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EXPLAINING DEVIATIONS FROM THE FIFTY-PERCENT RULE: A MULTIMODAL APPROACH TO THE SELECTION OF CASES FOR LITIGATION

DANIEL KESSLER, THOMAS MEITES, AND GEOFFREY MILLER*

ABSTRACT

In their 1984 article, Priest and Klein show that a simple divergent expectations model of the decision to litigate leads to a plaintiff success rate at trial that approaches 50 percent as the fraction of cases going to trial approaches zero. However, an extensive empirical literature has documented that plaintiffs win far fewer than half of their cases. As Priest and Klein observe, this conflict between the predictions of the model and the empirical literature may be attributable to violations in the data of the assumptions behind the simple model. Based on data from 3,529 cases, we find that “multimodal” case characteristics associated with violations of these assumptions cause plaintiff win rates to deviate from the 50-percent baseline in the manner that simple law-and-economics models would suggest. In other words, among cases that conform more closely to the assumptions underlying the simple divergent expectations model, the plaintiff win rate is closer to 50 percent.

FEW results in the law and economics of litigation have sparked as much interest as the hypothesis, associated with a seminal article by Priest and Klein, that states that plaintiff win rates at trial approach 50 percent as the fraction of cases going to trial approaches zero.¹ The “50

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¹ Under certain assumptions discussed below. George L. Priest & Benjamin Klein, *The Selection of Disputes for Litigation*, 13 *J. Legal Stud.* 1 (1984); and George L. Priest, *Reexamining the Selection Hypothesis: Learning from Wittman’s Mistakes*, 14 *J. Legal Stud.* 215 (1985).

The “50 percent rule” is actually a limiting implication of a “selection effect,” in which the cases selected for litigation are the difficult and uncertain ones. Selection effects are

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percent rule” is discussed in major books on law and economics,² has been relied on by law-and-economics scholars as a step in the analysis of other issues,³ and has even been showcased by a law and economics scholar as a reason why scholars in other disciplines ought to take law and economics seriously.⁴

The 50 percent rule is actually a limiting implication of a selection effect that arises out of a simple divergent expectations model of the decision to litigate. In that model, each party estimates the quality of the plaintiff’s claim with error, and the plaintiff settles when the defendant’s offer is at least as large as the plaintiff’s estimate of the value of her claim. Priest and Klein observe that cases selected for litigation are likely to be the difficult and uncertain ones—that is, the cases in which the true quality of the claim is close to the quality level needed for the plaintiff to win if the claim were to be tried—because the clear-cut cases will be more likely to settle before trial (or may never evolve into filed cases at all). The difficult and uncertain cases, in turn, are likely to be those that, on average, result in about half the victories going to one party and about half to the other.⁵

Although recent empirical work has validated the selection hypothesis, an extensive literature has documented that plaintiffs generally win far fewer than 50 percent of cases at the trial court or appellate level. This article investigates whether a “multimodal” approach to the selection of cases for litigation can reconcile the validity of the selection hypothesis in general with observed plaintiff win rates of less than 50 percent. The

also stressed in William Baxter, *The Political Economy of Antitrust: Principal Paper*, in *The Political Economy of Antitrust* 16 (Robert D. Tollison ed. 1980) (a paper that also contains an intuitive version of the 50 percent hypothesis); and Patricia Munch Danzon & Lee A. Lillard, *Settlement out of Court: The Disposition of Medical Malpractice Claims*, 12 *J. Legal Stud.* 345, 352 (1983).

² See Richard A. Posner, *Economic Analysis of Law* (4th ed. 1992); A. Mitchell Polinsky, *An Introduction to Law and Economics* (2d ed. 1989); Robert Cooter & Thomas Ulen, *Law and Economics* (1988).

³ See Avery Katz, *Measuring the Demand for Litigation: Is the English Rule Really Cheaper?* 3 *J. L., Econ. & Org.* 143 (1987) (using the Priest-Klein assumption of 50 percent plaintiff win rate to calculate a reasonable measure of total expenditures on litigation to total stakes).

⁴ John J. Donohue III, *Law and Economics: The Road Not Taken*, 22 *L. & Soc. Rev.* 903 (1988).

⁵ But see Donald Wittman, *Dispute Resolution, Bargaining, and the Selection of Cases for Trial: A Study of the Generation of Biased and Unbiased Data*, 17 *J. Legal Stud.* 313 (1988) (the 50 percent rule is based on the assumption that it is more difficult for litigants to estimate the probability of winning when the probability is close to .5 than when it is near the endpoints); and, for experimental evidence supporting this hypothesis, see Linda R. Stanley & Don L. Coursey, *Empirical Evidence on the Selection Hypothesis and the Decision to Litigate or Settle*, 19 *J. Legal Stud.* 145 (1990).

multimodal approach hypothesizes that violations of assumptions of the simple divergent expectations model affect the selection of cases for litigation, thereby driving the plaintiff win rate away from 50 percent.

Based on data from 3,529 cases decided by the Seventh Circuit Court of Appeals between 1982 and 1987, our findings indicate that the multimodal approach explains plaintiff win rates of less than 50 percent within the context of a divergent expectations model. First, case characteristics associated with violations of assumptions of the divergent expectations model affect plaintiff win rates in the manner that simple law-and-economics models would predict. Second, we find that controlling for multimodal characteristics brings the plaintiff win rate closer to 50 percent. In other words, among cases that conform more closely to the assumptions underlying the Priest-Klein model, the plaintiff win rate is closer to 50 percent. Also, the data show that the multimodal approach applies in a similar fashion at each stage of the appeals process, further supporting its applicability.

The first part of this article gives a brief review of the mechanics of the theoretical model behind the Priest-Klein paper and the simple version of the 50 percent rule, coupled with a cataloging of findings in the previous empirical literature. The second part of this article suggests how a multimodal approach can reconcile the selection hypothesis with observed plaintiff win rates by explaining how assumptions implicit in the divergent expectations model may be violated in actual cases. The third section outlines the appellate data that we use. The fourth section presents our econometric model and empirical results. The fifth section presents our conclusion that a multimodal approach to explaining the selection of cases for litigation can improve the fit between the theory and the data.

I. PREVIOUS LITERATURE

A. *Theoretical Results*

The Priest-Klein hypothesis is based on a divergent expectations model of the selection of cases for litigation.⁶ In this model, cases have a true “quality” level Y such that all cases with Y greater than some “decision standard” D would be decided for the plaintiff if they were tried to a

⁶ The following summary draws heavily on the excellent summaries found in Peter Siegelman & John Donohue, *The Selection of Employment Discrimination Disputes for Litigation: Using Business Cycle Effects to Test the Priest/Klein Hypothesis*, 24 *J. Legal Stud.* 427 (1995); and Joel Waldfogel, *The Selection Hypothesis and the Relationship between Trial and Plaintiff Victory*, 103 *J. Pol. Econ.* 229 (1995).

verdict, and all cases with $Y' < D$ would be decided for the defendant. Plaintiffs and defendants form unbiased estimates of case quality subject to error, Y_p and Y_d , respectively. From this, each party derives an estimated probability of plaintiff victory, $P_p = \text{prob}(Y_p > D)$ and $P_d = \text{prob}(Y_d > D)$.

