

# Splitting Logs: An Empirical Perspective on Employment Discrimination Settlements

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# ESSAY

## SPLITTING LOGS: AN EMPIRICAL PERSPECTIVE ON EMPLOYMENT DISCRIMINATION SETTLEMENTS

Stewart J. Schwab & Michael Heise†

*Most cases settle, in employment discrimination litigation as elsewhere. Unfortunately, empirical knowledge of settlements remains limited. Data scarcity fuels untested perceptions and, all too frequently, misperceptions about how employment disputes are resolved. This Essay exploits a unique data set of successful settlements in the U.S. District Court for the Northern District of Illinois from 1999–2004 that includes for each case the plaintiff’s initial monetary demand, the defendant’s offer, and the resulting settlement. We find that in raw constant dollars, final settlements are typically far closer to defendant offers than plaintiff demands. After converting plaintiff demands, defendant offers, and final settlements into natural logs, however, the typical settlement splits the difference between plaintiff demand and defendant offer. We also find that settlement amounts rise if a trial date is set for a case. Finally, results from three-stage least squares models—that plaintiff demands influence defendant offers that, in turn, influence final settlement amounts—provide a glimpse into the structure of employment discrimination settlements.*

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## INTRODUCTION

As trials “vanish,” settlements flourish.<sup>1</sup> Data from state and federal courts evidence this trend. The overwhelming majority of civil filings in state courts increasingly settle prior to trial, and only a small percentage result in a jury or bench trial verdict.<sup>2</sup> The per capita rate of trials in general jurisdiction courts in twenty-two states fell by 33% between 1976 and 2002.<sup>3</sup> A trend away from court resolutions and toward settlements also characterizes litigation in federal courts.<sup>4</sup> The proportion of lawsuits commenced in federal courts that trials resolved fell from 11.5% in 1962 to 1.8% in 2002.<sup>5</sup>

Although the move toward resolving civil litigation through settlement rather than trial generally characterizes cases in the employment discrimination context, complicating wrinkles exist. On the one hand, the broad point that settlements perform most of the work resolving lawsuits certainly describes the employment discrimination setting. Kevin Clermont and Stewart Schwab, for example, found that settlements resolved almost 70% of employment discriminations claims filed in federal court.<sup>6</sup> Moreover, similar to most other types of

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<sup>1</sup> See generally Marc Galanter, *The Vanishing Trial: An Examination of Trials and Related Matters in Federal and State Courts*, 1 J. EMPIRICAL LEGAL STUD. 459 (2004) (tracking the decline in civil trials from 1962–2002 and suggesting increased rates of settlement as a possible cause).

<sup>2</sup> In 1992, settlement resolved more than 70% of tort cases in the nation’s seventy-five largest counties, and jury or bench trial verdict resolved less than 3%. See BUREAU OF JUSTICE STATISTICS SPECIAL REPORT, U.S. DEP’T OF JUSTICE, CIVIL JUSTICE SURVEY OF STATE COURTS, 1992: TORT CASES IN LARGE COUNTIES 3 tbl.2 (1995). Similar findings emerge for contract cases. See BUREAU OF JUSTICE STATISTICS SPECIAL REPORT, U.S. DEP’T OF JUSTICE, CIVIL JUSTICE SURVEY OF STATE COURTS, 1992: CONTRACT CASES IN LARGE COUNTIES 6 tbl.7 (1996) (finding that agreed judgment resolved nearly 50% of certain contract cases in the nation’s seventy-five largest counties and that jury or bench trial verdict resolved, combined, less than 3%); see also BUREAU OF JUSTICE STATISTICS SPECIAL REPORT, U.S. DEP’T OF JUSTICE, CIVIL JUSTICE SURVEY OF STATE COURTS, 2005: CIVIL BENCH AND JURY TRIALS IN STATE COURTS, 2005, at 8–9 (2009) (discussing the decline in civil trials generally); BUREAU OF JUSTICE STATISTICS BULLETIN, U.S. DEP’T OF JUSTICE, CIVIL JUSTICE SURVEY OF STATE COURTS, 2001: CIVIL TRIAL CASES AND VERDICTS IN LARGE COUNTIES, 2001, at 2 (2004) (differentiating between types of cases).

<sup>3</sup> Galanter, *supra* note 1, at 523, 527 fig.38.

<sup>4</sup> See Kevin M. Clermont & Stewart J. Schwab, *How Employment Discrimination Plaintiffs Fare in Federal Court*, 1 J. EMPIRICAL LEGAL STUD. 429, 439 fig.6, 440, 457–58 app. (2004).

<sup>5</sup> Galanter, *supra* note 1, at 462–63 tbl.1.

<sup>6</sup> Clermont & Schwab, *supra* note 4, at 440. Of note, however, is that, as compared to other plaintiffs, employment discrimination plaintiffs are slightly less likely to resolve litigation through settlement. See *id.* at 440–41.

cases, not only do most employment discrimination cases settle, but “more and more do so with the passing years.”<sup>7</sup> On the other hand, employment discrimination cases settle *less* frequently than other case types.<sup>8</sup> To be sure, it is difficult to overstate the point that employment discrimination cases have joined the general and pronounced trend away from trials and toward settlement for resolution. That said, the slope for employment discrimination cases is less steep than the slope for other case types.

What accounts for civil litigants’ growing preference for settlement over trial? Litigants’ self-interest—including practical factors such as increased prospects for reduced disposition time and cost<sup>9</sup> as well as avoiding the unpleasantness typically associated with trials and trial preparation—certainly contributes. In addition, despite important costs, the legal system itself increasingly promotes settlements through the rise of the alternative dispute resolution movement as well as provisions in the Civil Justice Reform Act of 1990<sup>10</sup> and the Alternative Dispute Resolution Act of 1998.<sup>11</sup> Indeed, these statutory developments help explain why virtually every federal district court now either requires or strongly encourages litigants to participate in a settlement conference.<sup>12</sup> Finally, settlement provides litigants with the opportunity for increased privacy as confidentiality agreements binding settling parties are common.<sup>13</sup>

This shift from trial to settlement as the mechanism of choice for resolving employment discrimination disputes, combined with the popularity of confidentiality agreements binding settling parties, imposes important costs.<sup>14</sup> While confidentiality agreements generate benefits (including settlements), they reduce the amount of informa-

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<sup>7</sup> *Id.* at 440.

<sup>8</sup> *See id.*

<sup>9</sup> *See* Ezra Friedman & Abraham L. Wickelgren, *No Free Lunch: How Settlement Can Reduce the Legal System’s Ability to Induce Efficient Behavior*, 61 SMU L. REV. 1355, 1355 (2008).

<sup>10</sup> Pub. L. No. 101-650, 104 Stat. 5089 (codified at 28 U.S.C. §§ 471–482 (2006)).

<sup>11</sup> Pub. L. No. 105-315, § 6, 112 Stat. 2993, 2995–96 (codified at 28 U.S.C. § 654 (2006)) (amending the Judicial Improvements and Access to Justice Act, Pub. L. No. 100-702, 102 Stat. 4642 (1988)).

<sup>12</sup> *See* Minna J. Kotkin, *Outing Outcomes: An Empirical Study of Confidential Employment Discrimination Settlements*, 64 WASH. & LEE L. REV. 111, 126 (2007); *see also* FED. R. CIV. P. 16 (stating that a court may order parties to appear for pretrial conferences to facilitate settlement); Morton Denlow & Jennifer E. Shack, *Judicial Settlement Databases: Development and Uses*, JUDGES’ J., Winter 2004, at 19, 19 (describing the judicial conference as a “principal means by which cases are resolved”).

<sup>13</sup> *See* Minna J. Kotkin, *Invisible Settlements, Invisible Discrimination*, 84 N.C. L. REV. 927, 929 (2006) (describing confidentiality agreements as the “norm” in individual employment discrimination cases that settle).

<sup>14</sup> *See generally* Owen M. Fiss, *Against Settlement*, 93 YALE L.J. 1073 (1984) (describing many of the problems associated with settlement, especially coerced consent, bargains struck by those without authority, subsequent judicial involvement, and favoring efficiency over justice).

tion available to subsequent litigants. Ironically, this lack of information can impede the settlement process itself.<sup>15</sup> Without access to a repository of settlement agreements, parties seeking to resolve an employment discrimination dispute—as well as courts seeking to promote settlements and reduce court congestion—lack critical information.

Thus, although most litigation ends in settlements, we know frustratingly little about the outcomes or the process of settlements. Therefore, we know frustratingly little about most litigation. Reduced information about settlements, especially about settlement terms, also imposes costs on research literatures. The popularity of confidentiality agreements in employment discrimination lawsuit settlements impedes a broader and deeper understanding of settlement behavior in these cases.<sup>16</sup> Although settlements greatly exceed trials as the mechanism for resolving employment discrimination lawsuits, scholars know far less about settlements than trials. As Professors Laura Nielson and Robert Nelson note, “we have virtually no information on how favorable settlements are for plaintiffs,” and this absence of critical information “represents an enormous gap in our knowledge about discrimination litigation.”<sup>17</sup>

The enormous comparative knowledge gap about settlements poses a critical challenge to future legal scholarship. Although legal research on the civil justice system is only beginning to assess trial activity with empirical rigor, it is already clear that future scholarship on the American civil justice system will inevitably have to include rigorous work on settlements and settlement behaviors. As the trial continues to vanish and settlements grow in absolute and relative import, related scholarship will need to adjust as well.

