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### Judicial Evaluations and Information Forcing: Ranking State High Courts and Their Judges

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# JUDICIAL EVALUATIONS AND INFORMATION FORCING: RANKING STATE HIGH COURTS AND THEIR JUDGES

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## ABSTRACT

*Judges and courts get evaluated and ranked in a variety of contexts. The President implicitly ranks lower-court judges when he picks some rather than others to be promoted within the federal judiciary. The ABA and other organizations evaluate and rank these same judges. For the state courts, governors and legislatures do similar rankings and evaluations, as do interest groups. The U.S. Chamber of Commerce, for example, produces an annual ranking of the state courts that is based on surveys of business lawyers. These various rankings and evaluations are often made on the basis of subjective information and opaque criteria. The secretive nature of these evaluations potentially allows organizations such as the Chamber of Commerce to use rankings to advance their own specific agenda. Our Article rests on the premise that these organizations that do their rankings based on opaque data and criteria need competition. Competition will force competing metrics to make transparent the underlying measures on which they are based and thereby foster the generation of higher quality metrics to rank judges. Using publicly available information and easy to reproduce measures, we construct an*

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*alternate set of rankings of the state courts that we then match up against the rankings from the Chamber of Commerce. Our measures are admittedly coarse. Nevertheless, to the extent they are credible, transparent, and significantly different from those of organizations like the Chamber of Commerce, the hope is that they will force those organizations to better explain the methods and information that underlie their rankings.*

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## INTRODUCTION

Everyone recognizes that there are better and worse courts and better and worse judges, but how does one evaluate courts and judges? Much depends on the answer to this question. Within constitutional constraints, state governments and the federal government have the power to change institutional features of their judicial systems—

including, in the states, whether judges are elected or appointed and how long their terms are—and history provides many examples of institutional reforms motivated by the desire to improve the judiciary. Institutional reform is premised on the assumption that accurate evaluation of the quality of the existing judiciary can lead to improvements in the judiciary. The same point can be made about individual judges. In the state systems, most judges serve for limited terms, which means that voters, governors, and others must decide whether to retain or replace a particular judge. They must base this decision on an evaluation of that judge's performance; otherwise the decision is arbitrary.

How, then, does one evaluate judges and courts? Start with judges. Judges are employees of the state, and the standard economic approach to answering the question begins with a principal-agent model. The judge is the agent; the state is the principal; and the state should want the judge to act in the state's interests. But the state is not a person; at best, its interests aggregate the interests of citizens. What are the interests of citizens? One might assume that they are something broad—well-being, justice, fairness. Or one might assume that they include specific policy preferences—abortion rights or not, gay marriage or not, and so forth. Or one might assume that citizens want judges to play their institutional role—to enforce the law and respect the Constitution. No one knows what citizens want; all of these assumptions might seem reasonable or not, but even if they are, the implications for judicial behavior are hardly clear. On the first view, how should judges act when citizens disagree about fairness? On the second view, how should judges act when citizens disagree about policy? On the third view, how should judges act when citizens disagree about the institutional role of judges—for example, about whether judges should enforce the original understanding of the Constitution or a Constitution that reflects evolving norms? None of these questions has a clear answer, and so the preferences of the principal are almost impossible to identify—though one can rule out certain things like bribe taking.

Because of the difficulty of identifying the principal's preferences, we cannot very easily evaluate judges on the basis of case outcomes. At best we can look at certain proxies, as we discuss below. The same problems arise for evaluating courts. Again, because the principal's preferences are difficult to identify, it is hard to determine whether a particular judicial system advances those preferences or not. An additional complexity here is that judicial systems take judges as

inputs and produce outputs—aggregate case outcomes—that may be better or worse than the judges taken as individuals. Put another way, aggregate case outcomes are not only a function of individual judge quality but also a host of other factors specific to a state—making it difficult to rank particular judges when differences among these other factors may lead to variation in aggregate outcomes. For example, rules that limit appeal to the high court may ensure that the opinions are very high quality (because the judges have plenty of time), but that many cases are not resolved consistently (because the higher court does not resolve disagreements among the lower courts).