The parties to the dispute do not behave strategically. The defendant makes a single offer, equal to her expected savings from settlement, estimated conditionally on her information, which is $P_d J + C_d - S_d$, where J represents the amount at stake, C_d represents the plaintiff's cost of litigating, and S_d represents the plaintiff's cost of settling. The plaintiff accepts the offer if it is greater than her expected benefit from trial, $P_p J - C_p + S_p$, and rejects the offer otherwise. Thus, cases go to trial when $P_p - P_d > (C - S)/J$, where $C = C_p + C_d$ and $S = S_p + S_d$.

The theoretical motivation behind the 50 percent rule is as follows. If $(C - S)/J$ is relatively high, say, 0.3,⁷ then cases that fail to settle will be those with $P_p > P_d$, which will be disproportionately cases with $Y' \approx D$ —cases with the true quality close to the decision standard—because it is in those close cases that normal differences in estimation of quality across parties lead to large differences in the estimated probability of winning at trial. Put another way, if both parties agree that the plaintiff has a very small chance of winning, for example, $Y' \ll D$, then differences in parties' assessment of case quality are unlikely to be large enough to prevent the parties from settling.

B. Empirical Results

Researchers have examined plaintiff win rates, both in the trial phase (including pretrial motions) and on appeal, in order to assess the 50 percent hypothesis, across a diverse group of data sets. A sample of studies from this large literature are summarized in Table 1 and listed in Appendix A.

The studies in Table 1 indicate that plaintiffs generally win less than 50 percent of their cases at all phases of the legal process.⁸ At the pretrial stage, for example, Eisenberg rejects the hypothesis that plaintiffs win 50 percent of all motions in a sample of 204,560 cases in Federal District Court.⁹ Although plaintiff win rates of less than 50 percent may be an American phenomenon, deviation from the 50 percent rule is not. Ram-

⁷ Contingency fee attorneys, for example, regularly charge clients fees of around 30–40 percent of total judgment size.

⁸ With some notable exceptions, such as Waldfogel, cited *supra*.

⁹ Theodore Eisenberg, *The Relationship between Plaintiff Success Rates before Trial and at Trial*, 154 J. Royal Stat. Soc. 111 (ser. A, pt. 1, 1991).

seyer and Nakazato, for example, analyze approximately 770,000 civil actions from Japanese courts and find that plaintiff success rates are significantly greater than 50 percent.¹⁰ Furthermore, several different measures of plaintiff success suggest that deviation from the 50 percent rule persists at the appellate stage. Plaintiffs-at-trial who appeal win fewer than 50 percent of their cases at the appellate level. In addition, appellants as a class win fewer than 50 percent of their appeals, whether they were plaintiffs- or defendants-at-trial.

Recent empirical work provides support for the selection hypothesis more generally, despite low plaintiff win rates. Siegelman and Donohue, for example, find that the employment discrimination cases filed during recessions are more likely to be settled than the employment discrimination cases filed during booms, due to a selection effect that leads parties to be less likely to litigate relatively weak cases. Along these lines, Waldfogel finds support for the selection hypothesis based on the fact that judges who are more likely to try cases to a verdict have plaintiff win rates that are further from 50 percent.

II. RECONCILING THE SELECTION HYPOTHESIS WITH OBSERVED PLAINTIFF WIN RATES: A MULTIMODAL APPROACH

The multimodal approach attempts to reconcile the selection hypothesis with observed plaintiff win rates by investigating whether case characteristics associated with violations of assumptions of the simple divergent expectations model affect the selection of cases for litigation. We consider seven characteristics of cases that law-and-economics models predict would affect the plaintiff win rate in litigated cases within the divergent expectations framework. In this section, we discuss each of the seven case characteristics that we examine and how each of them would affect plaintiff win rates within the divergent expectations framework.

Differential Stakes. As Priest and Klein observe, the hypothesis assumes that the stakes of the parties in the litigation are the same—that is, that the defendant stands to lose as much as the plaintiff stands to gain, no more or less.¹¹ When the stakes of the parties differ, Priest and Klein argue that the party with the greater stakes is likely to have a higher degree of success in the litigation. The intuitive reason is that the party

¹⁰ J. Mark Ramseyer & Minoru Nakazato, *The Rational Litigant: Settlement Amounts and Verdict Rates in Japan*, 18 J. Legal Stud. 263 (1989).

¹¹ Priest & Klein, *supra* note 1, at 24–29, 40. See also Theodore Eisenberg, *Litigation Models and Trial Outcomes in Civil Rights and Prisoner Cases*, 77 Geo. L. J. 1567, 1594–95 (1989); Theodore Eisenberg, *Testing the Selection Effect: A New Theoretical Framework with Empirical Tests*, 19 J. Legal Stud. 337, 338–39 (1990).

TABLE 1
SUMMARY OF THE PREVIOUS EMPIRICAL LITERATURE

Study	Data Set	No. of Observations	Success Rates
Clermont and Eisenberg (1992)	Federal trials where parties had right to jury trial	37,503 jury trials; 53,635 trials	Analysis of subject matter categories rejects 50 percent hypothesis. Only 22 of 93 categories of bench trial cases show plaintiff success rates of between 45 and 55 percent. Only 16 of 93 categories of jury trial cases show plaintiff success rates of between 45 and 55 percent.
Danzon and Lillard (1983)	Medical malpractice insurance case files closed in two years	385 trials	Plaintiff success rate: 26.8 percent
Eisenberg (1989)	Federal district court trials between 1978–85	57,206 trials	Only 16 of 72 subject matter categories show plaintiff success rates of between 45 and 55 percent.
Eisenberg (1990)	Tort trials in three Cook County, Illinois, courts, 1959–79	14,671 trials	50 percent hypothesis cannot be rejected, but data are inconclusive. Test across districts rejects 50 percent hypothesis.
	Nonbankruptcy civil cases in federal district courts, 1978–85	57,206 trials	Analysis of subject matter categories rejects 50 percent hypothesis; only 16 of 72 subject matter areas show plaintiff success rates between 45 and 55 percent.