In addition to dampening future research efforts, the paucity of empirical research on employment litigation settlements helps fuel widely accepted assumptions about employment discrimination litigation. One such assumption is that critical litigation stages influence settlements and their terms. Specifically, many observers opine that a plaintiff’s survival of a summary judgment motion and a judge’s setting a trial date are among the critical factors that influence settlement activity and behavior.<sup>18</sup> Similarly, many also hypothesize that

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<sup>15</sup> See Denlow & Shack, *supra* note 12, at 21–22 (describing how settlement data promote settlement).

<sup>16</sup> See Kotkin, *supra* note 13, at 962 (arguing that reduced information skews empirical studies of employment discrimination litigation).

<sup>17</sup> Laura Beth Nielson & Robert L. Nelson, *Rights Realized? An Empirical Analysis of Employment Discrimination Litigation as a Claiming System*, 2005 WIS. L. REV. 663, 693.

<sup>18</sup> See Thomas E. Willging et al., *An Empirical Analysis of Rule 23 to Address the Rulemaking Challenges*, 71 N.Y.U. L. REV. 74, 144 (1996) (noting the influence of critical trial moments on settlement activity).

the specific nature of the legal claim pursued in an employment discrimination lawsuit influences settlement activity.<sup>19</sup> Of course, it is difficult to know whether conventional wisdom finds empirical support because, as Professor Minna Kotkin aptly observes, “Nobody really knows what happens to [most] employment discrimination claims in the federal courts.”<sup>20</sup>

As the recent profound economic turmoil continues to place enormous stress on labor markets,<sup>21</sup> and as the domestic unemployment rate flirts with double-digits,<sup>22</sup> this moment is especially apt to try to gain a better sense about what happens to employment discrimination claims in federal courts. To provide needed information and better assess judicial settlement conferences’ efficacy, a group of magistrate judges in the U.S. District Court for the Northern District of Illinois created a settlement data set designed to assist other judges and magistrates overseeing employment discrimination settlement conferences.<sup>23</sup> While carefully safeguarding party confidentiality, the data set contains information on the type of case, the nature of claim, the specific alleged adverse employment action (e.g., failure to promote or termination), itemized damages, demands and offers, the litigation stage (e.g., whether a plaintiff survived a motion for summary judgment), and final settlement terms and amounts. These data are important, and we are unaware of any other data sets that are similar in size, scope, or focus. Most distinctive is that for each case, our data set includes the plaintiff’s initial monetary demand, the defendant’s initial monetary offer, and the resulting settlement amount.

This Essay focuses on the interactions involving plaintiff demands, defendant offers, and final settlement amounts. We also assess how factors such as litigation stages and alleged injuries influence negotiations in employment discrimination litigation. By exploring these factors with the benefit of actual settlement data, our findings are far more germane to how the majority of employment cases conclude. We find that while a few specific litigation stages emerge as influential, plaintiff demands and defendant offers consistently exert important influence over final settlements. In terms of real, constant

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<sup>19</sup> See Gary Phelan, *Resolving ADA Cases Through Mediation*, TRIAL, Dec. 1998, at 56, 57 (arguing that settlement is more likely in Americans with Disabilities Act (ADA) claims because, among other reasons, they are less “hostile” than other types of employment claims).

<sup>20</sup> Kotkin, *supra* note 12, at 112.

<sup>21</sup> See Melissa Menkel Shorey & Peter D. Guattery, *Changing Personnel Issues in an Economic Downturn*, Md. B.J., July/Aug. 2009, at 4, 5 (noting the implications for labor markets generated by economic turmoil).

<sup>22</sup> See Peter S. Goodman, *85,000 More Jobs Cut in December, Fogging Outlook*, N.Y. TIMES, Jan. 9, 2010, at A1 (noting that the nation’s unemployment rate—10%—would likely worsen in coming months).

<sup>23</sup> See Denlow & Shack, *supra* note 12, at 19–21.

dollars, we also find that final settlements fall far closer to defendant offers than plaintiff demands.

Final settlement amounts that are closer to the defendant's offer than to the plaintiff's demand imply greater bargaining power for defendants. To preview another key finding, settlements also convey a specific pattern in which the parties split the difference of the logs of their respective positions—or what we term “splitting the logs.” The logarithm is a measure of the order of magnitude, the Richter scale for earthquakes being a prominent example. If the parties differ by a couple of orders of magnitude, they will split that difference and the settlement will be an order of magnitude below the plaintiff's demand and an order of magnitude above the defendant's offer.

Our Essay also makes a methodological contribution by comparing results from both ordinary least squares (OLS) and three-stage least squares regression models. The standard regression models identify, among other factors, plaintiff demands and defendant offers as systematically influencing final settlement amounts. Although results from the three-stage least squares models are similar, they provide helpful texture and nuance. Specifically, findings from our three-stage model illustrate that plaintiff demands influence defendant offers, which in turn influence final settlements. Thus, while results from our three-stage least squares model generally reinforce results from our simple regression modes, the three-stage least squares model results provide greater insight into the structure of settlement negotiations and how this structure informs final settlement amounts.

Part I briefly surveys the relevant theoretical and empirical literatures on settlement, with a particular emphasis on the employment discrimination context. Part II describes our data. Part III presents descriptive results, concentrating on the spreads among initial plaintiff demands, defendant offers, and final settlement amounts. Part IV presents regression results that provide a more textured picture of the interactions between key independent variables such as plaintiff demands and defendant offers. We conclude with a brief discussion about our findings' implications for future research.

## I

### LITERATURE REVIEW

Although our analyses focus on factors that influence final settlement amounts in employment discrimination cases, we draw on the broader theoretical and empirical research literatures that address factors that influence litigants' decisions to settle (rather than on the more narrow topic of final settlement amounts). Consequently, we briefly describe below these distinct—though related—research litera-

tures, with an emphasis on leading empirical research, and we situate our study within these literatures.

Comparatively more scholarship assesses litigants' decisions to settle than final settlement amounts. Scholars point to an array of factors that influence litigants' settlement decisions. Law and economic theory provides a rich and helpful framework. For example, George Priest and Benjamin Klein assert that litigation culminating in trials is more likely (and settlement correspondingly is less likely) to occur in "close" cases.<sup>24</sup> Others have found such litigation more likely where the litigants' perspectives of their respective legal positions diverge.<sup>25</sup> In slight contrast, Robert Cooter and his colleagues Robert Mnookin and Lewis Kornhauser feel that litigants' settlement decisions are better understood as a function of bargaining between (and among) litigating parties.<sup>26</sup> To be sure, Priest, Klein, Cooter, Mnookin, and Kornhauser share common conceptual ground insofar as litigants' assessments of their legal exposure inform their bargaining positions.

More recently, scholars have looked to behavioral economics for insights into settlement activity, including framing, anchoring, and ambiguity aversion theories. After comparing final settlement offers with actual jury awards where parties rejected final settlement offers, Jeffrey Rachlinski concludes that framing theory offers much to explain settlement outcomes.<sup>27</sup> Anchoring theory, a variant of framing theory, suggests that people estimate with a reference to an initial "anchor" position, which evolves into a final settlement amount. Research suggests that different anchors generate different expectations and create different estimates and that these varying estimates tend to be biased toward the original anchor.<sup>28</sup> In the settlement context, dispute resolution scholars argue that opening offers may "anchor" an opponent's expectations and counteroffers and, paradoxically, impede a rational settlement.<sup>29</sup> The latter theory, ambiguity aversion, exploits litigants' aversion to agreeing to settle when perceptions of

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<sup>24</sup> See George L. Priest & Benjamin Klein, *The Selection of Disputes for Litigation*, 13 J. LEGAL STUD. 1, 12-17 (1984).

<sup>25</sup> See Steven Shavell, *Alternative Dispute Resolution: An Economic Analysis*, 24 J. LEGAL STUD. 1, 11 (1995).

<sup>26</sup> See, e.g., Robert Cooter et al., *Bargaining in the Shadow of the Law: A Testable Model of Strategic Behavior*, 11 J. LEGAL STUD. 225, 225 (1982); Robert H. Mnookin & Lewis Kornhauser, *Bargaining in the Shadow of the Law: The Case of Divorce*, 88 YALE L.J. 950, 950 (1979).

<sup>27</sup> See Jeffrey J. Rachlinski, *Gains, Losses, and the Psychology of Litigation*, 70 S. CAL. L. REV. 113, 118, 120, 142 (1996).

<sup>28</sup> See generally Chris Guthrie et al., *Blinking on the Bench: How Judges Decide Cases*, 93 CORNELL L. REV. 1, 19-21 (2007) (surveying the anchoring theory literature). For a directed application of the anchoring theory to settlements, see Russell Korobkin & Chris Guthrie, *Psychological Barriers to Litigation Settlement: An Experimental Approach*, 93 MICH. L. REV. 107, 129-42 (1994).

