ legal aid services have evolved and expanded, extending even to more rudimentary court-based platform solutions.⁸⁷ For instance, LawHelp and others have developed “self-help” portals through which individuals can complete a range of tasks, such as messaging their court, receiving information about files they need to download or otherwise acquire, studying a court’s procedural expectations (i.e., obligatory documents and deadlines), applying for legal and pro bono assistance, and obtaining assistance in navigating a court’s website.⁸⁸ In an attempt to cater to low-income individuals in particular communities, LawHelp provides assistance both in English and Spanish.⁸⁹ Some see the potential for creating an application that

82. Mark C. Palmer, *Technology Drives Access to Justice to the People and the Lawyers*, 2CIVILITY (Oct. 18, 2016), <https://www.2civility.org/technology-drives-access-to-justice-to-the-people-and-the-lawyers/> [<https://perma.cc/Q5X9-T5A4>].

83. A.B.A., *supra* note 81, at paras. 2, 5; Palmer, *supra* note 82, at para. 6.

84. Palmer, *supra* note 82, at para. 6.

85. Cabral et al., *supra* note 28, at 269–79.

86. COUNCIL OF ECON. ADVISERS, EXEC. OFFICE OF THE PRESIDENT, MAPPING THE DIGITAL DIVIDE 3, 6 (2015), https://obamawhitehouse.archives.gov/sites/default/files/wh_digital_divide_issue_brief.pdf [<https://perma.cc/ZZJ6-2GYM>] (announcing that “the digital divide has narrowed considerably since 2001” across race and income groups and that, “[a]ffordability aside, almost all Americans have the option of purchasing an Internet connection with an advertised download speed of 10 [Mbps]—fast enough to stream a high definition movie”); Cabral et al., *supra* note 28, at 246 (noting that 62% of low-income individual adults have access to the internet, versus 78% of all adults); see ANNA BROWN ET AL., DIGITAL DIVIDE NARROWS FOR LATINOS AS MORE SPANISH SPEAKERS AND IMMIGRANTS GO ONLINE, PEW RESEARCH CTR. 8 (2016), http://assets.pewresearch.org/wp-content/uploads/sites/7/2016/07/PH_2016.07.21_Broadband_Final.pdf [<https://perma.cc/V9J8-VA8L>] (finding that, between 2012 and 2015, the digital divide narrowed between whites and Hispanics and blacks); see also Wolf, *supra* note 79, at 768 (reporting that most pro se litigants “have at least a high school education and Internet access”).

87. Cabral et al., *supra* note 28, at 270.

88. *Id.* at 249–51.

89. *Id.*

recognizes when a litigant's opponent or another party has missed a filing deadline,⁹⁰ which would make it easier for litigants to be better informed about their litigation even when at a remote location. In New Jersey, courts found that a pro se initiative giving pop-up instructions designed to help litigants complete required forms resulted in fewer cases being dismissed against pro se plaintiffs.⁹¹

Online form completion services are also proliferating.⁹² These programs consist of an online database of forms with an interface that prompts potential litigants with plain English questions regarding their legal issue.⁹³ The software then transposes the litigant's answers to the appropriate place on the appropriate form, and at the end of the session, the litigant has a completed form that can be printed, signed, and submitted to the court or to another party, either in person or by traditional mail.⁹⁴ These programs are also capable of analyzing the answers litigants provide and can generate different prompt patterns based on a litigant's specific responses.⁹⁵ The number of states offering these services in some form increased between 2008 and 2016 from eleven to a total of thirty-nine.⁹⁶ Unfortunately, these solutions are not well integrated into court work flows, and while they reduce the "paper work" of accessing justice, they do less to lower the economic, physical, and psychological costs of accessing a courthouse.

Other categories of innovation, like triaging, possess a similar profile.⁹⁷ Triage relies on technology and data analytics to sort cases

90. *Id.* at 293–94 (citing as an example banks missing deadlines in foreclosure proceedings).

91. *Id.* at 280–81.

92. Jennifer Smith, *Rivalry Grows Among No-Frill Legal Services*, WALL ST. J. (Dec. 3, 2012, 10:37 AM), <https://www.wsj.com/articles/SB10001424127887323717004578155413493106962> [<https://perma.cc/H8KL-J63A>].

93. See Gerard J. Clark, *Internet Wars: The Bar Against the Websites*, 13 J. HIGH TECH. L. 247, 250–51 (2013) (describing LegalZoom's services and business model).

94. See Tina Rosenberg, *A Year of Big Ideas in Social Change*, N.Y. TIMES (Dec. 6, 2016), https://www.nytimes.com/2016/12/06/opinion/a-year-of-big-ideas-in-social-change.html?_r=0 [<https://perma.cc/9A37-9BZK>].

95. Tina Rosenberg, *Legal Aid with a Digital Twist*, N.Y. TIMES (June 1, 2016), <https://www.nytimes.com/2016/06/01/opinion/legal-aid-with-a-digital-twist.html> [<https://perma.cc/258E-WMGW>] (describing a Michigan questionnaire's ability to recognize when a person answers "yes" to having a misdemeanor charge and to ask follow-up questions).

96. *Id.* (describing how LawHelp Interactive partners with each state and ensures that the bank of forms meets the state's specific filing requirements).

97. See, e.g., Matthew J.B. Lawrence, *Procedural Triage*, 84 FORDHAM L. REV. 79, 83 (2015) (discussing "procedural triage"—a process of "rationing . . . among claimants based on the inherent value of participation to particular claimants"); Kari D. Boyle, *Triage—A Vital Tool to Increase Access to Justice*, SLAW (July 11, 2013), <http://www.slaw.ca/2013/07/11/triage-a-vital-tool-to-increase-access-to-justice/> [<https://perma.cc/J98A-3W8D>] (offering a broad definition of triage as a method designed "to diagnose/understand a person's situation/problem(s) and to provide early education, information, guidance, services and referral that best meet that person's situation and needs (sorting) within the resources available (allocation)").

by importance and also makes connections between cases to increase efficiency.⁹⁸ For example, a parent may use an online legal application to obtain help in a custody dispute but not recognize that she has an outstanding housing issue that may affect the custody determination. By taking an extensive background touching on a wide range of issues that might be relevant, a triage system can prioritize resolving the housing issue before litigation of the custody dispute proceeds.⁹⁹ The Legal Services Corporation, partnered with Microsoft, aims to increase the percentage of low-income people whose problems are effectively triaged through an “Access to Justice Portal.”¹⁰⁰ The portal, once it is developed and deployed, will use triage methods to direct users to the most appropriate services in light of their circumstances, taking into account the nature of their legal matter, the capacity of the client, whether the opponent is represented, and the stakes of the dispute.¹⁰¹ The ultimate aim is to transform access to justice by improving access to vital legal services with the help of Pro Bono Net—a nonprofit that promotes innovative uses of technology to increase access to justice.¹⁰² Similar technology could also be used to make court visits much more efficient by re-sorting queues to minimize waiting time.

All of these technology-based solutions indicate that “mobile”—i.e., remote access—tools are playing and will continue to play an important and visible role in increasing access to justice for low-income and unrepresented individuals. A 2014 study showed that 47% of low-income individuals owned a smart phone at the time of the survey,¹⁰³ and the fraction of people that rely on a phone as their main source of internet access has been growing steadily.¹⁰⁴ It is significant, however, that most mobile tools to date—including the ones described above—

98. Cabral et al., *supra* note 28, at 293.

99. *Id.* at 293–94.

100. Palmer, *supra* note 82; *TIG 2017 Statewide Justice Portal Discussion*, LEGAL SERVS. CORP., <http://www.lsc.gov/media-center/galleries-multimedia/video/tig-2017-statewide-justice-portal-discussion> (last visited Oct. 1, 2017) [<https://perma.cc/AR8F-PJT3>]; Richard Zorza, *The LSC–Pro Bono Net–Microsoft Statewide ATJ Portal*, RICHARD ZORZA’S ACCESS TO JUST. BLOG (May 8, 2017), <https://accesstojustice.net/2017/05/08/the-lsc-pro-bono-net-microsoft-statewide-atj-portal/> [<https://perma.cc/8S8B-Z5MS>].

101. *Microsoft Statewide Legal Access Portal Project - LSC Releases RFP*, PROBONO.NET (Nov. 22, 2016), https://www.probono.net/ny/news/article.624083-Microsoft_Statewide_Legal_Access_Portal_Project_LSC_Releases_RFP [<https://perma.cc/YB4U-5DZF>]. The LSC’s goal is for the portal to be accessible from any device, and it will be open source so that others can replicate it nationwide. *Id.*

102. *Id.*

103. Marilyn Cavicchia, *What Role Can Technology Play in Access to Justice—and Should Bar Foundations Help?*, B. LEADER, Sept.–Oct. 2014, https://www.americanbar.org/groups/bar_services/publications/bar_leader/2014-15/september-october/what-role-can-technology-play-access-justice-should-bar-foundations-help.html [<https://perma.cc/7B2G-LBE6>].

104. Cabral et al., *supra* note 28, at 268–69.

focus on providing legal “content,” or on messaging, reminders, payment options, or scheduling,¹⁰⁵ rather than on allowing litigants to truly “go to court” in the sense of empowering people to fully resolve their disputes over their phones on their own schedule.

A handful of large cities have experimented with multifaceted campaigns to reduce the access-to-justice gap, with technology-based prongs deployed alongside more traditional approaches to increasing court access, like extending hours. For instance, in 2015, Mayor Bill de Blasio in New York announced an initiative called “Justice Reboot” that was meant to help the New York courts erase their large backlog of cases.¹⁰⁶ This initiative included developing real-time tracking tools to allow various criminal justice agencies to monitor cases, integrating agency scheduling systems to keep all parties to a hearing on the same page, supplying online access to case files and a reminder system with robocalls and text messaging, permitting flexible court appearances including one or more days of night court, and implementing an online payment system for fines.¹⁰⁷ Many of these reforms have targeted more complex cases than those this Article considers, and with respect to at least some categories of these cases, the Justice Reboot program has been criticized as failing to speed up case resolution.¹⁰⁸ Naturally, a shift toward technology as an access point to justice and the courts will not be in and of itself sufficient.¹⁰⁹ The technology must be well designed and implemented properly.¹¹⁰

Finally, video conferencing using the internet is one quick-to-mind way to reduce the difficulty for many pro se individuals of taking time off work (at least for travel), paying for child care, and arranging for transportation to a courthouse.¹¹¹ One example is Montana’s use of

105. See REPORT OF THE SUMMIT ON THE USE OF TECHNOLOGY TO EXPAND ACCESS TO JUSTICE, LEGAL SERVS. CORP. 7–8 (2013), http://www.lsc.gov/sites/default/files/LSC_Tech%20Summit%20Report_2013.pdf [<https://perma.cc/UBF4-FQGU>].

106. *Mayor de Blasio and Chief Judge Lippman Announce Justice Reboot, an Initiative to Modernize the Criminal Justice System*, NYC.GOV (Apr. 14, 2015), <http://www1.nyc.gov/office-of-the-mayor/news/235-15/mayor-de-blasio-chief-judge-lippman-justice-reboot-initiative-modernize-the> [<https://perma.cc/9PP3-7KLQ>].

107. *Id.*

108. See Erin Durkin, *Rikers Island Inmates Still Waiting Too Long for Their Trials*, N.Y. DAILY NEWS (Oct. 25, 2016, 6:48 PM), <http://www.nydailynews.com/new-york/rikers-island-inmates-waiting-long-trials-article-1.2844859> [<https://perma.cc/4UP6-75QG>].

109. *Id.* (reporting Councilman Rory Lancman’s statement that it is “not a sign of progress if new defendants have simply taken [the old defendants’] place languishing on Rikers [Island]”).

110. See, e.g., Cabral et al., *supra* note 28, at 261–62 (emphasizing the importance of proper design and implementation by offering prescriptions for technology systems, e.g., “[i]n designing a system, one must consider the locations at which the application will be used,” and “courts . . . must maintain traditional services even as they expand into new technological frontiers”).

111. See, e.g., VIDEOCONFERENCING SUBCOMM., WIS. SUPREME CT. PLANNING & POLICY ADVISORY COMM., BRIDGING THE DISTANCE: IMPLEMENTING VIDEOCONFERENCING IN WISCONSIN

audiovisual conferencing software to connect attorneys and courts.¹¹² The system appears to particularly benefit individuals in rural areas, because it allows them to participate in court proceedings without the weighty burden of having to travel—sometimes long distances—to the courthouse.¹¹³ One can imagine a mobile phone-based technology that connects individuals directly with a prosecutor or a judge when it becomes their “virtual” turn in line.¹¹⁴ One limitation of this approach is that it still relies on synchronicity—i.e., having all parties involved using the technology at the same time—which invariably increases the difficulty of maintaining efficient communication and resolution and ordinarily requires business hours access only.¹¹⁵

Many of these innovations provide access to legal counsel and information, and some even deliver case-level data and appropriate documents to litigants. However, most—even video conferencing—do relatively little to provide robust access to justice by helping litigants interact (i.e., negotiate, argue, advocate, and submit evidence) on their own terms and at low cost with decisionmakers. For minor cases, this is essential, as “going to court” to engage in these specific activities is a necessary ingredient to a fair and accurate outcome.¹¹⁶

In this light, the evolution of online dispute resolution (“ODR”) between private parties in the commercial setting may supply another

(2017). <https://www.wicourts.gov/courts/committees/docs/ppacvidconf.pdf> [<https://perma.cc/ZA4K-QX5C>]:

Videoconferencing has the potential to more effectively use resources by: [r]educing travel requirements for all courtroom participants . . . [s]aving prisoner and patient transportation costs[, i]mproving courthouse security[, r]educing the cost of health care to prisoners and patients through telemedicine[, r]educing logistical barriers to conducting meetings[, p]roviding access to additional training/educational opportunities[, and i]ncreasing efficiency of legal proceedings

112. Pruitt & Showman, *supra* note 1, at 505–06.

113. Cabral et al., *supra* note 28, at 262; Wolf, *supra* note 79, at 785.

114. See, e.g., Beth Bacheldor, *Mobile Video Conferencing Expedites Search Warrants*, STATETECH (July 9, 2012), <https://statetechmagazine.com/article/2012/07/mobile-video-conferencing-expedites-search-warrants> [<https://perma.cc/9JWT-CYFZ>] (reporting that detectives in San Antonio, Texas, already use mobile video conferencing to communicate with judges in order to obtain search warrants and that the city has extended mobile video conferencing to residents through three interactive kiosks placed throughout San Antonio, which people can use to communicate directly with a judge to “resolve Municipal Court offenses and pay fines,” and suggesting that the San Antonio Municipal Court will continue to head in this general direction).

115. See Bulinski & Prescott, *supra* note 6, at 223–24; cf. ROBERT GUMBINER & ALIS GUMBINER, CURING OUR SICK HEALTH CARE SYSTEM: A SOLUTION TO AMERICA’S HEALTHCARE CRISIS 41 (2006) (describing the difficulty in accessing health care programs given that medical services are not readily available on evenings and weekends and many hourly workers cannot afford to take time off work to visit during business hours).