Eisenberg (1991)	Nonbankruptcy civil cases in federal district courts, 1978–85	204,560 cases resolved by pretrial motion	Analysis of subject matter categories rejects 50 percent hypothesis; only 10 of 72 subject matter areas show plaintiff success rates between 45 and 55 percent.
Eisenberg and Johnson (1991)	Federal court opinions in civil rights and employment cases, 1976–88	146 appellate opinions and 176 district court opinions	Success rates as follows: plaintiff-appellants: 27 percent; defendant-appellants: 26 percent
Eisenberg and Henderson (1993)	Published appellate opinions in products liability cases	1,100 opinions	Success rates as follows: plaintiff-appellants: 37.4 percent; defendant-appellants: 34.3 percent
Eisenberg and Schwab (1989)	Constitutional tort cases in three federal circuits resulting in opinions published between October 1, 1980, and December 31, 1985	771 opinions	Success rates as follows: Nonprisoner cases: plaintiff-appellants: 38 percent; defendant-appellants: 48 percent Prisoner case: plaintiff-appellants: 48 percent; defendant-appellants: 69 percent Control group (not constitutional tort cases): plaintiff-appellants: 35 percent; defendant-appellants: 33 percent
Gross and Syverud (1991)	Civil jury trials in California state superior courts, 1985–86	529 trials	Plaintiff success rate: 51.4 percent
Eisenberg and Henderson (1990) Henderson and Eisenberg (1992)	State and federal district court filings in product liability cases, 1979–89	2,882 state court opinions; 9,636 federal district court cases	Plaintiff success rates as follows: State and federal courts combined: in 1979: 56 percent; in 1989: 39 percent Federal district courts: in 1979: 41 percent; in 1989: 31 percent

TABLE 1 (Continued)

Study	Data Set	No. of Observations	Success Rates
Priest and Klein (1984)	Tort trials in three Cook County, Illinois, courts, 1959–79	14,671 trials	Plaintiff success rates as follows: municipal courts: 45.6 percent; circuit courts: 49.5 percent; U.S. district court: 53.0 percent Overall: 48.5 percent
Ramseyer and Nakazato (1989)	Contested ordinary civil actions in Japanese courts	Approximately 530,000 district court cases and 240,000 summary court cases	Plaintiff success rates as follows: district court: 78 percent; summary court: 81.9 percent
Schnapper (1989)	Published federal appellate decisions in which a party challenged sufficiency of evidence to support a jury verdict	208 decisions	Appellant success rates as follows: commercial cases: 27.4 percent; constitutional cases: 41.1 percent; personal injury cases: 30.6 percent; discrimination cases: 52.9 percent Plaintiff-appellants: 7.7 percent to 38.5 percent depending on case; Defendant-appellants: 40.0 percent to 58.5 percent depending on case
Schultz and Patterson (1992)	Race and sex discrimination cases in which lack of interest defense was in issue	63 district court cases (race); 54 district court cases (sex); 32 appeals (race); 19 appeals (sex)	Success rates as follows: Plaintiffs at trial: 49.2 percent (race); 46.3 percent (sex) Plaintiff-appellants: 50 percent (race); 40 percent (sex) Defendant-appellants: 75 percent (race); 57.1 percent (sex)

Eisenberg and Schwab (1987) Schwab and Eisenberg (1988)	Nonprisoner constitutional tort cases filed in 1 year in three districts	1,837 cases	Plaintiff success rate: 27 percent
Siegelman and Donohue (1994)	Employment discrimination lawsuits filed in federal district courts, 1969–89	221,118 filings	Plaintiff success rate: between 16.4 percent and 20.9 percent, depending on unemployment rate
Waldfoegel (1995)	Federal civil cases from the Southern District of New York, filed 1984–87 and terminated by the end of 1989	25,940 cases	Plaintiff success rate: 50 percent
Wheeler, Cartright, Kagan, and Friedman (1987)	Supreme court decisions in 16 states, 1870–1970	5,343 decisions	Appellant success rate: 40 percent
Wittman (1985)	Rear-end accident jury trials in California	582 trials	Plaintiff success rates as follows: 83 percent under contributory negligence regime; 84 percent under comparative negligence
Note (1978)	Supreme court decisions in 16 states, 1870–1970	5,113 decisions	Appellant success rate: 39 percent By state, range from 28.8 percent to 58.1 percent. By case type, range from 35.3 percent to 41.6 percent.

SOURCE.—See Appendix A.

with larger stakes has more to lose from the litigation and therefore is likely to offer enough to settle the case, from the perspective of the party with a lesser stake, in order to avoid a larger loss at trial.¹² Thus the cases that are selected for trial are likely to be ones in which the party with the greater stakes has a relatively better chance for success than would be the case when the stakes are equal.

Among litigated cases in which the defendant has higher stakes than the plaintiff, then, we would expect the plaintiff win rate to be less than 50 percent. In an employment discrimination case, for example, the fact that an adverse judgment at trial harms the employer/defendant (in terms of reputation, or in terms of the influence of an adverse judgment on other pending or not-yet-filed claims) more than it benefits the employee/plaintiff means that the plaintiff win rate in employment discrimination cases, all else equal, should be less than 50 percent.

A number of studies have analyzed deviations from the 50 percent baseline as the possible consequence of differential party stakes. Priest and Klein's disaggregated data showed that product liability and medical malpractice cases displayed plaintiff success rates significantly below the predicted 50 percent.¹³ Priest and Klein hypothesize that manufacturers had greater stakes than persons harmed in products liability cases because of the danger of an unfavorable judicial precedent, and doctors had more at stake than patients because of the potential harm to their reputations from an unfavorable verdict.¹⁴ Results obtained by Danzon and Lillard are consistent.¹⁵

Differential Sophistication of the Parties. Differential sophistication of the parties also affects the plaintiff win rate.¹⁶ In the context of a criminal case where the defendant has private information about his chances at trial, for instance, Froeb shows that defendants with relatively good chances at trial are more likely to go to trial.¹⁷ This outcome, he points out, is analogous to adverse selection in an insurance market. Just as relatively worse risks are more likely to purchase insurance, so are defendants with relatively worse chances at trial more likely to settle their cases. Thus, superior defendant information in criminal cases implies that the government's win rate among tried cases should be lower than 50 percent.

¹² See Priest & Klein, *supra* note 1, at 26.

¹³ *Id.* at 38.

¹⁴ *Id.* at 39–41.

¹⁵ Danzon & Lillard, *supra* note 1.

¹⁶ See, for example, Keith N. Hylton, Asymmetric Information and the Selection of Disputes for Litigation, 22 J. Legal Stud. 187 (1993).

¹⁷ Luke Froeb, The Adverse Selection of Cases for Trial, 13 Int'l Rev. L. & Econ. 317 (1993).