<sup>29</sup> Korobkin & Guthrie, *supra* note 28, at 139.

the probability of a successful outcome (at trial) are far from clear.<sup>30</sup> To the extent that the disposal of an important motion (or motions) during the pretrial stage reduces the uncertainty surrounding a trial's outcome, ambiguity aversion theory might account for an increase in settlement activity after a court decides a critical motion.

In addition to general law and economic and behavioral economic theories, scholars also note the influence of more practical factors on settlement outcomes. After studying a sample of civil litigation in state courts, Samuel Gross and Kent Syverud emphasize the importance of the nature of the litigants and their relations to one another, insurance (including any policy caps), and the distribution of settlement authority on settlement behavior.<sup>31</sup> Finally, pure litigation strategy may also influence settlement activity.<sup>32</sup> For example, by refusing an otherwise reasonable settlement offer, a party can impose additional litigation costs on an opponent by either delaying the final disposition of a case or, in the posttrial context, encumbering a trial court award<sup>33</sup> or both.

Although civil settlements in general and employment discrimination settlements in particular benefit from a maturing theoretical literature, empirical research testing the efficacy of the various theoretical accounts is far less developed. Contributing mightily to the underdeveloped empirical literature is a paucity of helpful data. Moreover, the little empirical literature on employment discrimination litigation that does exist draws principally on published summary judgments or trial decisions.<sup>34</sup> Of course, factors that influence which decisions get published contribute additional complicating wrinkles.<sup>35</sup> Even more important is that motion outcomes and trial decisions, while certainly important, resolve only a comparatively small percentage of employment discrimination claims.<sup>36</sup> Thus, studies of pub-

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<sup>30</sup> For an introduction to ambiguity aversion and related discussion, see generally Craig R. Fox & Amos Tversky, *Ambiguity Aversion and Comparative Ignorance*, 110 Q.J. ECON. 585 (1995).

<sup>31</sup> See Samuel R. Gross & Kent D. Syverud, *Getting to No: A Study of Settlement Negotiations and the Selection of Cases for Trial*, 90 MICH. L. REV. 319, 322 (1991). A study of medical malpractice closed claims in Texas notes the influence of malpractice insurance policy limits on differences between what juries award and what prevailing plaintiffs receive. See David A. Hyman et al., *Do Defendants Pay What Juries Award? Post-Verdict Haircuts in Texas Medical Malpractice Cases, 1988–2003*, 4 J. EMPIRICAL LEGAL STUD. 3, 4 (2007).

<sup>32</sup> See, e.g., Lynn M. LoPucki & Walter O. Weyrauch, *A Theory of Legal Strategy*, 49 DUKE L.J. 1405, 1468–71 (2000) (noting various strategic aspects of the settlement process).

<sup>33</sup> See, e.g., Harlon Leigh Dalton, *Taking the Right to Appeal (More or Less) Seriously*, 95 YALE L.J. 62, 85 (1985) (noting the various reasons motivating a party's decision to file an appeal).

<sup>34</sup> See Kotkin, *supra* note 12, at 118–25 (summarizing the leading empirical studies).

<sup>35</sup> See generally Denise M. Keele et al., *An Analysis of Ideological Effects in Published Versus Unpublished Judicial Opinions*, 6 J. EMPIRICAL LEGAL STUD. 213 (2009) (finding that ideology influences judicial opinion publication decisions in federal appellate courts).

<sup>36</sup> Clermont & Schwab, *supra* note 4, at 457 app.

lished employment discrimination trial decisions necessarily miss the resolution of most employment discrimination cases and, in so doing, introduce the specter of selection bias.

Empirical studies of the comparatively small pool of employment discrimination cases that proceed to trial emphasize the difficulties that plaintiffs face in prevailing. Notably, Clermont and Schwab find that, as compared with defendants, plaintiffs in employment discrimination lawsuits lose more pretrial motions, trials, and appeals.<sup>37</sup> Because the larger pool of employment disputes that settle likely systematically differs from the smaller pool of employment disputes resolved at trial, whether findings from studies of tried employment cases shed much helpful light on settled employment cases remains unclear. Wary of drawing broader inferences from data located at the tip of the “iceberg,”<sup>38</sup> scholars recently began calling for greater attention to settlement activity as well as for the development of public settlement data.<sup>39</sup>

Empirical studies on employment discrimination litigation are few in number; empirical studies of employment discrimination settlements are rare events. The only major study of employment discrimination settlements focuses on filling in important descriptive aspects of settlements.<sup>40</sup> Kotkin’s recent study of employment discrimination settlements is helpful in part because it also uses the Chicago Judicial Settlement Project data set.<sup>41</sup> Kotkin’s discussion emphasizes two important themes. First, the median amount for settling plaintiffs exceeds \$50,000.<sup>42</sup> Second, settling plaintiffs’ recoveries essentially track lost wage calculations.<sup>43</sup> Kotkin interprets her findings to imply that plaintiffs’ discrimination claims against employers are more meritorious than otherwise suggested by analyses of published trial court opinions.<sup>44</sup>

Our study builds on the existing empirical literature in two critical ways. Unlike most other studies, ours relies on settled rather than

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<sup>37</sup> *Id.* at 429; see also Michael Selmi, *Why Are Employment Discrimination Cases So Hard to Win?*, 61 LA. L. REV. 555, 557–61 (2001) (noting plaintiffs’ difficulties pretrial and at trial).

<sup>38</sup> Peter Siegelman & John J. Donohue III, *Studying the Iceberg from Its Tip: A Comparison of Published and Unpublished Employment Discrimination Cases*, 24 LAW & SOC’Y REV. 1133, 1135–37 (1990) (noting that most studies rely on published court opinions while most disputes are resolved without a written judicial opinion).

<sup>39</sup> See, e.g., Judith Resnick, *Uncovering, Disclosing, and Discovering How the Public Dimensions of Court-Based Processes Are at Risk*, 81 CHI.-KENT L. REV. 521, 534–35 (2006) (arguing for making settlement documents and terms public); Stephen C. Yeazell, *Getting What We Asked For, Getting What We Paid For, and Not Liking What We Got: The Vanishing Civil Trial*, 1 J. EMPIRICAL LEGAL STUD. 943, 966–71 (2004) (same).

<sup>40</sup> See Kotkin, *supra* note 12, at 129.

<sup>41</sup> See *id.* at 127–29.

<sup>42</sup> *Id.* at 157.

<sup>43</sup> *Id.*

<sup>44</sup> See *id.* at 160.

tried cases. Moreover, while Kotkin's study of settled employment claims is limited to principally descriptive analyses with an emphasis on lost wage claims,<sup>45</sup> our inquiry centers on structural factors that explain final settlement amounts. Finally, our methodological contribution flows from including both standard regression and three-stage least squares models that, we believe, more accurately capture the nature of the settlement negotiations between plaintiffs and defendants.

## II

### DATA AND ANALYTIC APPROACH

#### A. Data

Our study uses data from the Chicago Judicial Settlement Project (Chicago Project), which grew out of judges' desires to increase the efficacy of settlement conferences and frustration with and reaction to the growing trend toward settlements bound by confidentiality agreements.<sup>46</sup> After every successful settlement conference in the Northern District of Illinois, the presiding magistrate judge prepares and submits a confidential settlement summary report.<sup>47</sup> Each settlement report takes approximately five minutes to complete. To preserve party confidentiality, the magistrate judge excludes party names and case numbers from the report.<sup>48</sup> Magistrate participation in the Chicago Project is voluntary, and the settlement memoranda are compiled monthly into a report for judges' use.

That judges' desires for more helpful and germane information on settlements motivated the Chicago Project, and the related data-gathering effort, is both notable and anomalous. Moreover, at the operational level, that judges gathered these data (for judges) stands in stark contrast to conventional wisdom that reflexively characterizes judges as structurally indifferent—if not disinclined—to participate in data-creation efforts relating to litigation and judicial decision making.<sup>49</sup>

Our data set includes information on 871 settlements involving nine magistrate judges in the Northern District of Illinois spanning six years (1999–2004, inclusive). The 871 settlements include 396 usable employment discrimination cases and 106 personal injury cases.<sup>50</sup> All 396 employment discrimination case settlements include monetary

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<sup>45</sup> Somewhat oddly, although Kotkin refers to “[r]egression analysis” in the text, *id.* at 158, actual regression output, at least in any standard form, is not found in her article.

<sup>46</sup> *See id.* at 127–28.

<sup>47</sup> *See id.* at 128.

<sup>48</sup> *See* Denlow & Shack, *supra* note 12, at 19, 21.

<sup>49</sup> *See, e.g.,* Maxwell L. Stearns, *Appellate Courts Inside and Out*, 101 MICH. L. REV. 1764, 1769 (2003) (noting that judges' voluntary participation in a judicial reform study was “not surprisingly incomplete”).