Despite these difficulties, efforts to rank courts are increasingly common. The U.S. Chamber of Commerce, for example, sponsors an annual survey of business lawyers and reports rankings of the best and worst state courts.<sup>1</sup> These rankings can have real world implications. Some state governments cite them to attract businesses, and they and other rankings have played a role in judicial elections.<sup>2</sup> Judges are also evaluated on a comparative basis. The American Bar Association (ABA) engages in judgments of this kind with respect to lower court judges who are being considered for nomination to the U.S. Supreme Court when it rates them as well qualified, qualified, or not qualified.<sup>3</sup>

But these evaluations are opaque. They reflect judgments of various individuals who do not necessarily have good judgment, express their views sincerely, or take account of all relevant

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1. Inst. for Legal Reform, *Lawsuit Climate 2008*, [http://www.instituteforlegalreform.com/index.php?option=com\\_ilr\\_harris\\_poll&year=2008](http://www.instituteforlegalreform.com/index.php?option=com_ilr_harris_poll&year=2008) (last visited Feb. 2, 2009).

2. One example is the advertisement on the Delaware state courts website. See *First State Judiciary, Superior Court in the News!*, [http://courts.delaware.gov/Courts/Superior\\_Court/About\\_Us/?press\\_99\\_05.htm](http://courts.delaware.gov/Courts/Superior_Court/About_Us/?press_99_05.htm) (last visited Feb. 2, 2009) (“The Judicial Branch of Delaware government is extremely pleased and gratified that our Courts rank number one in the nation in the quality of our litigation system.” (quoting Chief Justice Norm Veasey of the Delaware Supreme Court)); see also Official Site of the Governor of Virginia, <http://www.governor.virginia.gov/MediaRelations/newsReleases/viewRelease.cfm?id=213> (last visited Feb. 2, 2009) (talking about Virginia’s high ranking on the Chamber of Commerce survey). For discussions of the rankings and the need for reforms to improve rankings, see, for example, *Chamber Fights to Improve Legal Climate*, BUS. ADVOC. (Kan.), Apr. 21, 2005, <http://www.kansaschamber.org/forms/advo3/V3Num14.htm> (noting Kansas’s drop from fourth to sixteenth). On the use of rankings to argue for salary increases, see generally Letter from Robert D. Ray, Iowa Judicial Comp. Task Force, to Nicholas Critelli, President, Iowa State Bar Ass’n (Apr. 18, 2005), [http://www.iowabar.org/miscdocuments.nsf/2b85a4ea12f4bfac8625669d006e27ab/f0fb92e322a9987d86256ff20049a0bb/\\$FILE/Judicial%20compensation.pdf](http://www.iowabar.org/miscdocuments.nsf/2b85a4ea12f4bfac8625669d006e27ab/f0fb92e322a9987d86256ff20049a0bb/$FILE/Judicial%20compensation.pdf).

3. See, e.g., AM. BAR ASS’N, RATINGS OF ARTICLE III JUDICIAL NOMINEES: 110TH CONGRESS (2008), available at <http://www.abanet.org/scfedjud/ratings/ratings110.pdf>.

considerations. This is also a problem for websites that feature anonymous comments on judges.<sup>4</sup>

An alternative approach is to use objective measures of judicial quality. Academics have used citation counts as proxies for judicial quality.<sup>5</sup> In earlier work, we developed an alternative approach that captures other important elements of judicial performance—not only citations, but also independence and productivity. We used these measures to evaluate certain institutional features of courts—how judges are selected<sup>6</sup> and how they are paid<sup>7</sup>—and their relationship to judicial quality.

In this Article, we generate rankings from our measures and compare them to the rankings generated by the U.S. Chamber of Commerce and by academics in prior work. We hope that this comparison will stimulate thinking about how courts should be evaluated and ranked. Objective rankings of courts and judges provide a number of benefits. People who live in states with lower ranked state court systems may learn from the features of the judicial system (such as the mechanism of judge selection) used in higher ranked states. People whose lives that are influenced by out-of-state supreme courts (through, for example, the influence of the out-of-state court's opinions on the decisionmaking of courts in their own states) may benefit from knowing which of those courts have the most influence. At a minimum, they might want to get involved when judges on that court are being selected and to contribute amicus briefs and other assistance during litigation with out-of-state implications. Accurate rankings of state courts could also help legal research. If the best judicial opinions are the product of courts rather than individual judges, then judges, lawyers, and scholars who are searching for well-reasoned cases would benefit from knowing which courts are most likely to produce those cases. The presence of objective rankings may also force those, such as the Chamber of Commerce, providing less

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4. See The Robe Probe, <http://robeprobe.com> (last visited Feb. 6, 2009); The Robing Room, <http://www.therobingroom.com> (last visited Feb. 6, 2009).

5. See, e.g., William M. Landes, Lawrence Lessig & Michael E. Solimine, *Judicial Influence: A Citation Analysis of Federal Courts of Appeal Judges*, 27 J. LEGAL STUD. 271, 271 (1998).