A simple example illustrates this point in the context of the civil justice system. Assume that there is a sample of lawsuits, half of which are good suits that will generate a judgment for the plaintiff of \$100 if brought to trial, and half of which are bad lawsuits that will generate a judgment for the defendant-at-trial. Defendants are highly sophisticated, so that the defendant always knows which of the two categories—good or bad—a particular case falls into. Plaintiffs, in contrast, are unsophisticated and are unable to sort cases accurately into good or bad cases. Plaintiffs randomly assign values of \$0 or \$100 to cases without regard to their likelihood of success at trial. This yields four possible states, each with equal probability:

	<i>Defendants</i>	<i>Plaintiffs</i>
A.	\$100	\$100
B.	\$100	\$0
C.	\$0	\$100
D.	\$0	\$0

At pretrial settlement negotiations, both plaintiffs and defendants always demand or offer what they think the case is worth: \$100 if they believe the case is good, and nothing if they believe the case is bad. Cases falling into categories A and B will settle for \$100—the defendant's offer of \$100 either equals or exceeds the plaintiff's demand of \$100 or \$0. Cases falling into category D settle for \$0—the parties agree to a dismissal. Only cases that fall into category C do not settle since the plaintiff demands \$100 and the defendant offers nothing. But such cases are always losers for plaintiffs since we have assumed that the sophisticated defendant only offers nothing if the case is worth nothing.

In this example, defendants would win 100 percent of the time in cases that progressed to trial. More generally, the selection effect of party sophistication means that the sophisticated party will win a higher percentage of the cases selected for trial than will unsophisticated parties. The empirical evidence provides at least weak support for this hypothesis; parties who might be considered unsophisticated, such as prisoners and civil rights plaintiffs, have an abnormally low success rate.

Mismeasurement of Plaintiff Victory, or Damages versus Liability. In several types of civil cases, parties frequently litigate damages, with liability conceded (for example, rear-end accident litigation). In the studies discussed in Table 1, the standard for plaintiff "success" is typically whether the plaintiff received any benefit at trial or appeal.¹⁸ By this

¹⁸ See, for example, Kevin M. Clermont & Theodore Eisenberg, Trial by Jury or Judge: Transcending Empiricism, 77 Cornell L. Rev. 1124, 1133–34 (1992) (authors consider a case a success or win if the plaintiff gets any judgment).

standard, though, plaintiffs will appear to succeed far more often than they actually do in those cases in which the dispute is essentially over damages, which means that the 50 percent rule may not hold as an artifact of case accounting.¹⁹

Again, the point can be illustrated with a simple numerical example. Assume that the plaintiff and the defendant agree that the defendant will have to pay the plaintiff something, but cannot agree on how much. The plaintiff demands \$100, and the defendant is not willing to offer more than \$50. Assume that half of the time the plaintiff accurately predicts the trial outcome—the plaintiff will receive \$100 at trial—and the other half of the time the defendant correctly predicts that the plaintiff will receive \$50. The observed trial outcomes will be that the plaintiff gets \$50 half of the time and \$100 half of the time. According to the metric used in the standard empirical studies, this would represent a 100 percent plaintiff success rate. But on the issue of damages—which is the only real issue in the case—the actual success rate for plaintiffs would be only 50 percent: only half of the time do plaintiffs receive at trial what they demanded from defendants in settlement negotiations, while the rest of the time defendants win the victory because they are forced to pay no more than they would have been willing to pay in settlement.

The theory that high levels of plaintiff success can be explained by the incidence of suits where damages rather than liability is in dispute is developed by Ramseyer and Nakazato to support the observed high rates of plaintiff victors in their data set.²⁰ It also appears likely that a damages effect explains the high level of plaintiff victories (approximately 83 percent) observed by Wittman in his study of rear-end accident litigation in California;²¹ because most rear-end accidents appear to present an obvious case for liability, the litigation in these cases was almost certainly focused on disputes over the amount of damages.

Legal Standard Favors One Side. If the legal standard that is applied at trial favors one side over the other, then the strict version of the 50 percent rule may not hold under a wide range of circumstances. Indeed, Priest and Klein recognize that the divergent expectations model only predicts that the plaintiff win rate among litigated cases will tend toward 50 percent, not be equal to 50 percent. Put another way, the 50 percent rule implies that a change in the decision standard that would decrease

¹⁹ Priest & Klein, *supra* note 1, at 29; Eisenberg, *supra* note 11, at 338–39; Ramseyer & Nakazato, *supra* note 10, at 284.

²⁰ Ramseyer & Nakazato, *supra* note 10, at 263.

²¹ Donald Wittman, Is the Selection of Cases for Trial Biased? 14 J. Legal Stud. 185 (1985).

the probability of plaintiff victory by x percent, if all disputes were litigated, would decrease the probability of plaintiff victory among actually litigated disputes by less than x percent.

This result might arise in two plausible situations. First, if parties' error in assessing the probability of plaintiff victory is normally distributed, then the share of winning plaintiffs in the pool of litigated cases will fall as the decision standard leans more toward the defendant because the probability distribution of errors around the decision standard will become progressively asymmetric.²² Second, if a small number of cases are litigated at random because (for example) a small number of disputes have at least one irrational litigant, then the probability of plaintiff victory in the pool of litigated cases will be a weighted average of the probability of plaintiff victory in all disputes and 50 percent. As the probability of plaintiff victory in all disputes decreases, so then would the probability of plaintiff victory in litigated disputes, albeit at a slower rate.

Settlement Costs High Relative to Litigation Costs. As settlement costs rise relative to litigation costs, the number of litigated disputes increases. Consider the extreme case, in the model of divergent expectations presented above, where there were no savings from settlement: in other words, $C = S$. In this case, the parties settle only if $P_p = P_d$, and virtually all cases are litigated. Therefore the probability of a plaintiff victory in a litigated dispute tends toward the probability of plaintiff victory in the population as a whole. If other factors lead the probability of plaintiff victory in the population of all cases to be less than 50 percent, then cases with high settlement costs will exhibit a plaintiff win rate of less than half.

Even if this sort of example is unrealistic in the context of trial, it may be realistic at the appellate stage. Assume, for example, that a case has generated a verdict for the defendant-at-trial. Both risk-neutral parties know that the plaintiff's probability of success on appeal is 5 percent. The plaintiff's litigation costs for the appeal are \$3,000, and the defendant's litigation costs for appeal are also \$3,000. The transactions costs of negotiating a settlement on appeal are \$5,000 for each party. The reason that the transactions costs of settling exceed the litigation costs is that the appeal involves a simple question of law that the parties have already fully briefed and argued during trial motions. In these conditions settlement will not occur because the parties would spend more negotiating a settlement than they would in prosecuting and defending the appeal. The appeal will go forward, generating affirmances in 95 percent of the cases.

²² See Priest & Klein, *supra* note 1, at 20–24, for an explanation and proof.

This effect may partly explain the observation, in numerous studies of appellate outcomes, that appellants typically succeed far less than 50 percent of the time. Appellants face a difficult burden on appeal because they must convince the appeals court either that the trier of fact erred or that the judge misconstrued the applicable law. One would expect, therefore, that most of the cases selected for appeal because the settlement costs exceed the litigation costs will end up as affirmances, a prediction consistent with the empirical evidence.

High Awards. Throughout the divergent expectations model, parties to a dispute are assumed to be risk-neutral; in other words, they are only concerned with the expected value of a case, not with the variance of possible outcomes around the expected value.