<sup>50</sup> We used the 106 personal injury cases in supplemental analyses.

terms, and 144 (36.4%) involved nonmonetary terms that objectively favored either the plaintiff or defendant. The nonmonetary terms typically involved injunctive relief, such as employee reinstatement or promotion. Of course, it is difficult, if not impossible, to accurately quantify the financial value of nonmonetary awards. Such nonmonetary awards can easily influence the financial settlement amount. To control for the possible influence of the presence of nonmonetary awards, a dummy variable signals their presence and is included as a control variable for settlement models. Although our data do not speak directly to nonmonetary awards, the data do speak to the possible influence of the stage of litigation, the type of employment discrimination alleged, and the nature of the alleged harm on the plaintiff demand, defendant offer, and the final settlement amount.

Our data set, while unique, is not without important limitations. First, it includes information only on employment discrimination cases filed in U.S. District Court for the Northern District of Illinois that settled incident to settlement conference participation. Employment discrimination cases that settled independent of participation in the Chicago Project are not included. Also not included are employment discrimination cases that participated in the Chicago Project but did *not* settle. The inclusion of only settled cases poses consequential limitations on the analytical weight that our findings can responsibly support. Thus, our research question of interest dwells on factors that influence settlement amounts, and our findings safely extend only to the universe of settled employment discrimination cases.

Second, coding for both the type of employment discrimination alleged as well as for the nature of the alleged injury permitted more than one selection, and this result has the consequence of complicating statistical analyses. Third, confounding assessments about the value of final settlement amounts is that in many cases, critical information involving the plaintiff's lost wages is either missing or was folded into the final settlement without differentiating between the compensatory and back-pay components. Although this data limitation does not implicate the accuracy of the final settlement amount, it reduces our ability to place the settlement into a broader context.

## B. Basic Analytic Approach

We examine settlements ( $S$ ) as a function of the Plaintiff's Demand ( $D$ ) and Defendant's Offer ( $O$ ), taking into account as appropriate other characteristics of individual cases. Most generally, the offer and demand affects settlement in the following way:

$$S = O + b(D - O).$$

In this equation,  $b$  is a measure of the plaintiff's bargaining power, ranging from 0 (no plaintiff bargaining power) to 1 (complete

plaintiff bargaining power). When  $b = 0.5$ , the parties have equal bargaining power and split the difference. Rearranging the terms,  $b = (S - O) / (D - O)$  is the proportion of the difference in initial positions that the plaintiff gets in settlement.

Converting the terms in the first equation into natural logs, we get:

$$\ln S = \ln O + b'(\ln D - \ln O).$$

We interpret  $b'$  as a measure of how the parties split the order of magnitude of the initial difference.

One hypothesis is that the parties might split the numeric difference. Thus, if the plaintiff demands \$100,000 and the defendant offers \$20,000, they will evenly split the \$80,000 disagreement, and the resulting settlement will be \$60,000. Others might hypothesize that defendant-employers have superior bargaining power and will take the lion's share so that the settlement is closer to the defendant's offer than the plaintiff's demand.

### III

#### INITIAL OBSERVATIONS

The usable data set includes settlements from 396 employment discrimination cases. Nine separate magistrate judges participated, and seven of these judges participated in ten or more settled cases.<sup>51</sup> The raw number of settlements increased from 1999 to 2004, albeit unevenly, as the program added cases. This increase comports with larger national shifts in civil litigation away from trials and toward settlement as the mechanism for resolution.<sup>52</sup> Data from these settled cases provide insights into final settlement amounts, comparisons between what plaintiffs initially demanded and ultimately accepted, as well as the influence of such key variables as plaintiff demands and defendant offers.

#### A. Final Settlement Amounts

Figure 1 presents the distribution of final settlement amounts (converted into 2004 dollars<sup>53</sup>) and illustrates the distribution's strong left skew. The settlement values ranged from \$350 to \$1,250,000 with a mean of \$65,950. The raw summary settlement findings are consis-

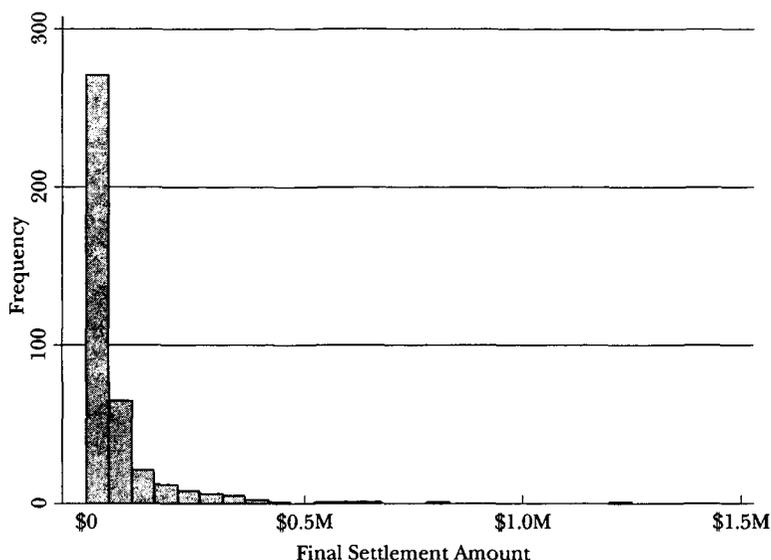
<sup>51</sup> One of the magistrate judges who contributed fewer than ten cases, W. Thomas Rosemond, Jr., retired in 2001. See *Magistrate Judges of the Northern District of Illinois*, N. DISTRICT OF ILL. CT. HIST. ASS'N, <http://www.ilndhistory.uscourts.gov/Magistrates.html> (last visited Feb. 19, 2011).

<sup>52</sup> See Yeazell, *supra* note 39, at 954-64 (explaining some of the dynamics underlying the shift from trials to settlements).

<sup>53</sup> To convert into 2004 dollars, we relied on the Minneapolis Federal Reserve CPI indices. See THE FED. RES. BANK OF MINNEAPOLIS, <http://www.minneapolisfed.org/research/data/us/calc/> (last visited Feb. 19, 2011).

tent with Kotkin's findings, though she studied a slightly different time period.<sup>54</sup>

FIGURE 1:  
DISTRIBUTION OF FINAL SETTLEMENT AMOUNT



Note: Final settlement amounts are in 2004 dollars.  
SOURCE: Chicago Judicial Settlement Project Data Set, 1999–2004.

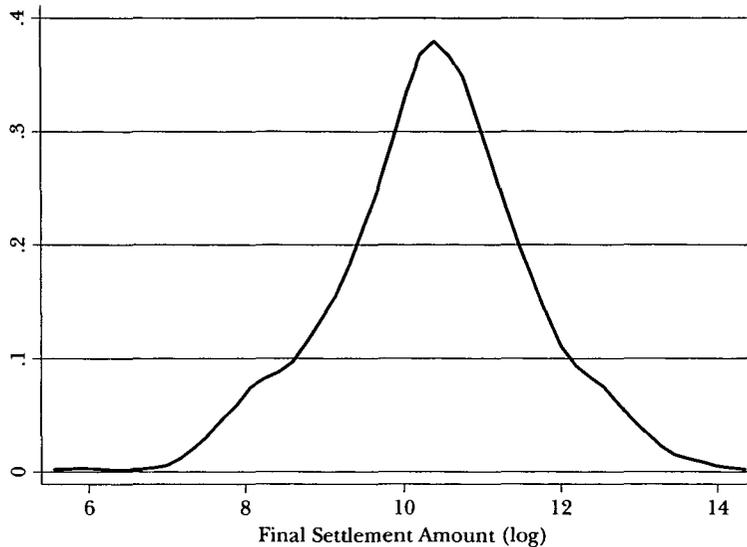
As is often the case, untransformed award amounts do not typically distribute normally. The skewed distribution of the final settlement amounts from our data set (Figure 1) illustrates this. To achieve the desired distribution for analytic purposes, we use logarithmic scales to transform the final settlement amounts data.<sup>55</sup> Figures 2 and 3 present the kernel density estimates<sup>56</sup> of the settlement values and the plaintiff bargaining-power ratio ( $b'$ ), respectively, after transformation.

<sup>54</sup> Although Kotkin reports a mean settlement amount of \$54,651, it is unclear from her study whether she converted “Gross Amounts of Recovery” into real dollars. See Kotkin, *supra* note 12, at 144.

<sup>55</sup> For a discussion about the need to logarithmically transform awards and of the need for transformation to satisfy various regression assumptions, see generally Theodore Eisenberg & Martin T. Wells, *The Significant Association Between Punitive and Compensatory Damages in Blockbuster Cases: A Methodological Primer*, 3 J. EMPIRICAL LEGAL STUD. 175, 181–85 (2006).

<sup>56</sup> For a discussion of the kernel density estimation, see B.W. SILVERMAN, *DENSITY ESTIMATION FOR STATISTICS AND DATA ANALYSIS* 34–75 (1998).