116. See ALLAN EDWARD BARSKY, CONFLICT RESOLUTION FOR THE HELPING PROFESSIONS 140 (2d ed. 2014) (noting that people want to be heard by the mediator and the other party and that “[w]hen people say, ‘I want my day in court,’ they typically mean that they want an objective third person to hear their story”).

piece of the access puzzle. ODR as a class of solutions usually relies on algorithmic tools rather than a third-party human decisionmaker for achieving resolutions.¹¹⁷ One of the beauties of private parties using ODR software in a prelitigation dispute is that the technology itself facilitates a consensual agreement built on exchanged information and party preferences,¹¹⁸ leaving the courts to deal only with enforcement of what amounts to a private contract.¹¹⁹ ODR backers have proposed moving ODR technology into state courts as a way to triage cases for pro se litigants, and by using such systems to resolve cases efficiently while simultaneously unburdening often overwhelmed state courts by shrinking their dockets.¹²⁰ ODR-like systems may also render certain proceedings more efficient, especially discovery and early dispositive motions, by making it easier for parties to review filings on their own schedule and to communicate remotely with each other and with the court. ODR as a concept certainly has the capacity to eliminate many face-to-face meetings, the mere planning of which can yield significant delays, frustration, and other costs in resolving disputes.¹²¹ ODR's bargaining and algorithmic technology is also now more than a decade old and has been well tested in literally millions of online merchant disputes,¹²² and so its transplantation into the court system seems like a realistic path forward.¹²³

117. Diane J. Levin, *Cybersettle Makes the Case for Resolving Disputes Online*, MEDIATION CHANNEL (Feb. 20, 2008), <https://mediationchannel.com/2008/02/20/cybersettle-makes-the-case-for-resolving-disputes-online/> [<https://perma.cc/QW7A-33DG>]. ODR platforms aim to help private parties settle disputes over the internet. For an example of such a platform, consider Cybersettle, Inc. In 2008, Cybersettle was

utiliz[ing] a patented automated, online, double-blind bid dispute resolution system which allow[ed] disputants to resolve claims quickly and confidentially. Optional telephone facilitation [was] also available when necessary to smooth out communication difficulties and keep settlement negotiations on track, or when parties [were] close and [could] benefit from the help of a skilled neutral.

Id. The archetypal ODR approach is to provide an online forum and tools to facilitate the full settlement of claims without any human intervention. At least some of these systems emerged out of the online consumer services settlement platforms that were developed to resolve buyer-seller disputes (such as the one instituted by eBay).

118. See Goodman, *supra* note 77.

119. Anjanette H. Raymond & Scott J. Shackelford, *Technology, Ethics, and Access to Justice: Should an Algorithm Be Deciding Your Case?*, 35 MICH. J. INT'L L. 485, 504 (2014).

120. Wolf, *supra* note 79, at 774.

121. Amy J. Schmitz, "Drive-Thru" Arbitration in the Digital Age: Empowering Consumers Through Binding ODR, 62 BAYLOR L. REV. 178, 202, 226–27 (2010).

122. See Ben Barton, *Modria and the Future of Dispute Resolution*, BLOOMBERG L.: BIG L. BUS. (Oct. 1, 2015), <https://bol.bna.com/modria-and-the-future-of-dispute-resolution/> [<https://perma.cc/LV2Y-783C>] (noting that eBay's ODR system handles up to sixty million disputes per year and settles approximately 90% of them with no human input on eBay's side).

123. See Schmitz, *supra* note 121, at 223, 228 (explaining that binding online arbitration can lead to low-cost, efficient dispute resolution so long as the arbitrators act to curtail excessive delays).

But the algorithmic methodology of traditional ODR platforms raises significant legitimacy concerns that seem likely to make them unacceptable to both courts and litigants alike,¹²⁴ at least for a large fraction of the disputes relevant to this Article, and most especially for those cases that involve the government as a party.¹²⁵ Citizens who are cited for civil infractions or charged with misdemeanors by the government, for instance, may be suspicious of collusion between the police, prosecutors, and the courts, especially when any algorithmic process lacks transparency or is difficult to observe or understand.¹²⁶ This also happens to be the class of cases where barriers to accessing courthouses themselves are critical to the bottom-line access-to-justice issue.¹²⁷ In other words, algorithmic ODR solutions would enhance dispute resolution efficiency the most in precisely those state court cases for which they would be considered most illegitimate.¹²⁸ Thus, to succeed, technology that enhances access to justice must ensure fair process and proper procedural protections through the right balance of automation and human involvement and oversight,¹²⁹ especially when the process will produce final judgments.¹³⁰

124. See, e.g., Condlin, *supra* note 10, at 745 (“The algorithms in question are . . . known only to their owners and creators. But a system of public dispute resolution must be based on substantive standards and procedural rules that are transparent and known equally to all. The conception of fair outcome underlying public dispute resolution cannot be private.” (footnote omitted)).

125. Raymond & Shackelford, *supra* note 119, at 516–18.

126. See Brian A. Pappas, *Online Court: Online Dispute Resolution and the Future of Small Claims*, UCLA J.L. & TECH., Fall 2008, at 1, 7 (noting that lack of personal connections between parties makes it difficult to build trust online); Raymond & Shackelford, *supra* note 119, at 516–17 (finding that increased use of technology and algorithms in ODR impacts the legitimacy of ODR decisions with respect to neutral decisionmaking “without favoritism” and trust in the system); Scott J. Shackelford & Anjanette H. Raymond, *Building the Virtual Courthouse: Ethical Considerations for Design, Implementation, and Regulation in the World of ODR*, 2014 WIS. L. REV. 615, 644 (making the argument that “[c]oncerns over a lack of transparency can also be exacerbated by power dynamics—especially when the other party has some affiliation to the ODR system itself”).

127. See Allen, *supra* note 19, at 16.

128. See Condlin, *supra* note 10, at 749 (“[P]articipants in . . . [algorithmic ODR] systems have no way of knowing or contesting the conceptions of correct outcome on which the algorithms are based, or the accuracy of the information on which the conceptions themselves are based, and there are reasons to be concerned about both.” (footnotes omitted)).

129. *Id.* at 745 (“[A] system of public dispute resolution must be based on substantive standards and procedural rules that are transparent and known equally to all.”); Pappas, *supra* note 126, at 16 (arguing that “technology in no way can be a substitute for trust . . . [and that] ODR will not flourish as a dispute resolution mechanism without legitimacy, something that the courts can and should provide”). See Youyang Hou et al., *Factors in Fairness and Emotion in Online Case Resolution Systems*, PROC. 2017 CHI CONF. ON HUM. FACTORS COMPUTING SYS. 2511, for a recent study of how litigants perceive the fairness of their interactions with court officials through platform technology.

130. Schmitz, *supra* note 121, at 206 (noting that the finality of online arbitration decisions has been critiqued).

Successful access-to-justice technology for minor cases in state courts must not only eliminate or mitigate the many costs of going to a courthouse; it must also free litigants to interact flexibly with all other parties and, ultimately, face a human decisionmaker with discretion comparable to that available in traditional in-person proceedings.¹³¹ Court-based platform technology that allows communication between parties and facilitates dispute resolution with the aid of a neutral and well-informed third-party decisionmaker is designed to satisfy exactly these requirements. In the next Part, I elaborate on these features by describing the specifics of a particular online platform—Matterhorn—that is currently operating in dozens of courts to resolve disputes, like traffic infractions and outstanding warrants.

II. PLATFORM TECHNOLOGY

Platform technology refers to technology that provides the base on which other processes can be built and applied.¹³² A courthouse is a platform, although we often use what amounts to an equivalent term in this context—a forum.¹³³ We can elect to resolve (or not resolve) all sorts of disputes in a courthouse and devise all sorts of processes to arrive at socially acceptable resolutions of those disputes.¹³⁴ If the goal is to end a dispute or facilitate an agreement, a courthouse serves as a platform by bringing all of the necessary parties to the same physical location so they may efficiently and effectively exchange arguments, evidence, and information and agree to a particular outcome or resort to what is hopefully an objective third-party determination.¹³⁵ Legal process aims to ensure that all of these activities are efficient in terms of time and resources and that they are likely to lead on average to an objectively

131. Bulinski & Prescott, *supra* note 6, at 229, 241 (arguing that “[a] citizen’s ability to effectively communicate his position is a critical component of an accessible justice system” and “[a]n effective OCR system . . . will serve to efficiently connect courts with litigants and their cases. . . . Judges would retain the full scope of their in-person, face-to-face judicial discretion and would receive all of the information they need to decide an issue accurately, but no more”). Some have begun to refer to such systems as a form of modified ODR—essentially, an ODR system that is operated by a court and that involves third-party decisionmakers, like magistrates or judges. See Pappas, *supra* note 126, at 16–17 (describing the “unique opportunity” for courts to strengthen ODR systems by providing procedural controls and enforceable judgments).

132. *Platform*, TECHOPEDIA, <https://www.techopedia.com/definition/3411/platform> (last visited Oct. 1, 2017) [<https://perma.cc/RG4L-2KVM>].

133. *Forum*, MERRIAM-WEBSTER’S DICTIONARY (11th ed. 2003).

134. See, e.g., *The Role of the Courts*, CAN. SUPERIOR CTS. JUDGES ASS’N, http://www.cscja-acjcs.ca/role_of_courts-en.asp?l=4 (last visited Oct. 1, 2017) [<https://perma.cc/D5WK-BNGW>].

135. See, e.g., Jamie Kilberg, *The Legal Process in the United States*, ANIMAL LEGAL DEF. FUND, <http://aldf.org/resources/when-your-companion-animal-has-been-harmed/the-legal-process-in-the-united-states/> (last visited Oct. 1, 2017) [<https://perma.cc/9Z3B-7JTN>].

accurate outcome or at least an outcome that society views as fair.¹³⁶ A platform and its associated procedures are optimized in part by taking into account the features of the other.¹³⁷ For instance, courtrooms are physically designed with adversarial or inquisitorial procedures in mind,¹³⁸ and governing procedures (e.g., the order in which evidence is presented) likewise take into account that parties will be together in the same place and at the same time.¹³⁹

In the court context, therefore, online platform technology is just technology that attempts to accomplish what courthouses seek to achieve but that happens to operate online.¹⁴⁰ It would be a mistake to describe platform technology in this context as creating an “online court,”¹⁴¹ a term that connotes a narrower idea. One can imagine an online court as technology that tries to import as many features of a traditional face-to-face proceeding as possible to an online setting.¹⁴² A mirroring approach, however, would not take full advantage of online technology. For instance, courthouses naturally direct everyone to be in the same physical room at the same time because communication between parties arriving at different times and with long lags would be extremely inefficient.¹⁴³ The same is not true in an online setting because it is less costly and usually faster for people to communicate and interact asynchronously: compare scheduling a telephone call or a

136. See *Mathews v. Eldridge*, 424 U.S. 319, 335 (1976):

[D]ue process generally requires consideration of three distinct factors: First, the private interest that will be affected by the official action; second, the risk of an erroneous deprivation of such interest through the procedures used, and the probable value, if any, of additional or substitute procedural safeguards; and finally, the Government's interest, including the function involved and the fiscal and administrative burdens that the additional or substitute procedural requirement would entail.

137. Cf. S.K., *What is the Nash Equilibrium and Why Does It Matter?*, *ECONOMIST* (Sept. 7, 2016), <https://www.economist.com/blogs/economist-explains/2016/09/economist-explains-economics> [<https://perma.cc/D2J8-HX5E>] (explaining that the Nash equilibrium exists when every individual “makes the best decision for [himself or] herself, based on what [he or] she thinks the others [in the group] will do”).

138. See Norman W. Spaulding, *The Enclosures of Justice: Courthouse Architecture, Due Process, and the Dead Metaphor of Trial*, 24 *YALE J.L. & HUMAN.* 311, 330 (2012) (noting that courtroom design and partitioning “ensures proximity, audibility, and clear sight lines to stage adversarial confrontation”).

139. See, e.g., *MICH. CT. R. 2.507*, <http://courts.mi.gov/Courts/MichiganSupremeCourt/rules/Documents/Michigan%20Court%20Rules.pdf> [<https://perma.cc/6WDG-X2BT>] (describing rules for conducting trial that presuppose both parties are present at the same time).

140. See Shackelford & Raymond, *supra* note 126, at 625–26 (“In many ways, these systems stand in an equal place with the more traditional brick-and-mortar courthouses . . .”).

141. See Lucille M. Ponte, *The Michigan Cyber Court: A Bold Experiment in the Development of the First Public Virtual Courthouse*, 4 *N.C. J.L. & TECH.* 51, 55–57 (2002) (describing early attempts at using technology to create online courts).

142. *Id.* at 69.

143. See Bulinski & Prescott, *supra* note 6, at 205–06.

meeting a month away (which might need to be rescheduled and could be suspended if a necessary party is absent or a key contingency does not occur) with communicating by email or text messaging, which may happen over a longer span of time, and which allows people to respond to requests on their own time and without other parties being forced to wait or to coordinate on yet another future date.

As a general matter, a court's use of online platform technology means that litigants, lawyers, law enforcement, prosecutors, judges, and other court personnel or relevant parties can communicate, share, and resolve cases in a virtual space rather than in a physical space.¹⁴⁴ Every other feature of a specific implemented technology is a design choice, one that is ultimately linked to the aspirations of the court and the parties.¹⁴⁵ In theory, communication between the relevant parties can occur in real time or asynchronously, by text, voice, or video. The platform can allow or forbid (or encourage or discourage) the exchange of electronic versions of documents, videos, recordings, data, or any other evidence deemed useful. There are no physical limitations on the types of matters handled or the order in which issues are addressed or how parties participate. Once all legal constraints are integrated, an online platform should be designed and deployed to achieve whatever society aims to accomplish with its dispute resolution resources, a list that presumably includes fairness, accuracy, and efficiency,¹⁴⁶ as well as making sure that parties and the public perceive the platform as performing well on these metrics.¹⁴⁷

144. See Sela, *supra* note 23, at 343 (observing that, in contrast to a video hearing, litigants and judges in a video-based judicial online dispute resolution “can participate in the hearing from virtually any location, using a device that connects to the internet”).

145. See VanWormer, *supra* note 48, at 1001 (“[A] court’s choices about what services to offer may also reflect one of several competing philosophies about how best to assist the pro se litigant.”).

146. See, e.g., Richard A. Posner, *An Economic Approach to Legal Procedure and Judicial Administration*, 2 J. LEGAL STUD. 399, 399–400 (1973) (“The purpose of legal procedure [can be] conceived to be the minimization of the sum of two types of costs: ‘error costs’ . . . and the ‘direct costs’ . . . of operating the legal dispute-resolution machinery.”); see also Patrick E. Longan, *Civil Trial Reform and the Appearance of Fairness*, 79 MARQ. L. REV. 295, 296 (1995) (“Judge Posner was correct . . . when he started with the premise that accuracy and efficiency are two methods of assessing a civil justice system. But the framework is incomplete. Procedures must not only be accurate and efficient: they must also be perceived by the litigants as fair.”).