Of course, this assumption is an imperfect approximation of reality. Litigants, particularly plaintiffs as a class, would be risk-averse over the range of possible outcomes of a case if the expected value of the case amounted to a substantial fraction of the litigant's total wealth.

Risk aversion, then, tends to increase the gains to settlement, thereby causing fewer disputes to be litigated. If the probability of a plaintiff victory in the population is less than 50 percent, cases with high awards will follow the 50 percent rule more closely than cases with lower awards.

Agency Effects. Law suits are ostensibly brought in the name of parties, but the parties are typically represented by attorneys who have their own interests to serve in the litigation. This problem is particularly acute in the case of settlement.²³ Attorneys who work on an hourly fee basis have an incentive to defer settlement and to continue working on the case as long as their return per hour of work on the case exceeds their opportunity cost of time. Thus, hourly fee attorneys may sometimes recommend against settlement early in the litigation even when settlement would be in the client's best interest. Contingency fee lawyers present a converse problem: the contingency fee lawyer has an incentive to settle a case very early in the litigation, even for an amount much lower than the client would receive after trial, because the attorney bears all the litigation expenses and can earn a high hourly fee by an early settlement.

These incentive effects, which are well known, suggest that cases in which the plaintiff is represented by an attorney on an hourly fee basis will have a lower success rate at trial than cases where the attorney is working on a contingent fee, if the probability of plaintiff victory in the population of all cases is less than 50 percent, because the hourly fee

²³ This discussion follows Geoffrey Miller, *Some Agency Problems in Settlement*, 26 J. Legal Stud. 189 (1987).

lawyer has a greater incentive to defer settlement and thus move the case toward trial.

The incentive of hourly fee attorneys to litigate, however, may be mitigated by reputation effects. While the hourly fee attorney has an incentive to delay settlement up to a point close to trial, once trial is in the offing the hourly fee lawyer's incentives are more ambiguous. Trial may be risky for the hourly fee attorney because the attorney risks losing the case. A loss, and especially a repeated series of losses, can have an adverse effect on the attorney's reputation because clients and other lawyers may conclude that the loss was due either to the attorney's bad trial skills or to his or her bad advice to the client. The client is also likely to blame the attorney for the loss, especially if the attorney has previously assured the client that the prospects for success in the litigation are good. Thus, as trial approaches, the hourly fee attorney has much more to lose from not settling than he or she does early in the litigation. One might infer that hourly fee attorneys are likely to try hard to settle cases as trial approaches and that the cases that do not settle will often be those for which the attorney could not get a realistic settlement offer—cases where the probability of success is relatively good.

The result that hourly fee attorneys litigate more than contingency fee attorneys may also be mitigated by the fact that contingency fee attorneys have reputation effects that encourage them to litigate, *ceteris paribus*. Far from dreading a loss at trial, a contingency fee attorney might see it as offering reputational advantages. By taking a case to trial, even if the case is unsuccessful, the contingency fee attorney demonstrates that he or she is able to go to trial with a weak case. This makes the attorney's threats of trial more credible in settlement negotiations. Further, it is unlikely that an unsuccessful case will harm the attorney's reputation with potential clients. Most contingency fee clients are going to be one-shot players who do not have good information about the quality of their attorney. Even if the client had access to the lawyer's track record, a history of some trial losses would not necessarily be grounds for alarm since the client could rationally conclude that the trial losses increase the attorney's ability to threaten trial in settlement negotiations and since the costs of trial are typically going to be borne in any event by the attorney and not the client.

But if the client controls the decision to litigate, then agency effects can have the opposite effect. Because the client bears less than the true cost of litigation under a contingency fee contract, and at least the true cost of litigation under an hourly fee contract, contingency fee plaintiffs would be more likely to litigate than hourly fee plaintiffs. Alternatively, Gross and Syverud point out that, if plaintiffs as a class are more liquid-

TABLE 2

PREDICTED EFFECTS OF MULTIMODAL CHARACTERISTICS ON PLAINTIFF WIN RATES AT TRIAL

Multimodal Characteristics	Effect on Plaintiff Win Rate at Trial
Defendant's stakes higher than plaintiff's (hi-d-stakes)	—
Defendant's information superior to plaintiff's (hi-d-info)	—
Mismeasurement of plaintiff victory (mismeasure)	+
Legal standard favors defendant (law-favors-d)	—
Settlement costs high relative to litigation costs (hi-set-cost)	—
High awards (hi-award)	+
Agency effects (agency)	+, —, or 0

NOTE.—A positive sign indicates an increase in win rate, a negative sign indicates a decrease in win rate, and a zero indicates no change.

ity-constrained than attorneys, then they will be less willing to go to trial when paying the attorney on an hourly basis than when the attorney represents the plaintiff on a contingency fee.²⁴

Thus, the effect of the agency effects associated with different fee arrangements on the selection of cases for litigation is theoretically indeterminate, and it depends on the relative control that the attorney and client have over the decision to litigate. By implication, the effect of contingency fee contracts versus hourly fee contracts on the probability of plaintiff victory at trial is also indeterminate. Assuming that the probability of plaintiff victory in the population at large is less than 50 percent, if clients control the decision to litigate, then contingency fee contracts should be associated with a lower probability of plaintiff victory; if attorneys control the decision to litigate, then contingency fee contracts should be associated with a higher probability of plaintiff victory.

The predicted effect of each of the seven multimodal characteristics discussed above on the probability of plaintiff victory is summarized in Table 2, assuming that the probability of plaintiff victory in the population of claims at large is less than 50 percent. For the differential stakes category, as with the differential sophistication and legal standard favors one side categories, we report the predicted effect of the defendant having the characteristic; an analogous prediction could be made for the plaintiff.

III. DATA

We analyze 3,529 civil cases decided on the merits by the Seventh Circuit Court of Appeals between 1982 and 1987. We began with data

²⁴ 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 (1991).

maintained by the Administrative Office of the United States Courts on all Seventh Circuit terminations of noncriminal matters from July 1982 through June 1987—some 10,072 terminations, 8,424 of which were civil.

These records contain information on the nature of the case. Civil cases are first categorized as being either “private” or “federal” cases. The “private civil” category is divided into 105 subcategories in ten broad areas, which are used by the district courts in their initial classification of the cases.²⁵ The records also include the date of docketing, the date of disposition, and the nature of the disposition.²⁶

The Administrative Office also provided us with a computerized database consisting of some 15,397 civil and criminal appeals that had been docketed in the Seventh Circuit from 1980 through 1989. These records indicate the names of the first named plaintiff and the first named defendant in the district court. In the civil appeals, we attempted to match the plaintiffs’ names in this general database with the names of appellees or appellants in the termination database. Of these, we found 3,529 civil cases decided on the merits for which we were able to identify the appellant as either plaintiff or defendant.

Table 3 presents the outcomes of trials, at each stage of the process, by subcategory of litigation. The data suggest that the simple version of the 50 percent rule does not hold. The last row of the third column of Table 3 shows that the fraction of plaintiffs-at-trial who won after appeals had been decided was 31.4 percent. Consistent with this, the overwhelming majority of suit types show a plaintiff win rate of less than 50 percent.