FIGURE 2:  
KERNAL DENSITY ESTIMATES OF (LOG) FINAL SETTLEMENT  
AMOUNTS



SOURCE: Chicago Judicial Settlement Project Data Set, 1999–2004.

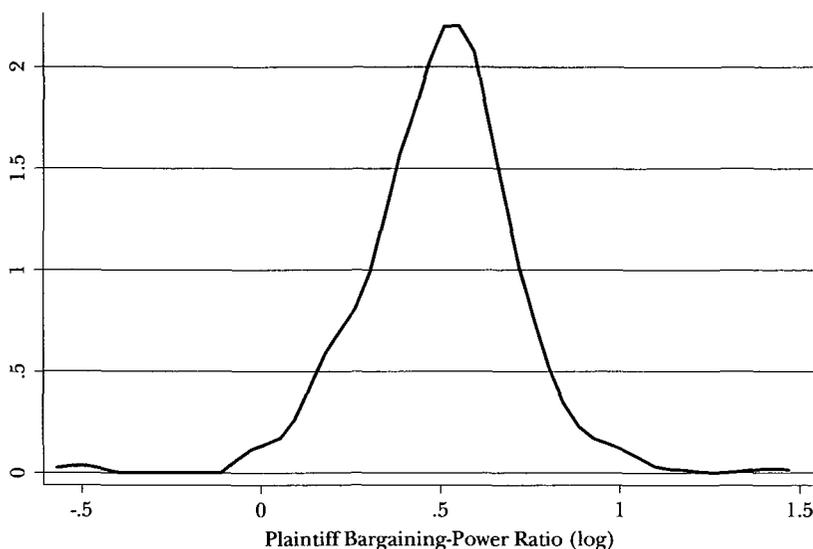
#### B. Demands, Offers, Final Settlements, and “Discounts”

Critical to negotiation theory and practice is the spread between the initial plaintiff demand and defendant offer, as well as the spread between the plaintiff demand and the amount the plaintiff accepted to settle the dispute. Reasons explaining why plaintiffs settle for an amount less than what they initially demand vary. Plaintiffs’ initial demands may exceed the actual value of their losses. After all, it is typically far easier to simply assert the value of harm in a complaint than it is to prove the harm beyond the preponderance of the evidence. Also, the transactions costs—including legal fees—incident to plaintiffs seeking recovery through the legal system can be considerable.<sup>57</sup> Thus, the pursuit of a “full” recovery may not make economic sense after discounting for necessary costs, legal and other. Finally, in their study comparing verdict amounts and actual payouts in the medical malpractice area, Professor David Hyman and his colleagues emphasize the role of defendants’ malpractice insurance policy limits on postverdict settlement amounts.<sup>58</sup> Presumably, many of the defendant–employers in this study have insured themselves against risks re-

<sup>57</sup> See Yeazell, *supra* note 39, at 951.

<sup>58</sup> See Hyman et al., *supra* note 31, at 53–54.

FIGURE 3:  
KERNAL DENSITY ESTIMATES OF (LOG) PLAINTIFF  
BARGAINING-POWER RATIO



SOURCE: Chicago Judicial Settlement Project Data Set, 1999–2004.

lating to employment discrimination claims, and these insurance policies include limits.

To assess the bargaining ratios, we organized the 396 disputes in our data set into rough quartiles based on the size of plaintiffs' initial demands. Table 1 presents mean plaintiff demands, defendant offers, final settlements, and plaintiff bargaining power for each of the four plaintiff demand quartiles. Results in Table 1 do not give a clean pattern, but they do suggest that plaintiffs' bargaining power decreased as the litigation stakes increased.

Two reference points—albeit imperfect and limited—provide some helpful context. First, the inverse linear relation between the mean settlement-demand ratio (again, a proxy for the plaintiff “discount”) and the initial plaintiff demand, illustrated in Table 1, is structurally analogous to findings from Hyman’s study of haircuts in postverdict settlements in the Texas medical malpractice context.<sup>59</sup> In the Hyman study, the authors found that “[t]he larger the adjusted verdict, the more likely and larger the haircut.”<sup>60</sup> Second, a similar analysis of settlements involving a different case type—personal injury

<sup>59</sup> See *id.* at 32.

<sup>60</sup> *Id.*

TABLE 1:  
MEAN DEMAND, OFFER, SETTLEMENT, AND PLAINTIFF BARGAINING-  
POWER RATIO BY SIZE OF PLAINTIFF DEMAND

| Plaintiff Demand (\$000) | Mean Plaintiff Demand (\$000) | Mean Defendant Offer (\$000) | Mean Settlement (\$000) | Mean Plaintiff Bargaining-Power Ratio (S - O)/(D - O) | n   |
|--------------------------|-------------------------------|------------------------------|-------------------------|---|-----|
| < 50                     | 28.4                          | 6.0                          | 12.9                    | 0.31  | 79  |
| 50 - 100                 | 74.5                          | 9.6                          | 27.7                    | 0.29  | 112 |
| 101 - 250                | 158.0                         | 16.0                         | 53.5                    | 0.29  | 106 |
| > 250                    | 663.2                         | 59.7                         | 173.2                   | 0.21  | 93  |

SOURCE: Chicago Judicial Settlement Project Data Set, 1999-2004.

cases—reveals similar relations among plaintiff demands, defendant offers, and final settlements.<sup>61</sup>

On the surface, the relation of the mean raw plaintiff demands, defendant offers, and final settlements (Table 1) implies only that the mean final settlement amounts were substantially closer to defendant offers than to plaintiff demands. Further analysis, however, reveals a persistent pattern.<sup>62</sup> Specifically, as Table 2 illustrates, in all 396 settlements, the mean log final settlement amount is extraordinarily close to the average of the mean log plaintiff demand and mean log defendant offer. That is, in the world of natural logs, the final settlement splits the difference between the plaintiff demand and defendant offer. Indeed, not only does this pattern persist across all four rough quartiles of the employment discrimination settlements, but the trend emerges in other case types as well. Specifically, the pattern of “splitting the logs” also describes settlement activity involving personal injury claims.<sup>63</sup>

To be sure, we do not suggest that litigants enter settlement negotiations thinking in terms of mathematical logs. Thus, we resist placing too much analytic weight on this finding. That said, the pattern does shed light on the structure of settlements and, more generally, bargaining theory. Within the context of natural logs (Table 2), final settlements typically “split the difference” between plaintiff demands and defendant offers. We suggest that the parties intuitively weigh the order of magnitude of their initial positions and then split the difference of those magnitudes. As Table 2 shows, plaintiffs and defendants differ by two or three orders of magnitude in their initial positions.

<sup>61</sup> For the results from the analysis of 106 personal injury settlements, also incident to the Chicago Project, see *infra* Appendix Tables A2 and A3.

<sup>62</sup> We are indebted to our Cornell Law School colleagues Theodore Eisenberg and Jeffrey Rachlinski who independently recognized and then alerted us to this underlying pattern.

<sup>63</sup> See *infra* Appendix Table A3.

TABLE 2:  
(LOG) MEAN PLAINTIFF DEMAND, (LOG) MEAN DEFENDANT  
OFFER, AND (LOG) MEAN SETTLEMENT

| <i>Mean:</i>   | All          | Plaintiff        | Plaintiff                | Plaintiff                 | Plaintiff         |
|--|--------------|------------------|--------------------------|---------------------------|-------------------|
|  |              | Demand<br><\$50K | Demand<br>\$50K – \$100K | Demand<br>\$101K – \$250K | Demand<br>>\$250K |
| (log) Plaintiff Demand                                     | 11.64        | 10.11            | 11.20                    | 11.93                     | 13.14             |
| (log) Defendant Offer                                      | 9.20         | 8.18             | 8.87                     | 9.25                      | 10.29             |
| <i>Average of Plaintiff Demand and<br/>Defendant Offer</i> | <i>10.42</i> | <i>9.15</i>      | <i>10.04</i>             | <i>10.59</i>              | <i>11.72</i>      |
| Actual (log) Settlement                                    | 10.37        | 9.10             | 10.00                    | 10.67                     | 11.56             |
| (log) Plaintiff Bargaining-<br>Power Ratio                 | 0.50         | 0.49             | 0.50                     | 0.55                      | 0.45              |
| (n)  | 396          | 79               | 112                      | 106                       | 93                |

NOTE: (log) Plaintiff Bargaining-Power Ratio =  $(\ln S - \ln O) / (\ln D - \ln O)$ .

SOURCE: Chicago Judicial Settlement Project Data Set, 1999–2004.

The final settlement, splitting the logs, is about 1.0 to 1.5 orders of magnitude above and below the offer and demand.

When one transitions out of the world of natural logs and into the world of actual constant dollars, however, the results in Table 1 suggest that defendants have greater influence on the outcome. A \$20,000 change in the defendant's initial offer of, say, \$25,000 has a far greater impact on the order of magnitude of its initial offer compared to the order-of-magnitude impact of a \$20,000 change in the plaintiff's higher demand of, say, \$200,000. Thus, defendants possess greater capacity to influence the final settlement amount through reasonable offers than do plaintiffs through reasonable demands. Such evidence supports an asymmetric bargaining theory favoring defendants.