147. See Kenneth S. Klein, *Truth and Legitimacy (In Courts)*, 48 LOY. U. CHI. L.J. 1, 71–74 (2016) (discussing “a dissonance between the judicial system’s self-articulation of the system’s commitment to accuracy, and the public’s perception of the courts”); Longan, *supra* note 146, at 296 (“Procedures must . . . be perceived by the litigants as fair.”). Research suggests that perceptions of efficiency are also important. See Bobbi McAdoo & Nancy A. Welsh, *Look Before You Leap and Keep on Looking: Lessons from the Institutionalization of Court-Connected Mediation*, 5 NEV. L.J. 399, 425 (2004) (“Though few parties have any real basis for judging the relative efficiency of court-connected mediation, parties have evaluated mediation quite favorably. They perceive mediation as more efficient than litigation and as reducing costs.” (footnote omitted)).

In 2014, a few state courts in Michigan began to implement a particular type of platform technology—Matterhorn—as a means of improving access to justice for its users and increasing their efficiency in resolving cases.¹⁴⁸ Matterhorn is a web application, meaning that it is web-based software that users access through a website.¹⁴⁹ It allows litigants to communicate with law enforcement, prosecutors, judges, and decisionmakers online to resolve a live legal matter,¹⁵⁰ and thus Matterhorn satisfies the definition of online platform technology given above. The adoption of Matterhorn by different courts in different communities and at different times presents an opportunity for careful empirical study of the consequence of using the technology on a range of access-oriented outcomes.¹⁵¹ Before I relate the data, the empirical strategy, and the study’s results and their implications, however, a brief description of how Matterhorn actually works for a typical case—for this research, a traffic case—is essential.¹⁵²

Litigants who have a civil citation (e.g., traffic ticket) and who wish to use their state court’s online platform to communicate with a prosecutor, a city attorney, or a judge about their case typically begin at the court’s website.¹⁵³ Individuals search for their case by entering identifying information—e.g., a driver’s license number.¹⁵⁴ Matterhorn

148. See Persky, *supra* note 26.

149. *What is Matterhorn?*, MATTERHORN, <https://getmatterhorn.com/about/> (last visited Oct. 1, 2017) [<https://perma.cc/9Y9G-Z95J>].

150. As in other contexts, Matterhorn may be used to accomplish other intermediate goals as well, such as educating litigants, collecting information, providing feedback to decisionmakers, and giving citizens a sense of being heard by the system—all of which may be achieved even if the matter is not resolved using Matterhorn.

151. Just as with a courthouse, the specific Matterhorn features a litigant will experience depend on the court, the type of case, the facts of the case, and possibly even the judge.

152. As of 2017, courts use Matterhorn to improve access and efficiency with respect to a number of different types of cases, including warrant resolutions, family court matters, and others. *Court Innovations Closes Funding Round with \$1.8 Million in Investment*, MATTERHORN (June 6, 2017), <https://getmatterhorn.com/court-innovations-closes-funding-round-1-8-million-investment/> [<https://perma.cc/G3BW-YLR5>] (“Citizens use Matterhorn to resolve traffic and parking tickets, warrants, family court compliance, plea online, or file a small claims civil case.”).

153. *How It Works*, MATTERHORN, <https://getmatterhorn.com/how-matterhorn-works/> (last visited Oct. 1, 2017) [<https://perma.cc/4DMA-98YR>] [hereinafter *How It Works*] (“Matterhorn provides a platform for courts . . . to resolve minor criminal and civil infractions Matterhorn routes [citizen-provided] case information to the right people instantly. Informed and participating parties can include law enforcement, the prosecutor, the clerks, a case worker, a mediator, a magistrate, and/or a judge.”); *Online Plea*, MATTERHORN, <https://getmatterhorn.com/matterhorn-platform/online-plea/> (last visited Oct. 1, 2017) [<https://perma.cc/YJ7Z-RJ4L>] (“From a link on your website, citizens can search online within Matterhorn to check eligibility.”).

154. See, e.g., Alex Tekip, *Online Ticket Review System Streamlines Process of Resolving Traffic Citations*, MATTERHORN (June 28, 2016), <https://getmatterhorn.com/online-ticket-review-system-streamlines-process-of-resolving-traffic-citations/> [<https://perma.cc/N8ED-923Y>] (“Before a driver can have his or her ticket reviewed online [in the particular district court], he or she must input his or her driver’s license number and date of birth”).

uses this data to search court databases for active cases that pertain to the individual. If the search is successful,¹⁵⁵ the platform applies eligibility criteria to these matters to determine which of them, if any, are eligible for online resolution.¹⁵⁶ If one or more cases is found to be eligible, Matterhorn presents the litigant in question with choices.¹⁵⁷ At an abstract level, these options include doing nothing—thereby retaining the option of going to court in person to resolve the matter—and seeking to engage with prosecutors and judges online with the goal of arriving at a mutually satisfactory outcome.¹⁵⁸

If a litigant decides to continue using the online platform,¹⁵⁹ Matterhorn equips the individual with instructions, information, and documents specific to the case, and then collects any responses and submissions the litigant supplies.¹⁶⁰ Matterhorn is configurable, and so requests can be for any information or documents a decisionmaker may view as useful to resolving the case.¹⁶¹ In all instances to date, Matterhorn asks litigants to explain in writing their reasons for using the platform (i.e., the nature of their substantive or procedural goal) and to defend their request with valid reasons and evidence. Once the litigant submits the request, Matterhorn forwards the request directly to the appropriate decisionmaker given the case type and any material facts—e.g., a prosecutor or a judge. Next the decisionmaker evaluates

155. If an individual's case is not found—perhaps because a ticket was just issued and is not yet in the system—Matterhorn will offer the litigant the option of providing contact information and allowing Matterhorn to continue to search for the ticket in the days ahead. If the ticket is found in the system at a future time, Matterhorn contacts the litigant, and invites the litigant to use the platform to resolve the case.

156. Courts develop eligibility criteria in order to limit the platform's availability to those kinds of cases that are deemed appropriate for resolution in an online setting. Eligibility criteria typically relate to the nature of the offense and the litigant's criminal history or driving record.

157. Matterhorn makes these choices regarding what the litigant "sees" and other design features entirely configurable, and so the court has a great deal of flexibility with respect to how the platform operates and what it and its users can do. However, the courts that are the subject of this Article configured Matterhorn in similar ways during the period of this study. *Matterhorn Platform*, MATTERHORN, <https://getmatterhorn.com/matterhorn-platform/> (last visited Oct. 1, 2017) [<https://perma.cc/2PZB-WPVD>].

158. Importantly, in the implementations studied in this Article, litigants *always* retain the option of going to the courthouse in person, even after fully exhausting their options while using Matterhorn. In other words, accessing the courts through Matterhorn results in no prejudice to other options at any time, and other than perhaps the risk of spending time using the online platform and gaining nothing, there is no risk to litigants for trying Matterhorn.

159. At the outset, Matterhorn requests contact information (e.g., email address and mobile number) from litigants so the court or other parties can impart information, requests, and/or any decisions to them during the remainder of the process. *How It Works*, *supra* note 153.

160. *Id.* ("If the case is eligible, the citizen can tell the court about their case and answer some questions from the court.")

161. These inquiries are typically structured to take account of known case information, including answers to previous questions and requests, so as to reduce or eliminate unnecessary or redundant requests.

the litigant's submissions and any other available and admissible data at the decisionmaker's convenience to make a determination about the case,¹⁶² which might be a denial, a proposal, or a request for additional information.¹⁶³ When appropriate, Matterhorn notifies the litigant of the decision, and if the decisionmaker has made an offer or another request, the platform asks the litigant to respond within a few days. A litigant can resolve the case by accepting the offer and complying with any requirements (e.g., payment). If the litigant declines the offer—or accepts it but does not comply—or ignores it, the system automatically rescinds the offer and restores the status quo ante.

The premise underlying the empirical research laid out in this Article is that platform technology has the potential to improve access to justice by dramatically reducing the costs of accessing courthouses and, in particular, the decisionmakers who traditionally do their work at courthouses. As platform technology, Matterhorn seeks to do this by allowing litigants to communicate and negotiate with decisionmakers directly online and asynchronously in a manner that is convenient for everyone. A hypothetical comparison of how the resolution of a traffic ticket might proceed with and without access to an online platform is useful to understand the potential tradeoffs involved and to identify potential metrics for assessing improvements in access.

Imagine a driver receives a traffic ticket, and is unhappy about it. The police officer issuing the ticket informs the potential litigant that he has the right to make an appointment at the state courthouse to contest the ticket before a judge or to meet with a prosecutor for an informal hearing. When the litigant calls the courthouse, he discovers that any appointments are weeks away and are only available during business hours on weekdays. The “appointments” consist of showing up at 9:00 a.m. and waiting in a queue with others who are similarly situated, a process that takes hours because although each litigant meets individually with a prosecutor or a judge for only a few minutes, many dozens or hundreds show up on each available day. The litigant is frustrated with these options. He remains unhappy about his ticket, but he is not confident that anything will change if he spends hours at

162. Typical decision-relevant data include the type of infraction, the circumstances of the incident, the specific relief requested, the litigant's criminal and traffic history, and the litigant's communications and submissions to the court.

163. Depending on the nature of the legal issue, there might be more than one decisionmaker who needs to be involved in resolving a case, and so Matterhorn's case “flow” will move the case and previous (and relevant) conclusions by preceding decisionmakers to the next decisionmaker. For example, in many Matterhorn implementations, a request for a reduced charge in a traffic infraction case first goes to a prosecutor or a law enforcement liaison (police officer), who makes a recommendation, before it proceeds to the judge or magistrate, who makes a decision, perhaps taking into account this recommendation.

the courthouse.¹⁶⁴ He decides his best course of action might be just to grumble and pay the fine, while remaining annoyed at the courts and law enforcement, and feeling like the bureaucracy somehow ensured that any right to a day in court was an empty one.

Now assume instead that the officer also informs the driver that the court in question uses online platform technology, and that a request and/or questions can be handled through this system. When the litigant gets home from work and gets his children to bed, he hops online and locates his ticket. He answers the questions, explains his concerns and asks questions about the ticket, requests a lower charge, and clicks submit, spending less than fifteen minutes on it. Four days later, he receives a response from one of the court's judges, conveying to him an offer of a reduced charge, based on his driving record and the recommendation of the prosecutor, who reviewed the case during the process. The judge writes:

Thank you for using [our online platform] to resolve your matter. Based on your driving record, the court has determined you would be an ideal candidate to have your infraction amended. As a result, you would not receive any points on your driving record. Please continue to practice safe and courteous driving at all times.¹⁶⁵

and then the judge adds a few more sentences answering the specific questions the litigant had appended to his request.¹⁶⁶ Not only did the litigant's legal situation improve, but the litigant also interacted with a judge in under a week, and so feels heard and perceives the system to be responsive. As a consequence, he accepts the judge's offer, and he immediately complies, allowing the court to close the case and collect any payment owed, eliminating any chance that the litigant defaults by putting off dealing with his ticket.

Alternatively, imagine instead that the judge responds in four days rejecting the litigant's request, explaining her reasoning:

164. What's more, without hiring a lawyer, the litigant may have little or no realistic ability to ask questions about his citation or to discover whether his concerns about the ticket have any legal merit. He could meet with the prosecutor or judge, but of course, this would defeat the purpose, since his initial aim is to determine whether going to the courthouse and waiting in line to meet with a decisionmaker is worth it in the first place.

165. An actual judge sent this response to real litigants through Matterhorn. I am grateful to Court Innovations Inc. for sharing these and other completely anonymized communications between judges and litigants with me. Electronic Communication from Court Innovations Inc. to author (Aug. 1, 2017) (on file with author) [hereinafter Electronic Communication] (listing templates designed and deployed by judges in communications with litigants).

166. Imagine these alternative actual responses: (1) "Although your driving record does not meet our standards for a plea offer, the court has decided to extend this offer as it appears you could really use a break. This plea will allow you to go forward without adding any additional points to your driving record. Please practice safer driving and obey all the rules of the road. Good Luck and thank you for using our on-line court system."; (2) "The parking enforcement officers cannot and do not know how long your car has been unlawfully parked. I have reduced your fine because of the designated driver circumstance." *Id.*

Thank you for your request and explanation. Please understand when in an unfamiliar area it is very important to look for the speed limits. They are always located at a speed limit change and often near major intersections. Speed limits are enforced for everyone's safety. Slow down and drive carefully!,¹⁶⁷

but also answers the litigant's questions in the process.¹⁶⁸ The judge then reminds the driver that he can still contest his ticket or seek an in-person meeting with a prosecutor or a judge, if he wishes. Despite the undesirable outcome, the litigant understands the basis for his citation much better, and has already had a prosecutor and a judge evaluate the dispute and decide against him. While he still has the right to go to the courthouse, the benefits of doing so are much smaller in his mind now, as he feels he has already managed to be heard by the key decisionmakers. He wishes he could do something about the ticket but grudgingly acknowledges that he was able to make his case and that the system was responsive. Accordingly, he decides simply to pay the fine while he is online using the court's online payment option. If he instead decides to go to the courthouse in person, maybe because he is unable to pay the entire amount he owes on the ticket, he may discover a shorter line to meet with a prosecutor or a judge given that many others are also using the online platform. If so, he may be more likely to stick it out and take care of his issue properly. Either way, better access will be evident in shorter durations, a higher likelihood of fines being paid in full, and lower default rates.

In Part III below, I describe data on outcomes from eight courts that implemented Matterhorn during the last two to three years in Michigan. For all eight courts, I am able to construct measures of case duration, percentage of fines paid, and case default, and can compare how adopting courts perform on these measures before and after the implementation of Matterhorn. The measures of access I analyze are admittedly indirect, related more directly to the processing efficiency of courts.¹⁶⁹ Nevertheless, the evidence I introduce is illuminating, and

167. *Id.* (noting that a Matterhorn-using judge used this language in actual, anonymized communications with litigants who requested relief through the platform).

168. Consider these alternative responses: (1) "Thank you for your request and explanation. Please understand driving the wrong way on a one-way street is extremely dangerous. You may think you are doing it safely. However, it is impossible to predict how another driver on the road lawfully will react to seeing your vehicle coming at them. Other drivers will not expect to see a car or even look for cars travelling the wrong direction."; (2) "Thank you for your request and explanation. If another driver tailgates you, pull over and let him or her pass. It is much better to have these unsafe drivers in front where you can see them rather than having them driving on your rear bumper." *Id.*

169. State courts live in a difficult financial environment. Jessica M. Eaglin, *Improving Economic Sanctions in the States*, 99 MINN. L. REV. 1837, 1866 (2015) ("[S]tate courts are persistently underfunded . . ."); *The Growing Crisis of Underfunding State Courts*, A.B.A. COMM. & MEDIA REL. DIVISION 1 (Mar. 16, 2011), https://www.americanbar.org/content/dam/aba/publishing/abanews/1300290469court_funding_crisis_background2.authcheckdam.pdf

makes a good prima facie case that implementing platform technology has important implications for access to justice for a large fraction of state court caseloads.¹⁷⁰

III. DATA AND EMPIRICAL ANALYSIS

In this Part, I present evidence on the effects of implementing platform technology on metrics relevant to access to justice, including case duration, closure rates, receipt of payment timing and success, and default rates. My analysis leverages the timing of Matterhorn's launch in each state court, studying before and after differences and statistically combining those experiences into an overall assessment of the platform's consequences.¹⁷¹ Below, I describe the case-level data underlying this research, and then I analyze the data both graphically and with regression methods better able to isolate causal relationships and improve inference generally.¹⁷²

The data consist of case-level information from eight Michigan state courts,¹⁷³ all of which implemented Matterhorn at different times

[<https://perma.cc/2Q7L-U556>] (“The systematic underfunding of the country’s courts causes delays in court proceedings, loss of staff and reduction of services. It prevents court cases from being heard and leads to delayed justice.”). It is thus important for courts to consider how the implementation of any new system will affect stakeholders—including those facing access-to-justice barriers. It is not enough for courts to evaluate only the impact of new technology on operations inside the courthouse. They must also be cognizant of the implications for lawyers, police, administrators, and the public. Various metrics lend themselves to examining such concerns, such as measuring police time spent on minor cases, out-of-pocket costs for litigants to attend court (and indeed, whether they show up at all), and offender recidivism rates. I focus primarily on metrics that are most important to courts and are therefore available, fairly easy to collect, and commonly used internally and by state agencies to evaluate a court’s success: time until case closure, the rate at which court fees and fines are paid, and default rates.