²⁵ The 10 broad categories are “contract,” “real property,” “torts/personal injury,” “torts/personal property damage,” “civil rights,” “prisoner petitions,” “forfeiture and penalty,” “labor laws,” “property rights,” and “social security,” as well as other federal statutes. Administrative Office of the United States Courts, Statistical Codes for Appeals Reports Submitted by the Clerks of Court, United States Court of Appeals 4, Exhibit A, at A-1. These categories are further broken into 105 subcategories: for example, “civil rights” is broken into “voting,” “jobs accommodation,” “welfare,” and other civil rights. *Id.*

²⁶ The computer tapes describe terminations as either on the merits or procedural. Merit terminations are divided into terminations that were made after oral hearing and terminations that were made on submissions without hearing. These terminations are further divided by outcome, that is, affirmed/enforced, reversed/vacated, affirmed in part/reversed in part, dismissed, remanded, transferred, and other. Procedural terminations are divided into terminations made with and without other judicial action. Appeals terminated with judicial action are classified by the grounds for disposition, for example, jurisdictional, voluntary dismissals, default, transfers, denial of certificate of probable cause in habeas appeals, and other. Appeals terminated without judicial action are broken into voluntary dismissals, default, and other. In addition, the computer tapes record the form of the disposition: published or unpublished, signed or unsigned, with or without comment. While the Administrative Office maintains information on the panel members involved in each termination, the office deleted this information from the computer tapes.

TABLE 3
TRIAL OUTCOMES BY TYPE OF SUIT

Suit Code	Description	prob (Plaintiff Win in Trial Court) (1)	prob (Plaintiff Win after Appeals) (2)	prob (Appellant Win) (3)	N (4)
110	Insurance—contract	.420	.469	.296	81
150	Enforcement of judgments— contract	.000	.333	.333	3
151	Recovery of overpayments, Medicare—contract	.750	.500	.250	4
152	Recovery of defaulted student loans—contract	1.000	1.000	.000	1
160	Stockholders' suits—contract	.333	.667	.333	3
190	Other contract actions	.452	.455	.304	418
195	Contract product liability	.429	.571	.143	7
210	Land condemnation—real property	.500	.500	.000	2
220	Foreclosure—real property	.870	.783	.087	23
230	Rent/lease/ejectment—real property	.500	.333	.833	6
240	Torts to land—real property	.400	.400	.000	5
245	Tort—product liability—real property	.000	.000	.000	1
290	Other real property actions	.471	.353	.235	17
310	Airplane—torts, personal injury	.200	.400	.200	5
315	Airplane products liability— torts, personal injury	1.000	.000	1.000	2
320	Assault/libel/slander—torts, personal injury	.258	.290	.226	31
330	Federal employer liability— torts, personal injury	.333	.333	.000	6
340	Marine—torts, personal injury	.300	.300	.000	10
350	Motor vehicle—torts, personal injury	.171	.286	.171	35
355	Motor vehicle products liabil- ity—torts, personal injury	.400	.600	.200	5
360	Other personal injury	.268	.268	.247	97
362	Personal injury—medical malpractice	.000	.500	.500	6
365	Personal injury—products liability	.410	.361	.337	83
370	Other fraud—torts, personal property damage	.344	.375	.219	32
371	Truth in lending—torts, per- sonal property damage	.000	.000	.000	1
380	Other personal property damage	.320	.320	.240	25
385	Property damage—product liability	.250	.250	.000	4
410	Antitrust	.359	.272	.304	92
420	Bankruptcy trustee	.000	.000	.000	1
421	Bankruptcy transfer rule	1.000	1.000	.000	1
430	Banks and banking	.214	.214	.286	14

TABLE 3 (Continued)

Suit Code	Description	prob (Plaintiff Win in Trial Court) (1)	prob (Plaintiff Win after Appeals) (2)	prob (Appellant Win) (3)	N (4)
440	Civil rights	.228	.269	.286	685
441	Voting—civil rights	.154	.615	.615	26
442	Jobs—civil rights	.152	.243	.261	448
443	Accommodations—civil rights	.438	.438	.375	16
444	Welfare—civil rights	.368	.368	.211	19
450	Interstate commerce	.308	.462	.308	13
540	Mandamus/other—prisoner petitions	.207	.310	.103	29
550	Prisoner—civil rights	.079	.146	.168	458
610	Agriculture acts—forfeiture and penalty	.500	.500	.000	2
620	Food and drug acts—forfeiture and penalty	.714	1.000	.286	7
640	Railroad and trucks—forfeiture and penalty	.000	.000	.000	2
690	Other forfeiture and penalty	.625	.750	.375	8
710	Fair Labor Standards Act	.231	.385	.615	13
720	Labor/Management Relations Act	.318	.279	.209	129
730	Labor/Management Reporting/ Disclosure Act	.158	.421	.263	19
740	Railway Labor Act	.238	.238	.190	21
790	Other labor litigation	.246	.351	.316	57
791	Employee Retirement Income Security Act	.286	.408	.408	49
820	Copyright—property rights	.714	.571	.429	21
830	Patent—property rights	.533	.367	.300	30
840	Trademark—property rights	.431	.588	.314	51
850	Securities, commodities, exchange	.367	.458	.392	120
860	Social Security before 7/78	.130	.261	.217	23
861	Social Security, 42 USC 923	.556	.111	.444	9
863	Social Security, 42 USC 405(g)	.013	.338	.351	77
864	Social Security, Supplemental Security Income	.179	.357	.250	28
865	Social Security, Surviving Child	.333	.333	.000	3
870	Tax litigation benefits	.272	.259	.210	81
871	IRS/third-party suits	.500	.375	.125	8
875	Customer challenges	.000	.500	.500	2
891	Agricultural acts	.000	.000	.000	2
893	Environmental litigation	.357	.286	.500	14
895	Freedom of Information Act	.250	.250	.500	8
950	Constitutionality of state statutes	.643	.214	.571	28
970	National Archives and Records Administration	1.000	1.000	.000	1
990	Other local questions	.000	.000	.000	1
	Total	.269	.314	.273	3,529

TABLE 4
CLASSIFICATION OF CASE TYPES INTO MULTIMODAL CHARACTERISTICS

Multimodal Characteristic	Suit Codes Included	Share of Observations with This Characteristic
hi-d-stakes	110, 220, 190, 310–370, 380, 410, 442, 540, 550, 710–840, 870	.660
hi-d-info	110, 190, 310–370, 380, 540, 550, 791, 863	.403
mismeasure	310–385	.097
law-favors-d	220, 440–444, 550, 863	.497
hi-set-cost	190, 370, 380, 540, 550, 820–840, 863, 870	.339
hi-award	110, 190, 310–340, 355, 362, 365, 371, 410, 820–850	.265
agency	110, 310–365, 410, 440–444, 540, 550, 791–850, 863	.703

NOTE.—See Table 2 for definitions of multimodal characteristics.