#### IV

##### ANALYSES

Consistent with common sense, the descriptive analyses imply relations among factors such as demands, offers, and settlements. In this Part, we explore whether these implied relations survive in regression models that simultaneously account for more than one factor. We turn first to standard OLS regression and then to three-stage least squares models that better account for the temporal dimension incident to the typical settlement process.

##### A. Modeling Employment Discrimination Litigation Settlements

We estimated six OLS regression models and present results in Table 3. Models 1 and 2 focus on final settlement amounts. Models 3 and 4 explore the settlement-demand ratio. Finally, Models 5 and 6 consider the plaintiff bargaining-power ratio.

Independent variables (principally in dummy variables) include the stage of litigation when the parties reached settlement along with the type of discrimination alleged. Our models account for clustering at the individual judge level, as we cannot safely presume that multiple decisions by the same judge are independent from one another.<sup>64</sup> We also include the year of settlement to identify any time trend. Finally, for the final settlement model (Model 1), we include our key independent variables of interest—the plaintiff’s initial demand (or offer) and the defendant’s initial offer (after adjusting to reflect constant 2004 dollars and logging both variables).

### 1. *Final Settlement Amounts*

Three variables dominate final settlement amounts: plaintiff demand, defendant offer, and establishing a trial date. As results from our full final settlement model (Model 1) in Table 3 show, both the plaintiff demand and defendant offer correlate strongly in the hypothesized direction with the final settlement amount. That is, higher plaintiff demands and defendant offers correspond with higher final settlement amounts. Indeed (and as a comparison with Model 2 implies), the absolute and relative strength of the plaintiff demand and defendant offer on final settlement likely crowded out the potential influences of other independent variables.

Setting a trial date is the only litigation-stage variable that exerted an important influence on final settlement amounts with some level of consistency.<sup>65</sup> Although the amount of legal work expended in any case prior to an actual trial can vary across cases, it is safe to assume that legal costs escalate for a trial. Setting the trial date is among the final stages prior to the trial itself. To the extent that the contesting parties are at all inclined to settle, and if the contesting parties’ “bottom lines” for an acceptable final settlement amount are partly a function of sunk litigation costs, the positive coefficient sign for the “setting trial date” coefficient makes intuitive sense.

Finally, two particular discrimination claims influenced final settlement amounts, though they did so in opposite directions. Claims that defendants violated the Family and Medical Leave Act of 1993 (FMLA),<sup>66</sup> as well as discrimination claims based in race, achieved statistical significance in Model 1 (but not in Model 2). Interestingly,

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<sup>64</sup> Results from unpublished alternative specifications reveal that our results are robust whether we include judge dummy variables, cluster at the judge level, or both. We also tested our results with fixed, as well as random, effects models.

<sup>65</sup> By *consistency*, we mean that no other variable achieved statistical significance in more than one of our four models.

<sup>66</sup> 29 U.S.C. §§ 2601–2654 (2006).

FMLA claims correspond with increased settlement amounts where race-based claims correspond with lower settlement amounts.

To indirectly assess the power of the plaintiff demand and defendant offer on the final settlement amount, in Model 2, we reran the model excluding those two key variables. Comparing how the results in Models 1 and 2 vary illustrates the influence of the plaintiff demand and defendant offer in the final settlement model. Perhaps the key difference in Models 1 and 2 involves their explanatory power. The R-squared in Model 1 (with the plaintiff demand and defendant offer variables) is 0.822, meaning that the variables explain 82.2% of the variance in final settlement amounts. In Model 2, after removing the demand and offer variables, the R-squared falls dramatically to only 0.210. Removing the plaintiff demand and defendant offer variables also makes room for the emergence of other independent variables. In Model 2, other litigation stages (e.g., prediscovery, setting trial date, completing discovery, and the denial of dispositive motions) achieved statistical significance, joining retaliation, which also achieved statistical significance.

## 2. *Settlement-Demand & Plaintiff Bargaining-Power Ratios*

In addition to the final settlement amount, another important settlement outcome is the spread between what the plaintiff initially demanded and the actual settled amount. As previously discussed, the settlement-demand ratio is the ratio of the final financial settlement agreed to by the parties to the original plaintiff demand. The settlement-demand ratio is helpful in that it illustrates the “spread” between what a plaintiff initially demanded and the settlement amount the plaintiff subsequently accepted. That actual ratios almost always fell below 1.0 indicates that plaintiffs typically settled for a value less than they originally demanded.

Results from the two settlement-demand ratio model specifications (Models 3 and 4) generally comport with results from our final settlement amounts models (Models 1 and 2). The key finding that links the final settlement amount and the settlement-demand ratio models involves the defendant offer’s influence. Also similar is that in the full settlement-demand ratio model (Model 3) only one other variable (age discrimination claims) achieved statistical significance. Finally, the full model (Model 3) explains more (though only slightly more) variation than the partial model (Model 4).

Although results from the full final settlement and the settlement-demand ratio models (Models 1 and 3) are generally consistent, they also differ in important ways. In the full settlement model (Model 1), the plaintiff demand and defendant offer strongly correlate with the final settlement amount. In the full settlement-demand

model (Model 3), however, only the defendant offer emerged as significant. This finding implies that, as between the plaintiff and defendant activity, the defendant's activity exerted more influence. Further, rather than reflect the influence of plaintiffs or defendants, in terms of litigation stage, the full plaintiff bargaining-power ratio model (Model 5) illustrates the persistent influence of setting a trial date.

Taken as a whole, and important differences notwithstanding, findings from our OLS regression models, presented in Table 3, suggest that when it comes to final settlement values (and, to a lesser extent, settlement-demand ratios), the plaintiff demand and the defendant offer mattered most. Also important, though with less robustness, was setting a trial date. No other litigation stage or form of employment discrimination correlates with our dependent variables of interest, particularly final settlement amount, with any consistent strength. As it relates to final settlement amount, Table 3 suggests that plaintiff demand and defendant offer warrant particular attention, particularly as to how they might interact.

## B. Multistage Models

A methodological shift from standard OLS regression to multistage models uncovers an important wrinkle in how the plaintiff demand and defendant offer interact and inform final settlement amounts. To the extent that litigation proceeds in discrete stages, iterative, multistage modeling is a helpful way to gain a more textured understanding of the variables and their interactions. To this end, our three-stage least squares model assesses the plaintiff's initial demand, the defendant's offer to that demand, and the final settlement amount that the plaintiff and defendant agreed to. To be sure, even multistage models impose simplicity on an activity (settlement negotiations) that can be anything but simple. After all, rather than following a set, three-step process, we remain confident that negotiations that culminate in settlements frequently involve many complex and potentially dynamic interactions between the plaintiff and defendant (and likely other parties). Limitations with three-stage modeling notwithstanding, we feel that the multistage model's incorporation of a structured temporal dimension into settlement activity more closely approximates actual settlement activity than simple OLS regression models.

In our three-stage regression model, the first equation estimates the plaintiff's demand as a function of various case characteristics. In other words, the plaintiff is the first mover, making a demand. The second equation estimates the defendant's responding offer as a function of various case characteristics and the plaintiff's estimated de-