170. It is worth noting that online platforms will, in the future, allow for the creation of rich databases of information that otherwise would be extremely labor intensive to collect, even on a small scale. For example, consider an examination of how long judges take to make decisions concerning traffic cases. In a brick-and-mortar courthouse, these data are technically available, but it would require either an observer to keep tabs on the court or judges to spend time charting the data, distracting themselves from the task of judging. One could approximate by dividing the overall time spent in court in a day by the number of cases resolved, but such data would lack the case-level specifics that an online system could easily collect.

171. Since the platform technology was launched in all of the sample courts, I do not have a control group of courts that did not offer access through Matterhorn. This prevents me from conducting a more traditional differences-in-differences analysis in which the difference between the pre- and postregime outcomes of the treatment group and of the control group are compared to each other (hence the name “differences-in-differences”) to account for omitted variable bias.

172. See Lee Epstein & Gary King, *The Rules of Inference*, 69 U. CHI. L. REV. 1, 76–80 (2002) (explaining the process of controlling for rival hypotheses).

173. The state courts selected were chosen from among the earliest adopters of Matterhorn. Inclusion on the basis of early adoption status may result in selection bias, and consequently care should be taken in interpreting the results. It might be more appropriate to interpret any findings as the likely effects of platform technology for unusually entrepreneurial, early adopter-type

in 2014 and 2015.¹⁷⁴ Table 1 presents standard descriptive statistics of outcomes and other variables by court. For every court, I assembled approximately one year of case-level records from before the adoption of Matterhorn and all available data from the post-Matterhorn period. Although the sample periods for the courts do overlap substantially, they diverge somewhat.¹⁷⁵ The earliest data come from May 2013 and the newest data originate in July 2016. For each court, I obtained information on all cases of the types eventually eligible for resolution through Matterhorn in that court upon implementation.¹⁷⁶ The types of cases that are eligible to be resolved through Matterhorn are similar across courts, but the platform was designed specifically to accommodate a court's preferences, and not surprisingly, eligibility is not identical.¹⁷⁷ Key data fields for each case include the case type and initial charge, the case's filing date, the status of the case at the time the data were pulled (open, closed, or disposed),¹⁷⁸ the final disposition of the case, the date of the final disposition, the amount ordered, the amount paid, and the dates of any payments.¹⁷⁹ The data also include whether the case was eligible for Matterhorn based on when the case was filed, whether the litigant used Matterhorn, and whether on the basis of a request made by the litigant through Matterhorn the judge ultimately offered the litigant some sort of relief.

courts. Other courts may see less dramatic results. Even so, adoption timing is at least partially exogenous, driven in part by scheduling and contract procedures.

174. Initially, I received data for a ninth state court, but upon investigation, the experience of this court with respect to implementation, training, and partner engagement was sufficiently different from other courts that it did not make sense to include this court and its data in the analysis. Specifically, a critical decisionmaker did not engage with the platform technology on a regular basis and was generally uncooperative in the post-implementation period, sometimes leaving cases to languish for more than two weeks at a stretch. Buy-in to new technology is and ought to be a critical consideration in evaluating the success of platform technology, but this particular court appears to be an outlier, not representative of other courts, nor would the results be indicative of the long-term potential of platform technology.

175. Unbalanced panel data are not an issue for standard inference problems when the lack of balance appears to be effectively random, as it does in this case. See JEFFREY M. WOOLDRIDGE, *ECONOMETRIC ANALYSIS OF CROSS SECTION AND PANEL DATA* 578–81 (2002).

176. These are mostly traffic infractions.

177. For example, two courts at random employed Matterhorn to resolve the following types of cases (in terms of their SOS—"Secretary of State"—codes): 1810, 1815, 2000, 2300, 2310, 2320, 2400, 2410, 2430, 2440, 2460, 2500, 2600, 2610, 2620, 2660, 2740, 2800, 2810, 2820, 2830, 2840, 2860, 2870, and 3035 versus 1810, 2000, 2100, 2300, 2310, 2400, 2430, 2440, 2500, 2514, 2600, 2650, 2740, 2800, 2810, 2820, 2830, 2840, 2870, 3290, 3295, 3300. These case types are all civil infractions, almost entirely traffic-related in practice. Consequently, in the graphical analysis below, apples of different varieties are being compared, whereas in regression analysis, it is at least possible to control for the fixed differences in case eligibility.

178. Disposed cases differ from closed cases in that the former have final disposition values but do not have closing dates, so it is not possible to measure precisely the case's "time to close."

179. The data include other information as well, including the litigant's age, the jurisdiction (state) of the litigant's driver's license, and others.

A. Graphical Evidence

Table 1 displays interesting facts about the courts, their docket size, their processing of cases, and their litigants' Matterhorn usage.¹⁸⁰ First, combining pre- and post-Matterhorn data, these minor traffic cases take more than a month on average and sometimes much longer to be resolved in these courts, although the time-to-payment measure indicates that cases are finally closed one or two days after the court receives final payment. The data also show that for cases with closed or disposed status, about 95% of fines are eventually paid, although there is decent variation across courts on this dimension. Depending on the court, approximately 5% to 25% of litigants with Matterhorn-eligible cases decide to use the platform to resolve their matter. These numbers are revealing in and of themselves. The variation across the courts in usage may have more to do with lack of public awareness of Matterhorn's availability than it does with any real variation in any underlying proclivity of litigants or the receptiveness (including the ease of traditional access) of the courts. In every one of the courts in this study, a large fraction of cases enter into default,¹⁸¹ which means that the litigant has not met some procedural deadline—typically not paying the initial fine and failing to arrange for a hearing.

180. These data include all open and closed cases. In most of the later analyses, I rely only on data from closed cases because only closed cases contain all of the necessary outcome fields, like closing date, etc. Unfortunately, studying only closed cases increases the likelihood of selection bias in favor of Matterhorn's being found to reduce case duration. *See, e.g.*, Epstein & King, *supra* note 172, at 99–114 (explaining that random selection in large studies is the only way to ensure an absence of selection bias). To see this, note that in the post-Matterhorn period but not in the pre-Matterhorn period, the cases with the longest duration are more likely to be open (and therefore dropped) when the sample period ends relative to cases that resolve in a few days after filing. I explore the robustness of dropping open cases in a number of ways in unreported work, including making conservative assumptions about open cases, such as assuming that all open cases at the end of the sample lasted as long as the ninety-ninth percentile for all cases. Adding open cases with conservative assumptions does not change the tenor of this study's conclusions, in part because the fraction of open cases is small relative to the fraction of closed cases.

181. "Default is a punitive measure, appropriate in defined circumstances, the threat of which encourages the cooperation of parties to a suit. Our court rules governing the entry of defaults and default judgments are narrowly designed to sanction an uncooperative party." *Rogers v. J.B. Hunt Transp., Inc.*, 466 Mich. 645, 653 (2002). Default procedures aim to keep dockets current and expedite the disposal of causes. *Bigelow v. Walraven*, 392 Mich. 566, 576 (1974). Michigan court rules allow the entry of a default when a defendant fails to appear (or fails to answer) a civil complaint, MICH. CT. R. 2.603, or a civil infraction, MICH. CT. R. 4.101. The failure-to-pay default seems to be a statutory creation, and it allows a state court judge to imprison someone in default for civil contempt. *See, e.g.*, MICH. COMP. LAWS § 257.908 (2016) (default in payment of a civil fine ordered pursuant to the Michigan Vehicle Code); MICH. COMP. LAWS § 324.40119 (2016) (default in payment of fines owed under Part 401 of Michigan's Natural Resources and Environmental Protection Act); MICH. COMP. LAWS § 552.152 (2016) (default in payment of alimony or support and maintenance); MICH. COMP. LAWS § 600.8827 (2016) (default in payment of fines for "state civil infractions").

TABLE 1: SUMMARY STATISTICS BY COURT

| Courts | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Mean Time to Close (in days) | 37.92 (67.5) | 44.64 (78.5) | 33.04 (56.0) | 31.84 (57.3) | 29.01 (48.2) | 67.38 (92.2) | 44.31 (60.2) | 31.93 (51.3) |
| Mean Time to Pay (in days) | 35.80 (69.0) | 42.34 (81.4) | 29.66 (53.4) | 28.49 (53.7) | 28.53 (47.7) | 69.03 (95.6) | 43.25 (59.9) | 29.09 (48.6) |
| Mean Percentage Paid | 0.96 (0.19) | 0.94 (0.24) | 0.97 (0.18) | 0.98 (0.15) | 0.95 (0.22) | 0.76 (0.42) | 0.94 (0.23) | 0.98 (0.15) |
| Cases Post-Matterhorn (count) | 2,061 | 2,284 | 4,075 | 1,390 | 2,373 | 6,138 | 5,662 | 3,776 |
| Litigant Used Matterhorn (count) | 254 | 89 | 199 | 163 | 697 | 442 | 976 | 238 |
| Court Granted Relief (count) | 171 | 66 | 166 | 141 | 695 | 436 | 840 | 131 |
| Default Judgment Disposition (count) | 711 | 1,174 | 1,426 | 427 | 480 | 3,780 | 2,798 | 1,079 |
| Closed Cases (count) | 3,161 | 4,139 | 6,968 | 2,308 | 4,005 | 7,943 | 11,585 | 7,671 |
| Disposed Cases (count) | 112 | 205 | 207 | 57 | 258 | 2,417 | 735 | 195 |
| Open Cases (count) | 10 | 12 | 72 | 9 | 22 | 25 | 60 | 47 |
| No. of Observations | 3,283 | 4,356 | 7,247 | 2,374 | 4,285 | 10,385 | 12,380 | 7,913 |

Notes: The total number of observations is 52,223. Mean time to close, mean time to pay, and mean percentage paid does not include open cases. In the regression analysis, open cases (257 total, with eight in the preperiod and 249 in the postperiod) were dropped, resulting in 51,966 total observations.

To begin to evaluate the effects of adopting platform technology on these litigants and courts, I offer simple graphical analyses to show how case processing has changed post-implementation.¹⁸² Descriptive statistics—including counts, averages, and graphs—are an intuitive way to assess whether Matterhorn has made it easier and quicker for litigants to handle certain legal issues while at the same time making courts more or at least not less efficient.¹⁸³ As one would expect, given the differences across courts in terms of size, personnel, budget (see caseload differences in Table 1), and resident populations,¹⁸⁴ the eight courts began the sample period under very different initial conditions and have also had varying experiences during the post-Matterhorn period.¹⁸⁵ Nevertheless, by contrasting court trajectories pre- and post-Matterhorn, one can make progress on untangling the potential effects

182. For the following analyses, cases have been divided into three groups: cases in which litigants made use of Matterhorn (postlaunch Matterhorn), cases in which litigants did *not* use Matterhorn but which were decided in a court where Matterhorn was available at the time (postlaunch non-Matterhorn), and cases for which Matterhorn was not yet available (prelaunch). All results use case types that at some point became eligible to use Matterhorn. Cases that were “not eligible” were not a part of this analysis.

183. See LEE EPSTEIN & ANDREW D. MARTIN, AN INTRODUCTION TO EMPIRICAL LEGAL RESEARCH 130 (2014) (defining descriptive statistics and illustrating how they can be used to distill large data sets into single numbers that convey a lot of information).

184. See *supra* Table 1.

185. In addition, basic analyses using averages and differences do not explicitly incorporate the possibility of sampling error into the analysis—in other words, the possibility that some of the effects calculated are illusory, merely the result of randomness. Given the number of cases in my analyses, this concern is minor. See EPSTEIN & MARTIN, *supra* note 183, at 85–87 (explaining that the use of large, diverse data sets helps to reduce the possibility of sampling error).

Matterhorn may have had on court case processing and, therefore, on the accessibility of these courthouses, both on average across all courts and for each court individually.

FIGURE 1: CLOSURE RATES

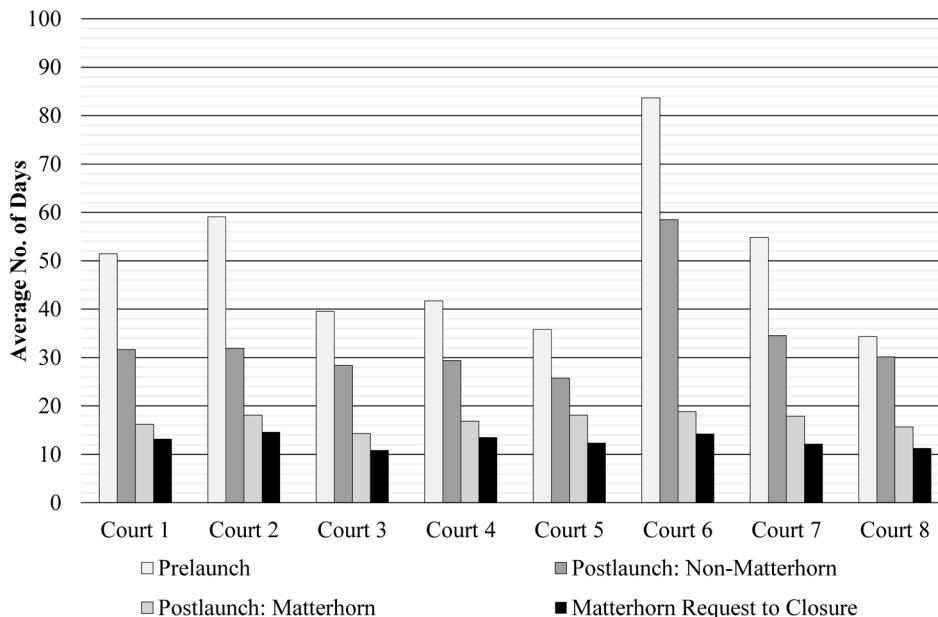


Figure 1 shows the mean duration in days for prelaunch cases, postlaunch Matterhorn cases, and postlaunch non-Matterhorn cases. This rough cut at the data reveals that average case duration drops considerably following the adoption of platform technology for those litigants who use it—from approximately fifty days (white) before Matterhorn to just fourteen days after Matterhorn’s implementation (lighter gray). Moreover, this decline in duration extends beyond those disputes in which litigants actually use the platform: adopting courts experience a substantial drop in the time it takes to close *all* cases—even non-Matterhorn cases (darker gray)—from approximately fifty days prelaunch to thirty-four days after launch.¹⁸⁶ Another interesting