Six of 70 categories (8.6 percent), representing 16 cases (0.5 percent of all cases), have a plaintiff win rate of exactly 50 percent; 13 of 70 categories (18.6 percent), representing 175 cases (5.0 percent), have a plaintiff win rate of more than 50 percent. However, 51 of 70 categories (72.9 percent), representing 3,338 cases (94.5 percent), have a plaintiff win rate of less than 50 percent.

Table 3 also shows that appellants, taken together, win fewer than half of their cases, and, with the exception of appellants in certain civil rights cases, appellants win less frequently than do plaintiffs-at-trial. Overall, 27.3 percent of appellants won their appeals, compared to 26.9 percent of plaintiffs-at-trial. But this does not make clear that, in 50 of 70 categories (71.4 percent), appellants are less likely to win than plaintiffs-at-trial. Put another way, excluding categories 440–442 (civil rights, voting—civil rights, and jobs—civil rights cases), plaintiffs won 30.4 percent of cases at trial, but appellants won only 26.8 percent of cases. It appears that the simple version of the 50 percent rule holds neither at trial nor on appeal.

Table 4 shows how we consolidated the 70 suit types into the seven multimodal categories. To review the 70 suit codes reported in the database to determine which of the seven characteristics discussed above each had, we collapse closely related suit codes into common groups.²⁷

²⁷ For example, the Administrative Office's 10 subcategories of personal injury litigation (codes 310–365) were treated as a single group, thus allowing us to include suit codes with only one or two cases on the database.

We then omit categories that have less than 20 cases that could not be grouped to avoid statistical problems. Although several categories have cases that are civil in form, we omit them from the study because they are not civil in substance. Thus, both state habeas and federal section 2255 attack substantive aspects of criminal proceedings and were omitted. Finally, we examine data on filings in several catch-all categories, such as “miscellaneous contract” or “other statutory” and either find we are able to categorize them or conclude that the cases in the category are too varied to be characterized.

IV. THE MODEL AND RESULTS

We model the plaintiff's (discrete) success in case i , Y_i , as a function of a continuous, unobserved underlying index of plaintiff success, Y_i^* .²⁸ Define a plaintiff win in case i with $Y_i = 1$, where $Y_i = 1$ if and only if $Y_i^* > 0$. Also, define the underlying index of plaintiff success in case i as a linear function of the vector of multimodal characteristics of case i , X_i , a parameter vector of the effect of characteristics on the index and a constant term, β , and an independently and identically normally distributed error term for case i , ϵ_i , $\text{var}(\epsilon_i) = 1$, that is uncorrelated with any of the multimodal characteristics:

$$Y_i^* = X_i\beta + \epsilon_i. \quad (1)$$

In this model, then, the probability of plaintiff victory in case i can be written

$$\text{prob}(Y_i = 1) = \text{prob}(Y_i^* > 0) = \Phi(X_i\beta), \quad (2)$$

where $\Phi(\cdot)$ is the cumulative normal distribution function. Maximum-likelihood estimation of this “probit” model chooses β to maximize the likelihood of observing the sample, thereby providing estimates of the effect of each multimodal characteristic on the probability of plaintiff victory, holding the other characteristics of a case constant.²⁹

We estimated the probit model above defining plaintiff success in terms of plaintiff success at trial, plaintiff success in the litigation process as a whole, and appellant success. Because the raw probit results cannot be easily interpreted in terms of probabilities,³⁰ we calculated the effect of each multimodal characteristic on the probability of plaintiff victory as

²⁸ The variables Y_i and Y_i^* can be defined in terms of plaintiff success at trial, plaintiff success in the litigation process as a whole, or appellant success.

²⁹ See, for example, William Greene, *Econometric Analysis*, sec. 20.3 (1st ed. 1990).

³⁰ *Id.*

TABLE 5
IMPACT OF MULTIMODAL CHARACTERISTICS ON THE PROBABILITY OF
PLAINTIFF VICTORY, CALCULATED FOR THE SAMPLE AVERAGE CASE
(Standard Errors Are in Parentheses)

MULTIMODAL CHARACTERISTIC	DEPENDENT VARIABLE		
	Plaintiff Win at Trial	Plaintiff Win after Appeals	Appellant Win
hi-d-stakes	-.038* (.020)	-.061** (.020)	-.062** (.020)
hi-d-info	-.073** (.025)	-.012 (.027)	.000 (.026)
mismeasure	.060* (.037)	-.010 (.036)	-.041 (.034)
law-favors-d	-.046 (.029)	-.047 (.031)	-.028 (.030)
hi-set-cost	-.042* (.024)	-.031 (.026)	-.038 (.026)
hi-award	.200** (.027)	.138** (.027)	.076** (.026)
agency	-.137** (.027)	-.067* (.027)	.006 (.026)

NOTE.—Calculations are based on probit estimates, which are found in Appendix Table B1. See Table 2 for definitions of multimodal characteristics.

* Significant at the 90 percent level.

** Significant at the 95 percent level.

the difference between the probability of plaintiff success for a case that had a particular multimodal characteristic and the probability of plaintiff success for a case that did not, assuming all of the other characteristics of the case were equal to the average characteristics in the sample.³¹ Table 5 presents these probabilities and their standard errors; the raw probit estimates are presented in Appendix B.

The first column of Table 5 provides estimates of the effect of each of the multimodal characteristics on the probability of a plaintiff win at trial. The estimated effects are in line with the theoretical predictions of the multimodal approach found in Table 2. The first row of the first column shows that high defendant stakes decrease the probability of plaintiff

³¹ Specifically, the effect of characteristic j is defined as

$$\Phi(X^1\beta) - \Phi(X^0\beta),$$

where $X^1 = (\bar{X}_1, \bar{X}_2, \dots, \bar{X}_{j-1}, 1, \bar{X}_{j+1}, \dots, \bar{X}_k)$ and $X^0 = (\bar{X}_1, \bar{X}_2, \dots, \bar{X}_{j-1}, 0, \bar{X}_{j+1}, \dots, \bar{X}_k)$, where $\bar{X}_m$ is the fraction of cases in the sample with multimodal characteristic m . We obtained standard errors with the delta method. See *id.*, sec. 7.6.

victory at trial for the average case by 3.8 percentage points, *ceteris paribus*: defendants with large amounts at stake in litigation settle with weaker plaintiffs more frequently than they otherwise would. In line with the theory, superior defendant information also decreases the probability of plaintiff victory at trial, by 7.3 percentage points. Mismeasurement and relatively high settlement costs result in deviations from the strict 50 percent rule as well. Plaintiffs in cases in which disputes are more likely to be over damages are 6.0 percentage points more likely to be scored as winning at trial. And, as the divergent expectations model would predict, plaintiffs in cases with high settlement costs are 4.2 percentage points less likely to win at trial, all else being held constant. All of these effects are statistically different from zero at least at a 90 percent level of significance.