TABLE 3:  
OLS FINAL SETTLEMENT AND SETTLEMENT RATIO MODELS

|  | (1)                 | (2)                 | (3)                            | (4)                            | (5)  | (6)  |
|--|---------------------|---------------------|--------------------------------|--------------------------------|--|--|
|  | Final<br>Settlement | Final<br>Settlement | Settlement-<br>Demand<br>Ratio | Settlement-<br>Demand<br>Ratio | Plaintiff<br>Bargaining-<br>Power<br>Ratio | Plaintiff<br>Bargaining-<br>Power<br>Ratio |
| Plaintiff Demand   | 0.423**<br>(0.042)  | —                   | -0.049<br>(0.021)              | —                              | -0.014<br>(0.012)                          | —  |
| Defendant Offer  | 0.529**<br>(0.036)  | —                   | 0.076**<br>(0.013)             | —                              | 0.001<br>(0.001)                           | —  |
| <i>Litigation Stage:</i>                                 |                     |                     |                                |                                |  |  |
| Early  | 0.051<br>(0.111)    | -0.289<br>(0.216)   | 0.030<br>(0.114)               | 0.028<br>(0.112)               | 0.009<br>(0.042)                           | 0.012<br>(0.042)                           |
| Prior to Any Discovery                                   | -0.099<br>(0.140)   | -0.645*<br>(0.229)  | -0.014<br>(0.074)              | -0.039<br>(0.084)              | -0.033<br>(0.064)                          | -0.027<br>(0.067)                          |
| Discovery Cut-Off Date<br>Set                            | 0.019<br>(0.072)    | -0.275<br>(0.164)   | 0.104<br>(0.083)               | 0.113<br>(0.075)               | 0.016<br>(0.036)                           | 0.018<br>(0.036)                           |
| Discovery in Progress                                    | 0.078<br>(0.086)    | 0.041<br>(0.255)    | 0.063<br>(0.057)               | 0.057<br>(0.063)               | 0.003<br>(0.041)                           | 0.001<br>(0.036)                           |
| Discovery Complete                                       | 0.020<br>(0.090)    | -0.292*<br>(0.096)  | -0.049<br>(0.063)              | -0.052<br>(0.056)              | -0.024<br>(0.029)                          | -0.023<br>(0.028)                          |
| Dispositive Motion<br>Pending                            | -0.115<br>(0.168)   | -0.404<br>(0.328)   | 0.140<br>(0.155)               | 0.072<br>(0.136)               | -0.043<br>(0.046)                          | -0.044<br>(0.046)                          |
| Dispositive Motion<br>Denied                             | 0.024<br>(0.086)    | 0.403*<br>(0.162)   | -0.060<br>(0.049)              | -0.067<br>(0.038)              | 0.015<br>(0.043)                           | 0.008<br>(0.040)                           |
| Dispositive Motion<br>Partly Denied or Partly<br>Granted | -0.282<br>(0.146)   | -0.008<br>(0.417)   | -0.031<br>(0.061)              | -0.078<br>(0.041)              | -0.082<br>(0.091)                          | -0.088<br>(0.083)                          |
| Final Pretrial Order<br>Date Set                         | 0.058<br>(0.133)    | 0.069<br>(0.502)    | -0.032<br>(0.036)              | -0.059<br>(0.053)              | -0.029<br>(0.047)                          | -0.034<br>(0.043)                          |
| Final Pretrial Order<br>Filed                            | -0.118<br>(0.145)   | 0.303<br>(0.291)    | 0.121<br>(0.249)               | 0.129<br>(0.258)               | -0.094<br>(0.061)                          | -0.100<br>(0.056)                          |
| Trial Date Set   | 0.198*<br>(0.060)   | 0.681*<br>(0.243)   | 0.075<br>(0.033)               | 0.096*<br>(0.035)              | 0.095*<br>(0.032)                          | 0.089*<br>(0.031)                          |
| <i>Discrimination Form:</i>                              |                     |                     |                                |                                |  |  |
| Age  | -0.063<br>(0.055)   | 0.293<br>(0.130)    | -0.140*<br>(0.050)             | -0.123<br>(0.052)              | -0.024<br>(0.026)                          | -0.027<br>(0.025)                          |
| Disability   | -0.108<br>(0.081)   | 0.357<br>(0.191)    | -0.120<br>(0.055)              | -0.098<br>(0.068)              | -0.026<br>(0.040)                          | -0.033<br>(0.037)                          |
| FMLA   | 0.325*<br>(0.106)   | 0.362<br>(0.270)    | 0.017<br>(0.057)               | 0.023<br>(0.085)               | 0.086*<br>(0.030)                          | 0.084*<br>(0.029)                          |
| National origin  | -0.294<br>(0.164)   | -0.017<br>(0.307)   | -0.213<br>(0.117)              | -0.214<br>(0.107)              | -0.106*<br>(0.038)                         | -0.113*<br>(0.042)                         |
| Pregnancy  | -0.098<br>(0.131)   | 0.154<br>(0.154)    | 0.066<br>(0.085)               | 0.054<br>(0.094)               | -0.044<br>(0.051)                          | -0.047<br>(0.051)                          |
| Race   | -0.166*<br>(0.060)  | -0.187<br>(0.113)   | -0.001<br>(0.046)              | -0.034<br>(0.048)              | -0.053*<br>(0.019)                         | -0.054*<br>(0.018)                         |
| Religion   | -0.077<br>(0.141)   | 0.058<br>(0.280)    | -0.053<br>(0.059)              | -0.037<br>(0.064)              | -0.001<br>(0.069)                          | -0.013<br>(0.070)                          |
| Retaliation  | 0.050<br>(0.076)    | 0.362*<br>(0.116)   | 0.003<br>(0.092)               | 0.023<br>(0.081)               | -0.002<br>(0.042)                          | -0.006<br>(0.043)                          |
| Sex  | -0.081<br>(0.106)   | 0.179<br>(0.237)    | 0.013<br>(0.062)               | 0.054<br>(0.056)               | -0.042<br>(0.030)                          | -0.046<br>(0.028)                          |
| Sexual Harassment  | 0.021<br>(0.063)    | 0.252<br>(0.234)    | 0.024<br>(0.081)               | 0.020<br>(0.076)               | 0.018<br>(0.032)                           | 0.015<br>(0.031)                           |
| Nonmonetary Terms  | -0.024<br>(0.080)   | 0.162<br>(0.107)    | -0.044<br>(0.043)              | -0.028<br>(0.038)              | -0.006<br>(0.043)                          | -0.008<br>(0.043)                          |
| Year Settled   | -0.034<br>(0.015)   | -0.041<br>(0.035)   | -0.014<br>(0.010)              | -0.024*<br>(0.008)             | -0.006<br>(0.005)                          | -0.007<br>(0.006)                          |
| Constant   | 69.340<br>(30.682)  | 92.242<br>(70.032)  | 28.969<br>(20.296)             | 49.198*<br>(16.554)            | 13.101<br>(10.868)                         | 13.697<br>(11.599)                         |
| R-Squared  | 0.822               | 0.210               | 0.243                          | 0.212                          | 0.076                                      | 0.072                                      |
| (N)  | 376                 | 396                 | 246                            | 256                            | 376  | 376  |

NOTES: All six models include dummy variables for each of the nine judges. Plaintiffs may have asserted more than one discrimination form in a single lawsuit. Final settlement, plaintiff offer, and defendant demand values were logged and converted into 2004 dollars. Robust standard errors are in parentheses.

SOURCE: Chicago Judicial Settlement Project Data Set, 1999–2004.

mand. In other words, the defendant makes an offer after considering the plaintiff's demand and the characteristics of the case. The final equation estimates the final settlement based on case characteristics and both the plaintiff's demand and the defendant's offer.

As Table 4 makes clear, in the second stage of the three-stage model, the plaintiff demand exerted the strongest influence on the defendant offer.<sup>67</sup> Table 4 also illustrates that in the third stage of our model—focusing on the final settlement amount—the defendant's offer strongly influenced the final amount, and the influence of the plaintiff's demand waned. These results suggest that the plaintiff's demand plays a role in the final settlement value but does so indirectly. Specifically, plaintiff demand informs the defendant's offer, and the defendant's offer in turn significantly influences the final settlement value.

Results from the three-stage least squares model (Table 4) comport with intuition and underscore the importance of careful modeling. Conventional wisdom—along with our results in Table 3—illustrates the importance of plaintiff demands and defendant offers on final settlement amounts. By design, however, the standard OLS models assume a static picture of the relation among plaintiff demands, defendant offers, and final settlement amounts. The standard OLS regression model is insensitive to any timing that might influence the relation among demands, offers, and final settlements.

The three-stage least squares model, unlike standard OLS regression models, better reflects the temporal and dynamic relations between the key independent variables—plaintiff demands and defendant offers—and how they influence final settlement amounts. Results in Table 4 supply critical nuance, texture, and context to the results in Table 3. Specifically, while both the key independent variables of interest remain statistically significant, of equal importance is the structure of their significance and how that structure informs final settlement amounts. While results from the standard OLS regression models (Table 3) imply that the plaintiff demand influences the final settlement offer directly, results from our multistage model imply a more structured and indirect set of relations. To be sure, we do not minimize the importance of plaintiff demands on final settlement amounts. Rather, our point is that results in Table 4 suggest that the influence of the plaintiff's demand on the final settlement is indirect and better understood as expressing itself through the defendant's offer.

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<sup>67</sup> Only one other variable—setting the final pretrial order date—achieved significance.

TABLE 4:  
THREE-STAGE LEAST SQUARE PLAINTIFF DEMAND, DEFENDANT  
OFFER FINAL, AND SETTLEMENT MODELS

|   | (1)<br>Plaintiff<br>Demand | (2)<br>Defendant<br>Offer | (3)<br>Final<br>Settlement |
|---|----------------------------|---------------------------|----------------------------|
| Plaintiff Demand                                      | —                          | 0.879**<br>(0.143)        | -0.165<br>(0.127)          |
| Defendant Offer                                       | —                          | —                         | 0.983**<br>(0.104)         |
| <i>Litigation Stage.</i>                              |                            |                           |                            |
| Early   | -0.362*<br>(0.174)         | -0.190<br>(0.169)         | 0.075<br>(0.106)           |
| Prior to Any Discovery                                | -0.534<br>(0.272)          | -0.062<br>(0.261)         | -0.175<br>(0.158)          |
| Discovery Cut-Off Date Set                            | -0.157<br>(0.160)          | 0.009<br>(0.149)          | -0.007<br>(0.090)          |
| Discovery in Progress                                 | 0.231<br>(0.186)           | -0.170<br>(0.174)         | 0.192<br>(0.112)           |
| Discovery Complete                                    | -0.119<br>(0.168)          | -0.142<br>(0.155)         | 0.054<br>(0.094)           |
| Dispositive Motion Pending                            | 0.140<br>(0.302)           | -0.478<br>(0.279)         | 0.120<br>(0.173)           |
| Dispositive Motion Denied                             | 0.451*<br>(0.218)          | 0.010<br>(0.211)          | 0.145<br>(0.133)           |
| Dispositive Motion Partly Denied or Partly<br>Granted | 0.353<br>(0.451)           | -0.249<br>(0.418)         | 0.029<br>(0.255)           |
| Final Pretrial Order Date Set                         | 0.223<br>(0.216)           | -0.432*<br>(0.201)        | 0.294*<br>(0.127)          |
| Final Pretrial Order Filed                            | 0.256<br>(0.363)           | -0.114<br>(0.336)         | 0.006<br>(0.203)           |
| Trial Date Set  | 0.507**<br>(0.195)         | 0.330<br>(0.193)          | 0.154<br>(0.125)           |
| Nonmonetary Terms                                     | —                          | —                         | -0.061<br>(0.064)          |
| Constant  | 11.671**<br>(0.151)        | -0.944<br>(1.679)         | 3.212**<br>(1.123)         |
| (N)   | 376                        | 376                       | 376                        |

NOTES: All three models include dummy variables for each of the nine judges. Plaintiffs may have asserted more than one discrimination form. Final settlement, plaintiff offer, and defendant demand values were logged and converted into 2004 dollars. Robust standard errors are in parentheses.