186. One could also view the postlaunch non-Matterhorn group of cases as representing an alternative counterfactual (as opposed to prelaunch cases)—i.e., indicating how long Matterhorn cases might have lasted in the absence of Matterhorn’s adoption. The two candidate comparison groups (prelaunch cases and postlaunch non-Matterhorn cases) rely on different assumptions—but either way, postlaunch Matterhorn cases appear to close much sooner. Using prelaunch cases as a control group assumes that nothing else has changed over time in these courts in how cases are processed *other than* the implementation of Matterhorn. If other policy changes or reforms occurred around the times these courts adopted Matterhorn, this approach will give Matterhorn credit for the effects of these innovations. However, I am aware of no other significant changes at

phenomenon worth observing is that no matter how long it generally took for a court to close cases before Matterhorn came online,¹⁸⁷ there seems to be significantly less variation in duration times across courts for Matterhorn cases once a request is made (black). Indeed, across courts, postrequest durations for Matterhorn cases have remarkably similar average times to closure. Therefore, at least according to these data, litigants who use Matterhorn to address their legal matters face an average case resolution speed that is independent of their court's previous timeliness in resolving its cases.¹⁸⁸ Evidence that platform technology may succeed in decreasing intercourt variability in average processing time, resulting in more consistent and uniform treatment across state courts, may be of independent social value.¹⁸⁹

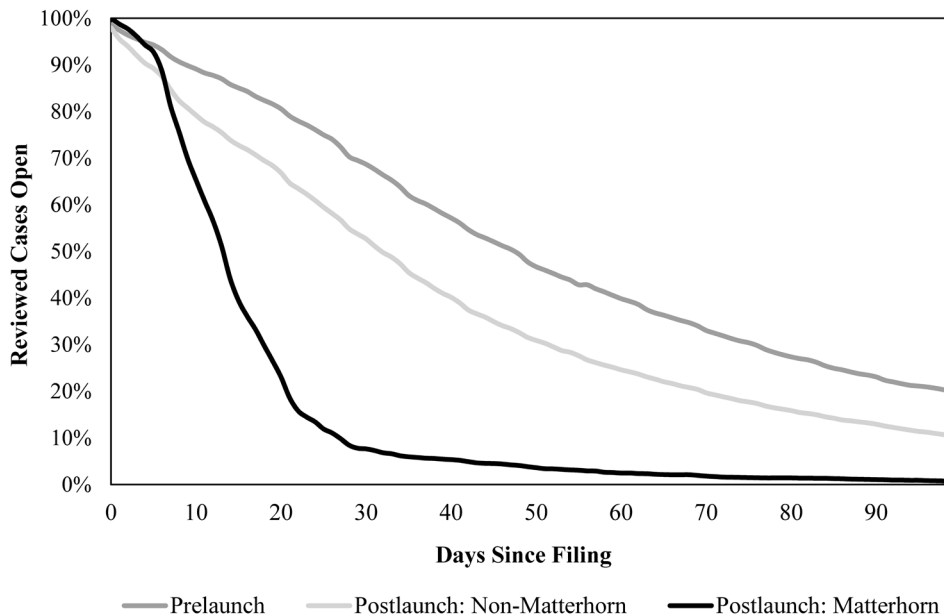
the adopting courts occurring around the times these courts implemented Matterhorn, and there is certainly no evidence that law enforcement shifted their ticketing practices in ways that might change the overall composition of the litigant pool. Using postlaunch non-Matterhorn cases as a comparison group assumes that people who choose to use Matterhorn and those who do not use it are roughly the same—i.e., as if Matterhorn use was randomly distributed across litigants. This is unlikely to be the case in any precise sense. Matterhorn is probably easier for tech-savvy people to use, and these individuals may be younger and more likely to be working (and therefore may have the capability of paying their fines or fees quickly). Using postlaunch non-Matterhorn cases as a counterfactual group also assumes that Matterhorn had no spillover effects on non-Matterhorn cases. Consequently, it is hard to defend this strategy because it seems likely that Matterhorn influenced the outcomes of non-Matterhorn cases in at least some way. That said, because it also seems likely that any effect of Matterhorn on these cases would bias my analysis *against* finding any effects of Matterhorn—because Matterhorn's effects, if any, are likely to push in the same direction for both Matterhorn and non-Matterhorn cases—one might interpret the comparison to postlaunch non-Matterhorn cases as being a “conservative” approach, identifying only the differential effect of Matterhorn *on its users*, but ignoring any value the platform may generate to all litigants and the court generally and to non-Matterhorn users specifically.

187. According to Figure 1, Court 5 and Court 6 had very different average times to closure (about thirty-five days as opposed to more than eighty days) pre-Matterhorn. After Matterhorn was implemented in each of these courts, cases using the traditional methods of resolution began to resolve faster (roughly twenty-five days and just under sixty days, respectively). These are noticeable improvements, and suggest that there may be spillover consequences of Matterhorn implementation to non-Matterhorn litigants. Another approach to interpreting these spillover findings, however, would be to instead treat postlaunch non-Matterhorn cases as capturing the counterfactual of what would have happened to all cases absent the adoption of Matterhorn, *see supra* note 186, and therefore accounting for other changes that may have made the court more accessible or efficient. *See supra* Figure 1.

188. There is always the possibility that the sizeable and uniform short-term response to the platform technology across every court is a reflection of a preexisting trend in the demand or supply for access. An existing time trend can overstate the effect of a policy change and obfuscate the more long-term dynamic effects of a policy shock. *See* Justin Wolfers, *Did Unilateral Divorce Laws Raise Divorce Rates? A Reconciliation and New Results*, 96 AM. ECON. REV. 1802, 1803–06 (2006) (using the divorce context to demonstrate that omitted factors can bias estimated effects if correlated with the treatment). The regression analysis below attempts to address this issue by explicitly controlling for court-specific trends.

189. *See* Steven S. Gensler, *Judicial Case Management: Caught in the Crossfire*, 60 DUKE L.J. 669, 720–22 (2010) (describing various scholarly criticisms of judicial discretion in case management, including that “[r]eliance on discretion has predictable consequences: expense, delay, unpredictability, and abuse of power”); *see also* Jan Miller, *Neuberger Calls for Judicial*

FIGURE 2: CASE DURATION



While an informative first cut, changes in simple *averages* pre- and post-Matterhorn may only tell part of the story. After all, average time-to-closure calculations can be affected by outliers, including rare disputes that take a very long time to conclude. Averages also mask significant offsetting differences across cases—i.e., mean-preserving changes in the duration distribution.¹⁹⁰ Platform technology appears to meaningfully reduce the time to closure, but from averages alone, one cannot discern whether *all* cases are resolved faster or whether just some fraction are resolved faster, with the remainder unaffected or perhaps taking longer than previously to close.¹⁹¹ These questions

Consistency, NEW L.J. (Apr. 1, 2010), <https://www.newlawjournal.co.uk/content/neuberger-calls-judicial-consistency> [<https://perma.cc/58BQ-VPJ5>] (reporting that then-President of the Supreme Court of the United Kingdom, Lord David Neuberger, “called for ‘greater consistency’ in case management among judges to reduce costs in civil litigation”).

190. This is especially true with the arithmetic means that are reported in this Article, as an arithmetic mean by definition does not vary with changes in mean-preserving spread, even though individual points on either side of that mean do so vary but in offsetting ways.

191. We might expect this latter scenario if a critical party using the platform was unable or unwilling to use the technology in a timely way for particular cases—e.g., a prosecutor or judge might decide to leave certain kinds of cases in the queue for weeks or months, perhaps because reviewing them required more technical know-how or comfort with the technology than the decisionmaker had or because the platform was not providing the information the decisionmaker felt was necessary to resolve cases of that type. I am not aware of any such dynamic in the particular context of Matterhorn, but as a general matter, a new online platform may result in a new class of cases being relatively more difficult or annoying to resolve, leading to courts being *relatively* less accessible to litigants with disputes of that kind.

matter, because the latter possibility would correspond to a less equal distribution of access benefits across potential beneficiaries.¹⁹²

Figure 2 portrays the percentage of cases that remain open by days since a case's filing date for each group of cases, and shows that many of Matterhorn's duration-reducing benefits *are* concentrated in a subset of cases, presumably those involving litigants who opt to accept an offer made by a court within a few days of their using the platform to make a request for relief.¹⁹³ The black line drops very quickly (with many more disputes resolving between six and twenty-nine days after filing) but eventually flattens out. By forty or fifty days after the filing date, litigants using Matterhorn but with their cases still unresolved are concluding their cases at a rate that is on average much closer to—although still higher than—the closure rate for those with open cases of similar duration in the prelaunch period.¹⁹⁴ By contrast, litigants who abstain from Matterhorn or who do not have access to Matterhorn appear to resolve their cases more slowly and steadily. The postlaunch lines (black and lighter gray) never cross or rise above the prelaunch line.¹⁹⁵ This consistent separation implies that while there may be litigants whose cases resolve more slowly after Matterhorn's adoption (perhaps including cases handled *through* Matterhorn), the increase for these cases is more than offset by cases that resolve more quickly post-Matterhorn.¹⁹⁶ Of a piece with Figure 1's breakdown, postlaunch non-

192. See, e.g., Stephanie Coontz, *When Numbers Mislead*, N.Y. TIMES (May 25, 2013), <http://www.nytimes.com/2013/05/26/opinion/sunday/when-numbers-mislead.html> [<https://perma.cc/N5XS-QWJL>] (“Averages are useful because many traits, behaviors and outcomes are distributed in a bell-shaped curve But averages can be misleading when a distribution is heavily skewed at one end, with a small number of unrepresentative outliers pulling the average in their direction.”).

193. Figures 2 and 3 only consider cases that close during the sample period. The numerator is the number of cases that are open as of the day in question but that ultimately do close before the end of the sample period. The denominator is the total number of cases that close before the sample period ends. However, including cases that remain open throughout the sample period produces the same basic pattern. (Figures available upon request.)

194. The caveat “on average” matters here, as pre- and postlaunch individuals may not be at all similar by the time the fortieth day arrives. The Matterhorn-using individuals closing their cases at the fortieth or fiftieth day may be matched by a similar number of litigants from the prelaunch group with similar or even faster resolution times. In that case, the prelaunch group's slope is less steep in percentage terms solely because the prelaunch subset with a faster rate is averaged with other prelaunch litigants whose cases are resolving more slowly.

195. This is not strictly true, as during the first couple of days, litigants using Matterhorn appear to close fewer cases than traditional access approaches in Figure 2. If the effect is real, it is likely the consequence of selection. At least some fraction of individuals who do not desire to negotiate or contest their citation (or who are unaware of Matterhorn's availability) will simply pay their ticket immediately by writing a check and dropping it in the mail or at the courthouse's drop box, while even a very eager Matterhorn user must make a request and interact with decisionmakers, which likely takes a few days at a minimum.

196. In more technical jargon, implementing platform technology appears to have produced a Kaldor-Hicks improvement on this dimension. See RICHARD A. POSNER, *ECONOMIC ANALYSIS OF*

Matterhorn disputes also show shorter durations than prelaunch cases, signifying the prospect of substantial spillover benefits for nonusers—possibly the result of less courthouse congestion.¹⁹⁷

Some of these disputes, of course, are never resolved. The data indicate that less than 2% of cases heard through Matterhorn end in default, compared to approximately 20% of cases using traditional in-court dispute resolution procedures.¹⁹⁸ Additionally, because 90% of Matterhorn cases resolve within one month (as opposed to only 30% of prelaunch cases), it would be much easier for a court that is using Matterhorn to intervene in potentially problematic cases after only thirty days because there would be many fewer outstanding cases. To illustrate, if all litigants used Matterhorn, judges would be able to conclude after just a month that the 10% of still-open cases had a 20% chance of defaulting. Absent Matterhorn, after thirty days, judges are looking at 70% of their cases still open, and yet almost 30% of these would be expected to default.¹⁹⁹ With platform technology, courts can home in on at-risk cases earlier in the process, when judges have more statutory flexibility in how they respond and are better able to cost effectively manage the resolution of these disputes.

State and local government shortfalls in recent years have left courts increasingly responsible for funding their own operations via court-generated fines and fees.²⁰⁰ Courts have responded in different

LAW 13 (6th ed. 2003) (“The Kaldor-Hicks concept is also and suggestively called potential Pareto superiority: The winners could compensate the losers, whether or not they actually do.”).

197. See *supra* note 186 for a different—and in a particular sense more conservative—interpretation of the postlaunch non-Matterhorn results as the outcome of a counterfactual exercise, one that allows us to account for the benefits of other innovations that the courts may have adopted around the time they implemented Matterhorn.

198. This difference may be driven in part or wholly by selection, however. Individuals who are very unlikely to default may be more likely to use Matterhorn, in which case low default risk *causes* the use of Matterhorn, not vice versa. On the other hand, there are reasons to think that default in this context is not driven entirely by inability to pay but at least some of the time by a litigant’s accidental failure to address the matter or perhaps by a purposeful refusal to comply or engage with the court because the process feels unfair or illegitimate. Matterhorn may be more likely, behaviorally, to support better follow-through, to inculcate positive feelings toward court officials, or to encourage preconceptions of fair treatment. See Hou et al., *supra* note 129, at 10 (“Our results show that . . . the ease of use of a system positively relate[s] to litigants’ perceived fairness of court officials and their emotion toward court officials.”). Regardless, selection into Matterhorn would be a valuable signal to courts that seek to reduce default proactively.

199. For example, judges could use Matterhorn to remind defendants in at-risk cases of the consequences of default. See Brian H. Bornstein et al., *Reducing Courts’ Failure-to-Appear Rate by Written Reminders*, 19 PSYCHOL. PUB. POL’Y & L. 70, 76–77 (2014) (finding that written reminders reduce failure-to-appear rates, particularly when they contain “information about possible sanctions”).

200. Torie Atkinson, Note, *A Fine Scheme: How Municipal Fines Become Crushing Debt in the Shadow of the New Debtors’ Prisons*, 51 HARV. C.R.-C.L. L. REV. 189, 190 (2016) (“As state and local budgets tighten, municipalities have turned to civil fines and penalties to fill empty coffers.” (citing Leah A. Plunkett, *Captive Markets*, 65 HASTINGS L.J. 57, 68 (2013))); see also Arthur W.

ways.²⁰¹ Many cut back on courthouse personnel and operating hours, delayed maintenance or other investments, and otherwise sought to reduce costs, especially short-term expenses.²⁰² Many have also sought to increase revenue by raising court fines and fees or by “escalating” cases—showing less forgiveness when litigants default by missing deadlines or making other missteps, punishing them with extra fines and fees²⁰³—at least when some portion of this revenue stays with the court.²⁰⁴ Critics have condemned these revenue enhancing strategies as regressive and inequitable, and as tending to undermine the public’s faith in the judiciary and the justice system more broadly.²⁰⁵ A potentially less objectionable approach to improving a court’s revenue situation is to develop ways to encourage better legal compliance with existing fine and fee structures in the first place.²⁰⁶ In fact, better access

Pepin, *The End of Debtors’ Prisons: Effective Court Policies for Successful Compliance with Legal Financial Obligations*, CONF. ST. CT. ADMIN. 2 (2016), <http://cosca.ncsc.org/~media/Microsites/Files/COSCA/Policy%20Papers/End-of-Debtors-Prisons-2016.ashx> [<https://perma.cc/Q7D4-SYVL>] (discussing the responsible enforcement of fines and fees, and explaining efforts to move away from the model of courts funding themselves).