Agency effects and high awards are the most important determinants of the selection of cases for litigation. A plaintiff in a case that is average except for divergences of interest between the plaintiff and the attorney due to the presence of a contingency fee contract is 13.7 percentage points less likely to win, holding other multimodal characteristics constant. This effect is statistically different from zero at a 99 percent level of significance. This finding provides evidence that clients, not lawyers, control the decision to litigate. If clients control the decision to litigate, then contingency fee contracts would be associated with increased litigation and a lower probability of plaintiff victory at trial and on appeal; if attorneys control the decision to litigate, then contingency fee contracts would be associated with less litigation and a high probability of plaintiff victory.

Surprisingly, the effect of high awards on the probability of plaintiff victory at trial is approximately as large as the effect of superior defendant information and agency effects combined. Plaintiffs in cases with high awards experience dramatically more success at trial than their otherwise similar counterparts: these plaintiffs are fully 20.0 percent more likely to win at trial, all else being constant. The fact that large stakes are associated with increased plaintiff victory at trial means that large stakes reduce the probability of litigation, all else being constant: in other words, large stakes encourage risk-averse parties to settle so as to avoid ending up a huge winner or loser.

The second and third columns of Table 5 show the effect of each multimodal characteristic on the probability that the plaintiff-at-trial would win after appeals are completed and the probability of the appellant winning, respectively. Reestimating the multimodal model with these other dependent variables shows that the basic principles behind the results presented in the first column are insensitive to the manner in which

“plaintiff victory” is defined. The signs of most of the multimodal effects remain the same across models with differently defined dependent variables. In addition, the effect of high defendant stakes, high awards, and agency effects on plaintiff victory remain significant in at least one of the two alternative specifications.

Other diagnostics support the validity of the multimodal approach. If the estimated probability of plaintiff victory for the baseline type of case (for example, a case with *none* of the seven multimodal characteristics that we analyze) in the multimodal model is closer to 50 percent than the probability of plaintiff victory in the raw data, then a multimodal approach that controls for deviations from the assumptions behind the divergent expectations model helps to reconcile the 50 percent rule with the data. Calculations of the probability of plaintiff victory for the baseline case from the raw probit results in Appendix B³² show that controlling for multimodal characteristics in fact brings the probability of plaintiff victory closer to 50 percent. The raw probability of plaintiff victory at trial is 26.9 percent (Table 3, col. 1), but the estimated baseline probability of plaintiff victory at trial is 39.3 percent, controlling for multimodal factors. Similarly, the raw probability of plaintiff victory after appeals (appellant victory) is 31.4 percent (27.3 percent), but the estimated baseline probabilities are 40.6 percent and 32.1 percent, respectively. Modifying the specification used in the estimation of the probit models also does not change the results substantially. For example, controlling for whether the United States was a party in the case only reduces the standard error of the effect of the multimodal characteristic “law favors defendant.”

V. CONCLUSION

In their 1984 article, Priest and Klein proposed the “50 percent rule”: namely, that under a simple divergent expectations model of the decision to litigate, a selection effect would cause approximately half of litigated cases to be won by the plaintiff and half to be won by the defendant. Although recent empirical work has shown a selection effect in litigated cases, an extensive literature has found that the probability of plaintiff victory is generally less than 50 percent.

This article investigates whether a “multimodal” approach to the selection of cases for litigation can reconcile the validity of the selection hypothesis in general with observed win rates of less than 50 percent. The

³² The baseline probability of plaintiff victory equals $\Phi(\alpha)$.

multimodal approach hypothesizes that violations of assumptions of the simple divergent expectations model affect the selection of cases for litigation, thereby driving the win rate away from 50 percent.

Based on data from 3,529 cases decided by the Seventh Circuit Court of Appeals between 1982 and 1987, we find that our approach explains win rates of less than 50 percent within the context of a divergent expectations model. First and foremost, case characteristics associated with violations of assumptions of the divergent expectations model affect win rates in the manner that simple law-and-economics models would predict. We examine seven characteristics of cases: differential stakes, differential information, mismeasurement of plaintiff victory, legal standard favoring one side, settlement costs being high relative to litigation costs, high awards, and agency effects. All of these characteristics affects win rates in the manner that the theory would suggest, six out of the seven in a statistically significant way.

Second, we find that controlling for multimodal characteristics brings the win rate closer to 50 percent. In other words, among cases that conform more closely to the assumptions underlying the Priest-Klein model, the win rate is closer to 50 percent. Also, the data show that the multimodal approach applies in a similar fashion at each stage of the appeals process, further supporting its applicability.

Thus, we argue that the best approach to understanding the selection of cases for litigation is a multimodal one, which does not rely on any single overarching theory to predict trial outcomes. Our article discusses a number of possible mechanisms that may drive case outcomes away from the 50 percent baseline, based on simple models. We attempt to consolidate the leading explanations for why outcomes deviate from 50 percent in a general multimodal approach.

We caution that our approach is only tentative. The effects we discuss find some support in the empirical evidence, but more documentation would be required before particular characteristics could be confidently identified as determining outcomes in particular classes of cases. Moreover, there may well be other important mechanisms that we have not discussed that significantly influence outcomes.³³ Our approach should be viewed as preliminary, although it provides a potentially valuable framework for further research. The task now is for researchers to engage in detailed investigation of selection effects in particular classes of cases

³³ For a discussion of several additional mechanisms, see Gross & Syverud, *supra* note 24, at 380–84.

in order to understand the dynamic forces at play in individualized contexts.

APPENDIX A

SOURCES FOR TABLE 1

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APPENDIX B

TABLE B1

PROBIT ESTIMATES OF EFFECTS OF MULTIMODAL CHARACTERISTICS
(Standard Errors Are in Parentheses)

MULTIMODAL CHARACTERISTIC	DEPENDENT VARIABLE		
	Plaintiff Win at Trial	Plaintiff Win after Appeals	Appellant Win
hi-d-stakes	-.115* (.060)	-.172** (.056)	-.183** (.057)
hi-d-info	-.231** (.080)	-.035 (.077)	-.001 (.080)
mismeasure	.180* (.107)	-.028 (.104)	-.128 (.109)
law-favors-d	-.143 (.092)	-.134 (.088)	-.087 (.092)
hi-set-cost	-.133* (.078)	-.088 (.076)	-.117 (.079)
hi-award	.583** (.076)	.378** (.073)	.223** (.075)
agency	-.399** (.078)	-.188** (.075)	.017 (.079)
constant term	-.269** (.060)	-.239** (.059)	-.465** (.060)
log-likelihood	-1,923.5	-2,136.9	-2,047.2

NOTE.—See Table 2 for definitions of multimodal characteristics.

* Significant at the 90 percent level.

** Significant at the 95 percent level.