SOURCE: Chicago Judicial Settlement Project Data Set, 1999–2004.

### CONCLUSION

Those seeking to understand employment discrimination litigation in federal courts without assessing settlements do so at some peril. Studying employment discrimination litigation by focusing on the comparatively rare case that results in a court decision is analo-

gous to studying icebergs from the deck of a passing ship. To be sure, the tips of icebergs are important and should not be ignored. At the same time, the bulk of the iceberg is found below the water line and largely obscured from vision. The same holds for employment discrimination litigation: the bulk of the action takes place in settings other than courtrooms and judicial decrees. A more complete understanding of employment discrimination litigation requires observers to account for the key activities that take place prior to any court decision.

A systematic accounting of employment discrimination settlement activity requires data. Regrettably, such data remain rare. The data that the Chicago Project generated, while far from perfect, nonetheless help fill a critical void. Results from our study of that settlement data underscore the salience of plaintiff demands and defendant offers on settlement outcomes. Our results also call into question some aspects of conventional wisdom that emphasize the independent influence of the stage of litigation or the type of discrimination claim advanced. While various litigation stages achieved significance in various models, the influence of the plaintiff demand and defendant offer consistently exerted greater influence. Should helpful data emerge, future research might consider comparing the subpool of employment cases that settle with those that do not. Such an inquiry will more squarely assess the efficacy of settlement conference policies, such as those in place in the U.S. District Court for the Northern District of Illinois and elsewhere.

Another point is methodological. By comparing results from standard OLS regression models with results from three-stage least squares models, we find important clues about how key variables relate and interact. Specifically, we found that the plaintiff demand's influence was expressed through (and likely helped frame) the defendant's offer. And it was the defendant's offer that correlated with the final settlement amount. Although initial plaintiff demand was important, its influence on the final settlement amount was indirect as compared with the more direct influence of the defendant offer.

Finally, we note that final settlements display the interesting characteristic of "splitting logs," whereby the parties generally split the logarithm or the order of magnitude of the initial positions. We do not imply that the "splitting the logs" finding possesses anything but a descriptive component. That is, we do not think our findings generate strategic value for litigating parties. Instead, our more modest aim is descriptive and, for now, best understood as hopefully prompting further study.

APPENDIX TABLE A1:  
DESCRIPTIVE STATISTICS OF VARIABLES

| Variable   | Mean    | S.D.    | Min.   | Max.    | <i>n</i> |
|--|---------|---------|--------|---------|----------|
| Final Settlement Amount (2004 dollars)             | 65,950  | 110,783 | 350    | 1.25M   | 396      |
| Settlement/Demand Ratio                            | 0.307   | 0.389   | 0.008  | 3.737   | 256      |
| Plaintiff Bargaining Power Ratio                   | 0.274   | 0.232   | -1.130 | 2.213   | 396      |
| Plaintiff Demand (2004 dollars)                    | 226,535 | 411,736 | 2,100  | 4.0M    | 396      |
| Defendant Offer (2004 dollars)                     | 22,447  | 49,259  | 0.0    | 600,000 | 396      |
| <i>Discrimination Form:</i>                        |         |         |        |         |          |
| Age  | 0.177   | 0.382   | 0.0    | 1.0     | 396      |
| Disability   | 0.189   | 0.392   | 0.0    | 1.0     | 396      |
| FMLA   | 0.038   | 0.191   | 0.0    | 1.0     | 396      |
| National origin                                    | 0.025   | 0.157   | 0.0    | 1.0     | 396      |
| Pregnancy  | 0.045   | 0.209   | 0.0    | 1.0     | 396      |
| Race   | 0.336   | 0.473   | 0.0    | 1.0     | 396      |
| Religion   | 0.025   | 0.157   | 0.0    | 1.0     | 396      |
| Retaliation  | 0.164   | 0.371   | 0.0    | 1.0     | 396      |
| Sex  | 0.167   | 0.373   | 0.0    | 1.0     | 396      |
| Sexual Harassment                                  | 0.159   | 0.366   | 0.0    | 1.0     | 396      |
| Nonmonetary Terms                                  | .0364   | 0.482   | 0.0    | 1.0     | 396      |
| <i>Litigation Stage:</i>                           |         |         |        |         |          |
| Early  | 0.222   | 0.416   | 0.0    | 1.0     | 396      |
| Prior to Any Discovery                             | 0.051   | 0.219   | 0.0    | 1.0     | 396      |
| Discovery Cut-Off Date Set                         | 0.268   | 0.443   | 0.0    | 1.0     | 396      |
| Discovery in Progress                              | 0.141   | 0.349   | 0.0    | 1.0     | 396      |
| Discovery Complete                                 | 0.263   | 0.441   | 0.0    | 1.0     | 396      |
| Dispositive Motion Pending                         | 0.040   | 0.197   | 0.0    | 1.0     | 396      |
| Dispositive Motion Denied                          | 0.076   | 0.265   | 0.0    | 1.0     | 396      |
| Dispositive Motion Partly Denied or Partly Granted | 0.015   | 0.122   | 0.0    | 1.0     | 396      |
| Final Pretrial Order Date Set                      | 0.098   | 0.298   | 0.0    | 1.0     | 396      |
| Final Pretrial Order Filed                         | 0.028   | 0.165   | 0.0    | 1.0     | 396      |
| Trial Date Set                                     | 0.157   | 0.364   | 0.0    | 1.0     | 396      |

Source: Chicago Judicial Settlement Project Data Set, 1999–2004.

APPENDIX TABLE A2:  
MEAN DEMAND, OFFER, SETTLEMENT, AND SETTLEMENT/DEMAND  
RATIO BY SIZE OF PLAINTIFF DEMAND—PERSONAL INJURY CASES

| Plaintiff Demand (\$000) | Mean Plaintiff Demand (\$000) | Mean Defendant Offer (\$000) | Mean Settlement (\$000) | Mean Demand/Settlement Ratio | <i>n</i> |
|--------------------------|-------------------------------|------------------------------|-------------------------|------------------------------|----------|
| <180                     | 95.0                          | 21.2                         | 46.9                    | 0.530                        | 25       |
| 180 – 330                | 260.7                         | 53.2                         | 111.4                   | 0.441                        | 27       |
| 331 – 800                | 522.5                         | 114.4                        | 232.2                   | 0.456                        | 23       |
| >800                     | 2,196.5                       | 292.3                        | 793.4                   | 0.369                        | 31       |

SOURCE: Chicago Judicial Settlement Project Data Set, 1999–2004.

APPENDIX TABLE A3:  
 (LOG) MEAN PLAINTIFF DEMAND, (LOG) MEAN DEFENDANT  
 OFFER, AND (LOG) MEAN SETTLEMENT—PERSONAL  
 INJURY CASES

| <i>Mean:</i>   | All   | Plaintiff         | Plaintiff                 | Plaintiff                 | Plaintiff         |
|--|-------|-------------------|---------------------------|---------------------------|-------------------|
|  |       | Demand<br><\$180K | Demand<br>\$180K – \$330K | Demand<br>\$331K – \$800K | Demand<br>>\$800K |
| (log) Plaintiff Demand                                     | 12.86 | 11.20             | 12.45                     | 13.14                     | 14.34             |
| (log) Defendant Offer                                      | 10.97 | 9.68              | 10.61                     | 11.35                     | 12.13             |
| <i>Average of Plaintiff Demand<br/>and Defendant Offer</i> | 11.92 | 10.44             | 11.53                     | 12.25                     | 13.24             |
| Actual (log) Settlement                                    | 11.92 | 10.48             | 11.52                     | 12.23                     | 13.20             |
| (n)  | 106   | 25                | 27                        | 23                        | 31                |

SOURCE: Chicago Judicial Settlement Project Data Set, 1999–2004.