201. See, e.g., GEOFFREY MCGOVERN & MICHAEL D. GREENBERG, WHO PAYS FOR JUSTICE?: PERSPECTIVES ON STATE COURT SYSTEM FINANCING AND GOVERNANCE, at xi–xv (2014) (studying the financing of court systems in five states—California, Florida, Massachusetts, Ohio, and Utah—in the face of “mounting evidence that many state courts have been struggling with . . . frozen to slashed annual operating budgets”).

202. Julie I. Fershtman, *No Courts, No Justice, No Freedom: You Don’t Know What You’ve Got Till It’s Gone*, MICH. B.J., May 2012, at 16, 16 (“Forty-two states have reduced court budgets, 34 have reduced staff, 39 have stopped filling clerk vacancies, and 23 have reduced courthouse operating hours.”).

203. See, e.g., Atkinson, *supra* note 200, at 195–97 (explaining that state constitutions often curtail the ability of local governments to raise tax rates, while fines and fees “can be raised at the discretion of the city. . . . Such revenue systems are subject to abuse and corruption when raising funds replaces public safety as the primary goal of law enforcement.”).

204. While fines and fees often defray courts’ operating expenses, the funds are sometimes put to other uses. MCGOVERN & GREENBERG, *supra* note 201, at 16–19; see also HUMAN RIGHTS WATCH, PROFITING FROM PROBATION: AMERICA’S “OFFENDER-FUNDED” PROBATION INDUSTRY 13 (2014), http://www.hrw.org/sites/default/files/reports/us0214_ForUpload_0.pdf [<https://perma.cc/YS99-FTSV>] (“[S]ome localities expect their criminal courts to fund most or even all of their own operations with fines and fees extracted from defendants and offenders. Some local governments go further, expecting their criminal courts to earn a profit and serve as key sources of public revenue.”); Tamar R. Birkhead, *The New Peonage*, 72 WASH. & LEE L. REV. 1595, 1652 (2015) (“Several . . . recent policy reports and white papers have confirmed that states are increasingly turning to court user fees and surcharges both to underwrite criminal justice costs and also to close general budgetary gaps.”); Neil L. Sobol, *Charging the Poor: Criminal Justice Debt and Modern-Day Debtors’ Prisons*, 75 MD. L. REV. 486, 502 (2016) (“[I]n Allegan County, Michigan [sentencing surcharges] help fund the county employees’ fitness facility.”).

205. Atkinson, *supra* note 200, at 216 (arguing that revenue enhancing strategies “lead to the deterioration of community trust that not only harms residents and citizens, but also impedes law enforcement objectives”); Eaglin, *supra* note 169, at 1868 (contending that using fines and fees to fund “programs unrelated to the particular individual’s offense . . . [constitutes] a regressive tax on individuals in the criminal justice system to support government functions”).

206. See, e.g., Pepin, *supra* note 200, at 16–18 (discussing “cost-effective reminder practices and information-sharing practices that substantially increase attendance in court, save staff time,

to decisionmakers may cultivate a more productive relationship between litigants, law enforcement, and courts, reducing waste and counterproductive behavior and leaving all parties better off.

The phrase “improving compliance” does not sound as if it can work to the systematic benefit of those facing government infractions, but this conclusion may be specious.²⁰⁷ Courts cannot get blood out of a stone,²⁰⁸ but the status quo nevertheless involves arbitrariness and inefficiency.²⁰⁹ Some litigants pay the fees they owe, but many others do not or “wait” for a very long time to do so, especially litigants from lower-income populations.²¹⁰ Those who delay often wind up in the end paying much more—tantamount to borrowing at a usurious rate from

reduce added fees for non-appearance, and increase revenue collected” while also fostering “confidence in the courts and a greater sense of procedural justice”).

207. *See id.* at 16 (“The most direct step to mitigate the impact of court . . . [fines and fees] that is within the ability of courts may be to minimize the incidence of failure to appear or failure to pay. Evidence-based practices can significantly mitigate both.”).

208. Atkinson, *supra* note 200, at 236 (“[M]any contemporary fine schemes . . . contravene common sense, as attempting to extract money from the poorest among us is not a solution to either budget shortfalls or crime reduction.”).

209. *See, e.g.*, ACLU, IN FOR A PENNY: THE RISE OF AMERICA’S NEW DEBTORS’ PRISONS 9 (2010), https://www.aclu.org/files/assets/InForAPenny_web.pdf [<https://perma.cc/6D2B-JLUX>] [hereinafter ACLU REPORT]:

Although states and counties view [fines and fees] as much-needed revenue, they do not systematically gather and produce data showing that their efforts to collect unpaid legal debts actually make money. In fact, incarcerating indigent defendants unable to pay their [fines and fees] often ends up costing much more than states and counties can ever hope to recover.;

Atkinson, *supra* note 200, at 227 (“Pay-or-stay systems . . . are ineffective at deterring future violations and fiscally irresponsible insofar as incarcerating poor defendants is more costly to the state than simply waiving the fines.”); Eaglin, *supra* note 169, at 1855 (reporting that Ohio courts often impose “arbitrary monthly payment plan[s]” (citing ACLU OF OHIO, THE OUTSKIRTS OF HOPE: HOW OHIO’S DEBTORS’ PRISONS ARE RUINING LIVES AND COSTING COMMUNITIES 8 (2013), www.acluohio.org/wp-content/uploads/2013/04/TheOutskirtsOfHope2013_04.pdf [<https://perma.cc/WNM6-8NX2>])).

210. Birkhead, *supra* note 204, at 1628:

When a middle or upper income person receives a court fee or fine, most can readily pay it, ending their contact with the system; in contrast . . . for the typical criminal defendant or young person in delinquency court, a single court-imposed fee or fine can trigger a chain reaction that leads inexorably to a whole host of potentially disastrous complications, including, but not limited to, incarceration.

The extent to which fines and fees go unpaid can be inferred from data on failure-to-pay charges and incarceration. In Ferguson, Missouri, “the court imposed roughly one Failure to Appear charge . . . [for a missed payment or appearance] per every two citations or summonses issued by . . . [the police].” FERGUSON REPORT, *supra* note 50, at 42. In 2013, fines for failure-to-appear violations accounted for 24% of the court’s revenue. *Id.* at 43. Over a twelve-month period, police in Leon County, Florida, made 838 arrests “solely for failure to appear at Collections Court after failing to pay court fees and fines or falling behind in a payment plan.” REBEKAH DILLER, BRENNAN CTR. FOR JUSTICE, THE HIDDEN COSTS OF FLORIDA’S CRIMINAL JUSTICE FEES 19 (2010), <http://www.brennancenter.org/sites/default/files/legacy/Justice/FloridaF&F.pdf> [<https://perma.cc/P6UX-K3BJ>]. Over a six-month period in 2012, 22% of total bookings in one Ohio jail appear to have been related to failure to pay fines or fees. ACLU REPORT, *supra* note 209, at 8.

the courts—and often suffer a variety of other consequences, including the hardships of a warrant for their arrest for failure to pay.²¹¹ At the same time, courts are due enormous sums of money,²¹² and spend time and energy issuing warrants or employing very expensive collections agencies.²¹³ In the end, both litigants and courts are worse off than they would be if the parties were free to communicate easily and come to a mutually advantageous agreement.²¹⁴ Online platform technology offers the potential to improve the interchange between litigants and courts, ensure better-structured payment plans, and reduce the waste

211. Eaglin, *supra* note 169, at 1852 (“Failure to pay can generate late fees, interest, and additional collection fees. These additional costs exacerbate the severity of the already-onerous fees and fines imposed by the court. Nonpayment may lead to driver’s license suspension, wage garnishment, prolonged court supervision, arrest warrants, and incarceration.” (footnotes omitted)); *see also* Sarah Dolisca Bellacicco, Note, *Safe Haven No Longer: The Role of Georgia Courts and Private Probation Companies in Sustaining a De Facto Debtors’ Prison System*, 48 GA. L. REV. 227, 239 n.71 (2013) (noting that fees imposed after failure to pay amounted to an effective interest rate “far in excess of that allowed by Georgia’s usury laws”). Moreover, delay may seem economically rational, but certain behavioral biases, such as hyperbolic discounting and loss aversion, may cause litigants to delay or avoid payment even when doing so is individually economically irrational from their perspective. *See* Norman I. Silber, *Late Charges, Regular Billing, and Reasonable Consumers: A Rationale for a Late Payment Act*, 83 CHI.-KENT. L. REV. 855, 865–66 (2008) (“On a rational calculation of costs and benefits, there are few situations in which intentionally missing a due date for a minimum payment makes financially rational sense for those who can afford to make a payment.”); Joshua D. Wright & Douglas H. Ginsburg, *Behavioral Law and Economics: Its Origins, Fatal Flaws, and Implications for Liberty*, 106 NW. U. L. REV. 1033, 1041–44 (2012) (discussing hyperbolic discounting and loss-aversion and cautioning that “to support a policy intervention . . . experimental research must (1) yield data that are robust and (2) be interpreted carefully to distinguish irrational behavior from efficient mistakes”).

212. Traci R. Gentilozzi, *Facebook Helps Detroit Court Bring in Cash*, MICH. LAW. WKLY. (Apr. 25, 2014), <http://milawyersweekly.com/news/2014/04/17/facebook-helps-detroit-court-bring-in-cash/> [<https://perma.cc/M2CK-A2GJ>] (“Most recent figures indicate [Michigan’s 36th District Court] is owed about \$279 million, an amount that amassed over a 10-year period.”).

213. Laura I. Appleman, *Nickel and Dimed into Incarceration: Cash-register Justice in the Criminal System*, 57 B.C. L. REV. 1483, 1513 (2016) (“[P]rivate collection agencies can charge individuals up to a forty percent surcharge on amounts collected”); Birkhead, *supra* note 204, at 1653–54:

[The] extensive infrastructure [required] to turn court and correctional officials into collection agents . . . [includes] court personnel to administer payment plans, driver’s license sanctions, electronic fund transfers, liens, and wage and bank account garnishment; specialized collection courts to adjudicate payment plans; law enforcement to issue and serve warrants for failure to pay or appear in court; and, not infrequently, court personnel to themselves act as tax collection agents. As a result, rather than serve as a straightforward revenue source for the state, the income generated from this hidden regressive tax often does not exceed the operational costs necessary to facilitate collection. (citations omitted).

214. At the very least, platform technology can reduce bargaining costs, allowing the parties to reach a more efficient outcome. *See* David D. Haddock & Fred S. McChesney, *Bargaining Costs, Bargaining Benefits, and Compulsory Nonbargaining Rules*, 7 J.L. ECON. & ORG. 334, 334–35 (1991) (explaining that bargaining costs can cause “some exchanges . . . [to be] missed altogether . . . [and] even if some deal is made, strategic bargaining can obscure the contract curve’s precise location so that some available gains from trade are missed”).

that comes from delay and the cat-and-mouse games that are common in today's justice system generally and state courts in particular.

FIGURE 3: PAYMENT TIMING

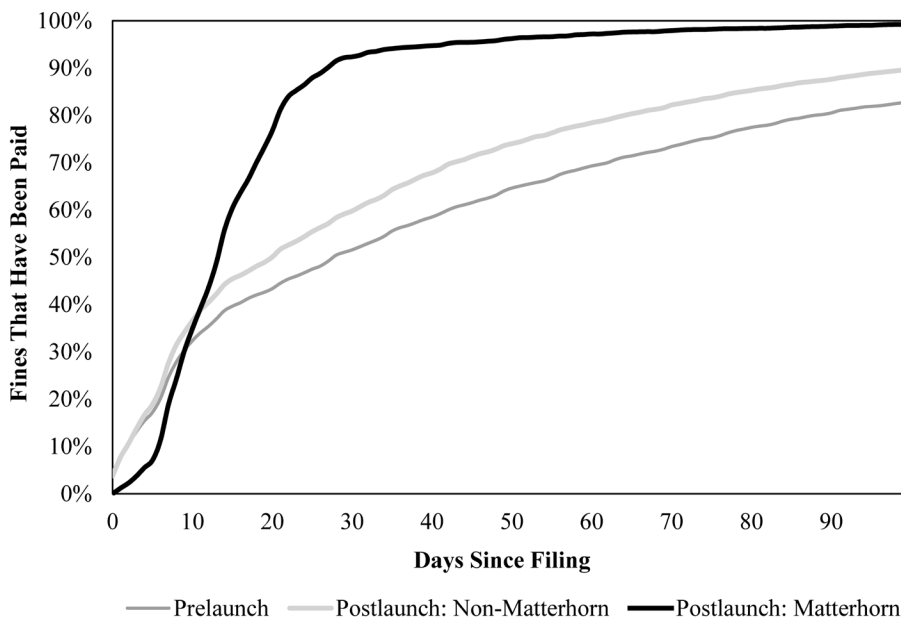


Figure 3 portrays litigant payment behavior—i.e., compliance—as it evolved in courts that implemented online platform technology, showing outcomes for prelaunch cases, postlaunch Matterhorn cases, and postlaunch non-Matterhorn cases. It analyzes the percentage of fines imposed that are paid by a given day after the imposition of a fine,²¹⁵ and it tells a story that complements Figures 1 and 2. With respect to Matterhorn cases, courts collected 80% of the fines they ordered within twenty-one days of a case's filing. Before Matterhorn's implementation, reaching an 80% payment rate took something closer to three months, and the figure hints that improvement after this date was minor.²¹⁶ It is important to understand that months of delay are costly to courts, not only in terms of the time value of money but in terms of the time and resources that go into enforcement efforts. Even

215. See *supra* note 193. This figure does not account for cases that remain open throughout the sample period, but incorporating those cases produces a very similar pattern.

216. While selection may explain part of this differential, it cannot account for all of it, as postlaunch non-Matterhorn cases also appear to have better payment outcomes. If Matterhorn's success on this dimension were solely the result of litigant selection dynamics, postlaunch non-Matterhorn cases should have performed worse on this metric than prelaunch cases.

a month after a case was filed, the courts in the aggregate had only collected 51% of the fines they had ordered, compared to over 90% for cases using Matterhorn.

Again, as with case duration in Figure 2, it may seem odd that, within the first ten or so days after the filing of a case, courts seem to collect a *smaller* percentage of the total fine amount they are owed by litigants using Matterhorn relative to litigants proceeding through the traditional in-person process. But even if this delay in payment is a regular feature of Matterhorn usage and not the result of sampling error, it may be a good thing. It indicates that litigants are better able to access their court once platform technology has been implemented to ask questions, negotiate, and even contest their charge. Matterhorn users, by definition, are not seeking simply to pay the stated fines on their citation as quickly as they can; their time to payment is thus naturally delayed by their interactions with prosecutors and judges.²¹⁷ Online platform technology aspires to facilitate communication and negotiation to resolve cases, and these activities take time.²¹⁸ On the other hand, those litigants who accept responsibility and want to pay their fine immediately have no need and may derive little benefit from access to decisionmakers through platform technology.²¹⁹

B. Regression Analysis

Simple descriptive statistics, including counts and averages, demonstrate in an intuitive manner that platform technology has the potential to make state courts more accessible and more efficient. The technology seems to dramatically reduce the time it takes for litigants to resolve their cases, and the data also suggest that in cases involving Matterhorn, litigants are actively interacting with decisionmakers, not merely grumbling and mailing a check. All of that said, as Figure 1 makes clear, not every court began in the same place in terms of its accessibility and efficiency, nor have the Matterhorn-adopting courts

217. Days in Figure 3 are calculated from the filing of the case until the time of payment.

218. There is at least one slight caveat to this contention. Litigants who use Matterhorn are almost certainly more likely to pay their fines and fees online, whereas individuals who do not seek to access the court through platform technology are more likely to send their payments through the mail, which might take a day or two to be received. One could argue that this one- or two-day reduction is actually due to online payment processing and not to Matterhorn, but the counterargument that online platform technology provides a side benefit of inducing litigants to use online payment options, which are much more efficient, is at least colorable.

219. Courts using Matterhorn and other platform technology usually offer online payment options. With the ability to pay an owed fine online instantly, litigants who choose to accept responsibility can conclude their cases almost immediately. The data indicate that about 20% of Matterhorn users paid within the first six days.

necessarily had the same experience or an equally stable environment throughout the sample period. Moreover, the analyses above may not adequately account for other possibly confounding circumstances that harbor the potential to render the estimates—measured as differences in averages and counts—misleading. In this Section, I use regression analysis to explore the robustness of my findings. The results of this enterprise are estimates that differ in magnitude and interpretation, but they carry the same qualitative conclusions.

This analysis explores the effects of platform technology on two different sets of outcomes—four outcomes in all—that are most readily observable in the court data. The first set consists of two time-related measures: (1) the time in days between case initiation and the closing of the case and (2) the time in days between case initiation and the receipt of full payment. The second set of outcomes consists of two payment-oriented variables: (3) the percentage of the amount owed in the case that is finally paid and (4) whether the litigant defaults in the case.²²⁰ I make use of an empirical strategy that some refer to as “differences-in-differences” analysis because the method leverages the fact that different courts adopted Matterhorn at different times (and so I calculate differences *within* a court pre- and postadoption but also differences *across* courts when some adopt during periods in which others have already or not yet adopted) to isolate the effects of an online platform.²²¹ The goal of this analysis is to ascertain whether the implementation of platform technology created significant access and efficiency benefits while also ensuring—to the extent possible—that these benefits cannot be explained away by differences or fluctuations over time in court dockets, operations, or environments.

Every empirical strategy depends on assumptions. My analysis aims to account for a few of the least reasonable assumptions implicit in calculating simple average differences across all courts pre- and post-implementation. Specifically, I control for fixed differences across the courts, and I consider the possibility that court-specific linear and quadratic trends over time (in days) as well as seasonal differences in court and litigant behavior may be the source of my initial results.²²²

220. The coefficient estimates I report in the tables below are calculated using ordinary least squares. I explore a number of other specifications to probe the robustness of my results—for example, I find in unreported analyses that my conclusions are robust to using different logit model alternatives to examine the effects of Matterhorn on the likelihood of default.

221. For a discussion and critique of this approach, see Marianne Bertrand et al., *How Much Should We Trust Differences-in-Differences Estimates?*, 119 Q.J. ECON. 249, 252–54 (2004).

222. The analysis also allows for the correlation of error terms across cases coming from the same court by clustering the standard errors by court. However, the number of clusters is small (eight), and therefore, hypothesis testing may over-reject the null. See A. Colin Cameron et al., *Bootstrap-Based Improvements for Inference with Clustered Errors*, 90 REV. ECON. & STAT. 414,

The study also controls for some very basic litigant demographics: (1) the litigant's age and (2) the state of the litigant's driver's license.²²³ Nevertheless, data are never as comprehensive as one would prefer them to be, and so many—very reasonable, in my view—assumptions are necessarily built into the analysis. For instance, the work below does not incorporate whether the citation was based on state or local law, nor does it control for the law enforcement agency that issued the citation, although I have no good reason to believe that omitting these variables from my analysis would bias my findings.²²⁴

I present the results of these regressions in Tables 2 through 5 below, one table for each outcome. In these results tables, each column represents a different specification, with the fifth and sixth columns being arguably the most robust. The estimates in these columns are conservative in that they are resilient to many potentially confounding influences. The key independent variables include “Post-Matterhorn,” “Used Matterhorn,” and “Granted Relief.” The estimated coefficients on these three variables are the difference in case outcomes between pre- and postadoption of Matterhorn cases, between Matterhorn and non-Matterhorn cases (both pre- and postadoption), and between cases in which litigants were and were not granted relief, respectively. Adding different combinations of coefficients together and comparing their sums allows one to assess differences in outcomes across groups, similar to the approach of Figures 1 through 3.

I emphasize the estimates in Column (6) of the tables below, although it is important to recognize that including “Granted Relief” as a regressor has significant implications for the interpretation of the column's results because “Granted Relief” is itself an outcome of the resolution process and thus endogenous. I nevertheless add “Granted Relief” to the specifications in Columns (3) and (6) because doing so is valuable for investigating *how* the adoption of Matterhorn's platform

414–15 (2008) (explaining that a small number of clusters results in standard errors that are biased downward, leading to over-rejection of the null hypothesis). The amount of bias can be significant. *Id.* at 422. For Tables 2 and 3, this concern is material, and so the results there should be viewed with caution. The primary conclusions with respect to the “Used Matterhorn” coefficients in Tables 4 and 5 seem unlikely to be upset by this potential bias, however.

223. Including these controls resulted in lost observations. Results are robust to excluding these variables as controls (and including the otherwise dropped observations).

224. In addition, I use the case filing date, not the “offense” date, when pinpointing the day a case begins, and I do not employ offense codes as controls. The data were also “cleaned,” meaning cases with apparently similar circumstances were sometimes grouped together even though they were labelled differently in different courts. Fractions of dollars were rounded in a few cases to make sure that amount totals were consistent in the data; certain cases labeled “disposed” were treated as if they were “closed”; missing first and last payment dates were replaced with the “close” date and missing “close” dates were replaced with the final payment date. None of these minor adjustments is likely to have any effect on the results.

technology affects the particular outcome at issue.²²⁵ More precisely, these columns allow one to consider whether the estimated coefficients on “Used Matterhorn” in Columns (2) and (5)—the aggregate effect estimates—are driven solely by Matterhorn cases that receive relief from the court or are they also driven by Matterhorn cases in which relief was denied. Do cases in this latter category experience reduced case duration, faster payment receipts, and less default?

TABLE 2: TIME-TO-CLOSE RESULTS

| | (1) | (2) | (3) | (4) | (5) | (6) |
|--|-----------------------|-----------------------|-----------------------|----------------------|-----------------------|----------------------|
| Post-Matterhorn (0 = No, 1 = Yes) | -2.186 (3.545) | -0.911 (3.725) | -0.964 (3.714) | -1.352 (2.918) | -0.114 (3.189) | -0.184 (3.178) |
| Used Matterhorn (0 = No, 1 = Yes) | | -16.425*** (4.158) | -5.755** (2.102) | | -15.796*** (4.237) | -5.769** (2.330) |
| Granted Relief (0 = No, 1 = Yes) | | | -12.441*** (3.456) | | | -11.697** (3.672) |
| Constant | 76.847*** (10.658) | 74.507*** (10.617) | 74.374*** (10.639) | 38.418** (11.698) | 39.422** (11.660) | 39.590** (11.666) |
| Controls | | | | | | |
| Age and State | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Court Fixed Effects | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Month of Year Fixed Effects | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Court-Specific Linear Time Trends | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Court-Specific Quadratic Time Trends | | | | ✓ | ✓ | ✓ |
| Mean Time to Close | 42.35 | 42.35 | 42.35 | 42.35 | 42.35 | 42.35 |
| No. of Observations | 47,473 | 47,473 | 47,473 | 47,473 | 47,473 | 47,473 |

Notes: The outcome variable is the time (in days) between the case’s filing and closing dates. This analysis does not include open cases. *, **, *** represent significance at the 10%, 5%, and 1% level, respectively. Standard errors clustered on court are reported in parentheses.

Beginning with the effect of Matterhorn’s platform technology on case duration, Table 2 shows that the cases of litigants who use Matterhorn and who do *not* receive relief conclude 5.7 days earlier on average relative to non-Matterhorn cases, after controlling for the age and the licensing state of the litigant, court fixed effects, month of the year effects, and court-specific linear and quadratic trend controls.²²⁶ The reduction in closing time is even greater for Matterhorn cases in which the court offers the litigant relief, over seventeen days earlier, when compared to non-Matterhorn cases. The average dispute in my sample lasts over forty days, signifying that implementing platform technology like Matterhorn has the potential to reduce the duration of an average minor state court case (e.g., a traffic ticket) by 10% to 40%,

225. Importantly, “Granted Relief” only takes the value of one in cases granted relief *through Matterhorn*—i.e., it does not mark traditionally resolved cases that received relief—and takes the value of zero for all cases in which “Used Matterhorn” is zero.

226. For sake of brevity, not all of the estimated coefficients are included in the tables.

with greater duration reductions associated with litigants who receive relief after accessing the court through the platform.²²⁷

TABLE 3: TIME-TO-PAYMENT RECEIPT RESULTS

| | (1) | (2) | (3) | (4) | (5) | (6) |
|--|-----------------------|-----------------------|-----------------------|----------------------|----------------------|----------------------|
| Post-Matterhorn (0 = No, 1 = Yes) | -2.958 (3.312) | -1.644 (3.526) | -1.697 (3.509) | -2.342 (2.824) | -1.066 (3.120) | -1.134 (3.102) |
| Used Matterhorn (0 = No, 1 = Yes) | | -15.771*** (4.435) | -5.787** (1.910) | | -15.115** (4.508) | -5.723** (2.073) |
| Granted Relief (0 = No, 1 = Yes) | | | -11.531** (3.398) | | | -10.853** (3.562) |
| Constant | 78.253*** (11.454) | 75.836*** (11.394) | 75.703*** (11.419) | 41.428** (12.382) | 42.507** (12.343) | 42.669** (12.350) |
| Controls | | | | | | |
| Age and State | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Court Fixed Effects | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Month of Year Fixed Effects | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Court-Specific Linear Time Trends | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Court-Specific Quadratic Time Trends | | | | ✓ | ✓ | ✓ |
| Mean Time to Payment | 40.66 | 40.66 | 40.66 | 40.66 | 40.66 | 40.66 |
| No. of Observations | 43,340 | 43,340 | 43,340 | 43,340 | 43,340 | 43,340 |

Notes: The outcome variable is the time (in days) between the case's filing and final pay dates. This analysis does not include open cases. *, **, *** represent significance at the 10%, 5%, and 1% level, respectively. Standard errors clustered on court are reported in parentheses.

Importantly, while the graphical analysis in the figures points to a general overall reduction in the time it takes for cases to resolve post-Matterhorn (perhaps indicative of a decline in court congestion), the regression analysis in Table 2 tells a more complicated story. The inclusion of court-specific linear trends (to capture smooth changes in court outcomes over time) and litigant controls seems to eliminate any statistically significant evidence of a general post-Matterhorn drop in case duration. However, accounting for time trends may be excessively conservative and risks ignoring any beneficial (or pernicious) effects of Matterhorn that grow or decline steadily over time, and may therefore misleadingly mask a general post-Matterhorn effect on case duration. Indeed, when I do without the court-specific trend controls included in Table 2, I find that Matterhorn adoption is associated with substantial reductions in average case duration on the order of fifteen to twenty days—or close to a third of prelaunch duration. The estimated effects of adopting platform technology on time-to-payment receipt are given in Table 3. These estimates are virtually identical to the time-to-close results, reflecting the fact that a court's payment receipt is highly—if

227. None of these results are sensitive to including the small number of open cases (with conservative assumptions used to calculate their duration) in the analysis.

not mechanically—correlated with the closing of a case, and affirming the proposition that litigant access (shorter case duration) and court efficiency (faster compliance) go hand in hand.

From an access perspective, these findings seem encouraging, although the analysis in this Article can only study outcomes that are observable in the data that courts assemble and are willing to share. Undoubtedly, this is a serious shortcoming. For instance, if litigants happened to be very unsatisfied with the prospect of accessing courts through platform technology, perceiving it as unfair, for example, then focusing solely on the reduction in a case's duration and other metrics related to case processing would be misleading.²²⁸ Examining litigant reactions to platform technology on these other unrecorded or softer dimensions is beyond the scope of this Article. Yet some anecdotal and survey evidence at least hints that litigants are not only satisfied with using Matterhorn but grateful for the access it affords them.²²⁹ User surveys and informal interviews reveal that litigants appear to have had very positive experiences with Matterhorn.²³⁰ More than 90% of Matterhorn litigants found the platform easy to operate,²³¹ and 92% indicated that they fully understood the state of their case throughout the online process.²³² Survey results also corroborate the notion that platform technology can significantly increase litigants' access to the courts.²³³ More than a third of survey respondents reported that they

228. See Longan, *supra* note 146, at 296 (“[A]ccuracy and efficiency are two methods of assessing a civil justice system. But the framework is incomplete. Procedures must not only be accurate and efficient: they must also be perceived by the litigants as fair.”).

229. See Bulinski & Prescott, *supra* note 6, at 215, 224–27 (offering data indicating “that a large fraction of the population would find it more convenient to address their legal issues at times when courts are closed” and further describing how business hours–type availability can hamper “access to justice”); Hou et al., *supra* note 129, at 10 (discussing litigants’ perceptions of the fairness of their interactions with courts when utilizing online case resolution systems).

230. *Online Dispute Resolution for Courts*, MATTERHORN, <https://getmatterhorn.com/online-dispute-resolution-for-courts/> (last visited Oct. 1, 2017) [<https://perma.cc/SG8L-XEJV>] [hereinafter *Online Dispute Resolution*] (summarizing the results of a user survey: “[C]itizens have been very positive about the Matterhorn experience. The user survey reveals that more than 90% of citizens found the website easy to use. And 92% indicated they fully understood the state of their case throughout the online process.”); *Online Resolution Outcomes: Putting Court Access Technology to Work*, COURT INNOVATIONS INC. 2, <https://www.sec.gov/Archives/edgar/data/1691881/000166919116000080/WhitePaper1.pdf> (last visited Oct. 1, 2017) [<https://perma.cc/TZ2Y-FRMC>] [hereinafter COURT INNOVATIONS INC.].

231. *Online Dispute Resolution*, *supra* note 230 (describing ease-of-use results from a user survey conducted by Court Innovations Inc.); COURT INNOVATIONS INC., *supra* note 230, at 5.

232. *Online Dispute Resolution*, *supra* note 230 (reporting procedural comprehension results from Court Innovations Inc.’s user survey); COURT INNOVATIONS INC., *supra* note 230, at 5.

233. *Online Dispute Resolution*, *supra* note 230 (“But perhaps the most important finding of the user survey is the evidence that Matterhorn is significantly increasing citizen access to the courts.”); see also Bulinski & Prescott, *supra* note 6, at 211 (arguing that online case resolution systems are capable of providing litigants with greater access to courts).

would not have been able to come to the courthouse in person at all if not for the availability of online platform access, and therefore would have simply paid their fine (if they were able to pay) with no realistic opportunity to challenge the government's allegations against them—or they just would have gone into default.²³⁴

The frequency of requests made through Matterhorn outside of traditional business hours (30%) and on weekends (10%) validates this conclusion.²³⁵ Timing is not a perfect proxy for a litigant's inability to go to court in person, of course.²³⁶ Many of these individuals may have been able to miss work but just found it much more costly to do so relative to using the online platform.²³⁷ On the other hand, many may have been able to go online during a lunch or other break (i.e., during business hours) to resolve a legal issue but would not have been able to physically go to the courthouse.²³⁸ In any event, based on these two measurements, it seems reasonable to estimate that nearly four out of every ten litigants who use Matterhorn would have had little recourse but to accept responsibility and pay any associated fines or to continue to incur penalties and potentially face a failure-to-pay warrant issued for their arrest if the Matterhorn platform were unavailable.

Another indirect way litigants might express their satisfaction is by opening their wallets—and doing so sooner rather than later.²³⁹

234. *Online Dispute Resolution*, *supra* note 230 (“39% of people who used the system said they would not have been able to come to court in person. This means that Matterhorn courts provide 64% more access.”); COURT INNOVATIONS INC., *supra* note 230, at 6.

235. Bulinski & Prescott, *supra* note 6, at 227 (“We determined, from a small sample of user requests—one that is instructive on this question but also not necessarily representative—that approximately 10 percent of these requests for traffic cases are submitted to courts on weekends, and about 30 percent are made outside of typical business hours.”).

236. *See id.* at 226 (“There is no perfect way to measure the burden courts impose on citizens by restricting the hours in which individuals can seek to resolve their outstanding legal issues.”); *id.* at 227 (“Some of these cases would surely be resolved either way; the fact that individuals request reviews and communicate with judges outside of open court hours, however, signals that it is perhaps much easier for them to do so during alternative times.”).

237. *See id.* at 224–26 (discussing the various costs involved in missing work—including monetary losses, loss of an employer's goodwill, and costs derived from child care expenses—and how litigants may avoid those costs by utilizing an online case resolution system).

238. *Id.* at 227:

We note that because the use of OCR systems is much more time efficient (no travel, no lines), the 64 percent of requests that occurred during business hours may have been submitted during short breaks, over the lunch hour, or while in the midst of other temporary or unexpected downtime—i.e., periods during which physically going to court would have been impossible. Had these litigants been required to go to court in person, they may have preferred non-business hours. Indeed, it is possible that these litigants may have been unable to access the court at all had OCR systems not been available at the courts in question.

239. *See* Christian Homburg et al., *Do Satisfied Customers Really Pay More? A Study of the Relationship Between Customer Satisfaction and Willingness to Pay*, J. MARKETING, Apr. 2005, at 84, 84 (finding “a strong, positive impact of customer satisfaction on willingness to pay”).

Litigants are almost certainly more likely to pay the sum a court says they owe after a prosecutor or judge has answered their questions and considered their arguments.²⁴⁰ If this happens soon after the issuance of a citation in a court with platform technology, one would expect to see the “percentage of fines received” metric approach the 100% mark much earlier in the case-processing timeline,²⁴¹ and ultimately achieve higher percentages received overall. Table 4 is an analog to Figure 3 but explicitly examines—pre- and post-Matterhorn—the percentage of payments received on an amount the litigant owes the court, the idea being that, if platform technology enhances access or satisfaction, one should anticipate post-Matterhorn courts collecting a larger fraction of the fines they demand. If platform technology positively affects this percentage, it would signal not only better court access but also more efficient court processing and less deadweight loss.

Table 4 indicates that the percentage paid post-implementation increases—by about two percentage points—for those who do not use Matterhorn, suggesting either an online platform spillover effect in the form of reduced court congestion or a general upward trend in collection efficiency deriving from another source.²⁴² Those who do use Matterhorn (and do *not* receive any relief as a result of their accessing the court’s decisionmakers) show an additional 7.7 percentage-point increase in the percentage of their obligation that they ultimately pay. Litigants who exploit Matterhorn and *do* receive some relief from the court appear to perform even better relative to the baseline, by almost twelve percentage points, but the difference between the behavior of those who are granted relief and those who are not is not statistically significant. If there truly is no difference between those litigants who receive relief and those who do not in their willingness to pay their fine, one interpretation is that the *outcome* of the case matters less to litigants than the process, including access. There is little doubt that litigants would prefer to receive relief, but if they feel they have had an opportunity to correspond with a decisionmaker, they may also feel

240. See Tom R. Tyler, *Procedural Justice, Legitimacy, and the Effective Rule of Law*, 30 CRIME & JUST. 283, 292 (2003):

Studies of decision acceptance suggest that it is usually procedural justice that is especially important in shaping people’s willingness to defer to the decisions made by legal authorities In other words, while people could potentially be influenced by either the fairness of the outcomes they receive or the fairness of the procedures by which legal authorities exercise their authority, procedural fairness typically shapes . . . decision acceptance (citation omitted);

Bulinski & Prescott, *supra* note 6, at 231 (“Individuals tend to have more faith in systems when they feel they have had an opportunity to speak.”).

241. See *supra* Figure 3.

242. See *supra* note 186 and accompanying text.

satisfied that they have been heard and their case has been effectively resolved.²⁴³ At the margin, these litigants may be more willing to pay, and pay sooner.²⁴⁴ Either way, observe that with a baseline of close to 90% pre-implementation, Matterhorn users (and especially those who receive relief) approach a 100% payment rate.

TABLE 4: PERCENTAGE-PAID RESULTS

| | (1) | (2) | (3) | (4) | (5) | (6) |
|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Post-Matterhorn (0 = No, 1 = Yes) | 0.033** (0.010) | 0.024** (0.010) | 0.024** (0.010) | 0.027*** (0.005) | 0.017** (0.007) | 0.018** (0.007) |
| Used Matterhorn (0 = No, 1 = Yes) | | 0.110*** (0.030) | 0.075*** (0.015) | | 0.114*** (0.031) | 0.077*** (0.017) |
| Granted Relief (0 = No, 1 = Yes) | | | 0.040 (0.032) | | | 0.043 (0.031) |
| Constant | 0.975*** (0.084) | 0.990*** (0.080) | 0.991*** (0.080) | 0.716*** (0.092) | 0.714*** (0.092) | 0.714*** (0.093) |
| Controls | | | | | | |
| Age and State | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Court Fixed Effects | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Month of Year Fixed Effects | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Court-Specific Linear Time Trends | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Court-Specific Quadratic Time Trends | | | | ✓ | ✓ | ✓ |
| Mean Percentage Paid | 0.916 | 0.916 | 0.916 | 0.916 | 0.916 | 0.916 |
| No. of Observations | 47,608 | 47,608 | 47,608 | 47,608 | 47,608 | 47,608 |

Notes: The outcome variable is the percentage of the dollar amount ordered by the court that the litigant paid. This analysis does not include open cases. **, *** represent significance at the 10%, 5%, and 1% level, respectively. Standard errors clustered on court are reported in parentheses.

Finally, it is worth studying the effects of platform technology on the likelihood that a litigant will default. Default can be described as a disfavored status with adverse legal consequences: (1) fresh fines, fees, and other burdens begin to accrue to the litigant; (2) the litigant forfeits the opportunity to contest the violation or infraction alleged by law enforcement; and (3) additional, onerous obligations encumber the court, including the need to send reminders and the prospect of costly future enforcement (e.g., detention).²⁴⁵ In an ideal world with perfect

243. See Tyler, *supra* note 240, at 292 (“[While] assessments of the favorableness of outcomes [and] distributive justice judgments have a role in shaping people’s reactions to their encounters with legal authorities[,] . . . procedural justice judgments consistently are found to have the major influence.”).

244. It is also possible that selection plays a role here as well—that individuals who are able and willing to use Matterhorn may be more able and willing to pay and to do so earlier in the timeline. However, despite using a fairly saturated model, there is no decline in the percentage paid for those who do not use the online platform post-implementation, reducing the likelihood that this possibility plays a critical role.

245. See MICH. COMP. LAWS § 600.8827(8) (2016):

Not less than 28 days after a defendant fails to appear in response to a citation . . . , the court shall give notice . . . that if the defendant fails to appear or fails to comply with

access to justice and perfect information, default would be nonexistent because litigants and decisionmakers would communicate and resolve their disputes quickly.²⁴⁶ Default, then, is caused by institutions that fail to accomplish dispute resolution in a timely fashion.²⁴⁷ If platform technology enjoys the ability to help parties communicate more easily and resolve their disputes earlier, then defaulting on cases should be rarer once access of that sort is available.

Table 5 explores the effects that platform technology has on the likelihood that a dispute ends in default.²⁴⁸ To establish a baseline, I compare the default rates of prelaunch cases and those of postlaunch non-Matterhorn cases.²⁴⁹ I discover that the likelihood of default is the same (or, more precisely, I find no evidence of any difference) between these two groups. In contrast to non-Matterhorn and prelaunch cases, litigants whose disputes went through the Matterhorn system but who were *not* granted any relief nevertheless had an 18.6 percentage-point lower likelihood of entering default status on average. Those litigants who did receive an offer of relief had over a twenty-three percentage-point reduction in the likelihood of winding up in default. Again, given the baseline rate of default in these courts, these calculations suggest

the order or judgment . . . within 14 days after the notice is issued, the court will give to the secretary of state notice of that failure.;

supra note 181.

246. This is an idealistic view, but failure to settle is canonically viewed as the consequence of asymmetric information—essentially, the inability of the parties to understand each other. *See* Lucian Arye Bebhuk, *Litigation and Settlement Under Imperfect Information*, 15 RAND J. ECON. 404, 414 (1984) (“[Information] asymmetry might influence parties’ litigation and settlement decisions, and . . . might lead to a failure to settle. Furthermore, legal rules and institutions that magnify the extent to which an informational asymmetry is present might well increase the likelihood of litigation.”); Kathryn E. Spier, *Settlement Bargaining and the Design of Damage Awards*, 10 J.L. ECON. & ORG. 84, 85–86 (1994) (“[I]nformation asymmetries when combined with legal complexity present an obstacle to efficient dispute resolution.”).

247. *See, e.g.,* Pepin, *supra* note 200, at 16–18:

Courts can adopt cost-effective reminder practices and information-sharing practices that substantially increase attendance in court, save staff time, reduce added fees for non-appearance, and increase revenue collected. Achieving these goals should not be inhibited by the reasonable, but unsupported, notion that people should be responsible enough to get themselves to court.

248. Table 5 reports results from estimating a linear probability model, *see* JEFFREY M. WOOLDRIDGE, *INTRODUCTORY ECONOMETRICS: A MODERN APPROACH* 248 (2012), using whether the final disposition of a case was a default judgment as the binary outcome. The model, as with the previous analyses, includes controls for the litigant’s age and driver’s license state, court fixed effects, month of the year fixed effects, and court-specific linear and quadratic time trends. Using alternative specifications, including logits, did not affect the substance of the results.

249. It is worth reiterating just how high the percentage of cases that default is on average in state courts. In the eight courts under consideration here, the average default rate is over 20%. For one out of every five cases involving civil infractions, therefore, the court and the litigant have to endure additional procedure and delay, even if the litigant eventually pays, as Table 4 indicates usually happens in these cases.

that litigants who seek and receive relief from their court through the Matterhorn platform rarely default. While some of this association may be a function of particularly careful litigants tending more often to use the platform in the first place—i.e., those who are less likely to default are more likely to use Matterhorn—the fact that default rates for nonusers do not move to offset these gains indicates that selection is not the sole source of the relationship identified in Table 5.

TABLE 5: LIKELIHOOD OF DEFAULT RESULTS

| | (1) | (2) | (3) | (4) | (5) | (6) |
|--|--------------------|----------------------|----------------------|---------------------|----------------------|----------------------|
| Post-Matterhorn (0 = No, 1 = Yes) | -0.015* (0.007) | 0.002 (0.009) | 0.002 (0.009) | -0.008 (0.008) | 0.010 (0.010) | 0.010 (0.010) |
| Used Matterhorn (0 = No, 1 = Yes) | | -0.225*** (0.028) | -0.183*** (0.016) | | -0.227*** (0.028) | -0.186*** (0.016) |
| Granted Relief (0 = No, 1 = Yes) | | | -0.049* (0.025) | | | -0.048* (0.025) |
| Constant | 0.287** (0.085) | 0.258** (0.083) | 0.257** (0.083) | 0.293*** (0.082) | 0.298*** (0.082) | 0.298*** (0.082) |
| Controls | | | | | | |
| Age and State | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Court Fixed Effects | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Month of Year Fixed Effects | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Court-Specific Linear Time Trends | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Court-Specific Quadratic Time Trends | | | | ✓ | ✓ | ✓ |
| Mean Default Rate (Proportion) | 0.229 | 0.229 | 0.229 | 0.229 | 0.229 | 0.229 |
| No. of Observations | 51,630 | 51,630 | 51,630 | 51,630 | 51,630 | 51,630 |

Notes: The outcome variable is a dichotomous variable equal to one if the case enters into default and is zero otherwise. This analysis does not include open cases. *, **, *** represent significance at the 10%, 5%, and 1% level, respectively. Standard errors clustered on court are reported in parentheses.

* * *

Although the evidence I lay out above highlights the significant advantages of online platform technology for both litigants and courts, this study has limitations. First and foremost, the scope of the study is modest—with eight trial courts from a single state—and the analysis examines the consequences of a particular *instance* of online platform technology, Matterhorn, which is arguably the first such platform to be rolled out in a number of independent but otherwise similar and geographically proximate state courts. Second, the outcomes I am able to examine are limited to metrics constructed using case-processing data. This limitation requires translating efficiency improvements in case duration, payment compliance, and default rates into terms that access-to-justice advocates and litigants can appreciate. Mostly, I do not endeavor to do this systematically in this Article, but in the end, movement on these metrics is likely to embody changes in the barriers

litigants face and the satisfaction they feel when they use their courts. Third, while leveraging variation in online platform adoption timing is a reliable approach to studying the causal effects of this innovation, it is built on important, identifying assumptions, and a true randomized controlled trial would be a useful complement to this research.

CONCLUSION

This Article makes the *empirical* case that platform technology presents an important opportunity for policymakers who wish to open up America's courts so that citizens can make the most of what these institutions have to offer. There are plenty of reasons to believe that platform technology can make resolving minor cases in courts easier, faster, and better, and yet rigorous evidence on the access-to-justice consequences of platform technology is wanting. I address this need in this Article by studying the effects of implementing such technology in eight state courts that collectively resolve tens of thousands of cases in a year. I find compelling empirical evidence that by embracing online platform technology, courts can sharply reduce case duration, improve litigant satisfaction, and curtail litigant default rates. For most legal matters in our state courts, the principal barrier to accessing justice is limited access to our courthouses. While there are several benefits to improving access to high-quality legal representation and developing self-help resources, the evidence I present in this Article supports the idea that reform targeting the somewhat humdrum transaction costs of using everyday courthouses would go a very long way to making our courts more open, responsive, efficient, and effective—and to ensuring that citizens perceive them as such. When the issue is framed in this way, it perhaps should not be surprising that online technology—often a central driver of reducing costs in other domains—may also prove to be a veritable fount of access-to-justice innovation.