6. Stephen J. Choi, G. Mitu Gulati & Eric A. Posner, *Professionals or Politicians: The Uncertain Empirical Case for an Elected Rather than Appointed Judiciary*, J.L. ECON. & ORG. (forthcoming 2009) (manuscript at 3), available at [http://ssrn.com/abstract\\_id=1008989](http://ssrn.com/abstract_id=1008989).

7. Stephen J. Choi, G. Mitu Gulati & Eric A. Posner, *Are Judges Overpaid?: A Skeptical Response to the Judicial Salary Debate*, 1 J. LEGAL ANALYSIS 47, 50 (2009), <https://ojs.hup.harvard.edu/index.php/jla/article/view/3/18>.

transparent rankings to disclose greater information and justification for their rankings. If, for example, a state does poorly under objective measures of judicial quality and well under the Chamber of Commerce ranking, this discrepancy will both highlight the inability of any ranking to capture all aspects of what people care about with respect to judicial quality and focus attention on the precise data and criteria for quality the Chamber of Commerce follows.

There are those who will object to the general goal of encouraging better rankings of judicial performance. And we acknowledge that there is a danger here. Rankings seem to trivialize activities that are of public importance, and they may incite the ranked agents or institutions to engage in destructive competition or demoralize those who have no ability to escape from the bottom. The most serious objection to rankings is that they unavoidably rely on measures that neglect hard-to-observe, but important, aspects of performance. If those who achieve a high ranking are, nonetheless, rewarded with resources or public esteem, agents may distort their missions to do well on whatever measures are used.<sup>8</sup> Given that rankings happen whether one likes them or not, it seems better to have a system with multiple competitors seeking to deliver better and more informative rankings than one in which there are only a handful of biased evaluators.

The Article proceeds in three Parts. Part I sets our objective measures. Part II applies them to the state high courts. Part III then applies the same measures to individual state high court judges.

## I. THE MEASURES

If one starts with the proposition that some courts are better than other courts and some judges are better than others, then, in principle, one can rank courts and judges according to their quality. But the idea that courts can be ranked objectively, that is, by using publicly verifiable information about their decisions, might trouble some. Too much of what a court does cannot be observed or measured objectively, and so objective measures are more likely to mislead than to enlighten.<sup>9</sup>

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8. See Steven Kerr, *On the Folly of Rewarding A, While Hoping for B*, 18 ACAD. MGMT. J. 769, 778 (1975); Wendy Nelson Espeland & Michael Sauder, *Rankings and Reactivity: How Public Measures Recreate Social Worlds*, 113 AMER. J. SOC. 1, 1 (2007).

9. E.g., William P. Marshall, *Be Careful What You Wish for: The Problems with Using Empirical Rankings to Select Supreme Court Justices*, 78 S. CAL. L. REV. 119, 122–29 (2004).

This skepticism might reflect some part of the truth but it sweeps too broadly. One can say the same thing about virtually any institution—and a court is just a particular type of institution. Consider the problem of evaluating employees. Employers need to measure the performance of employees so that they can set compensation, fire and promote, and in other ways provide incentives to work productively. Almost all types of work involve a mixture of activities that can be observed and measured and activities that cannot be observed and measured. For example, a law firm might evaluate its lawyers on the basis of hours billed, briefs written, cases argued and won, and so forth. But the firm will also be conscious about how the lawyer handles clients, how efficiently the lawyer spends her hours, and how well she gets along with colleagues. If the firm rewards her entirely on the basis of her measurable activities, then she will have an incentive to shirk with respect to the less measurable activities. In practice, law firms and other employers base compensation decisions on both types of activities, using measurable criteria as a broad gauge but also relying on the judgments of supervisors and colleagues regarding the less measurable activities.

These same considerations apply to judges and likewise to courts. The objective measures that we use capture some, but not all, aspects of judicial quality. It would be a mistake to believe that small differences in measured outcomes reflect significant differences in quality. But where the differences are large, it is likely that the lower-ranked judges or courts are inferior, unless a good reason exists to explain the difference.<sup>10</sup> In law firm billable-hours terms, the lawyer billing three thousand hours per year is likely working harder than the one billing 1,500 hours, other things equal. Whether a firm would promote the three thousand-hour associate to partner may turn on other factors; nonetheless, a firm would almost certainly not promote the 1,500-hour associate.

We use three measures of judicial quality: productivity, opinion quality, and independence. We apply these measures to a data set consisting of the decisions of all the judges of the highest court of every state for the three years from 1998 to 2000. We exclude the District of Columbia, and we treat the separate civil and criminal high

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10. For further discussion of methodological issues involved in ranking judges, see generally Stephen J. Choi & G. Mitu Gulati, *Choosing the Next Supreme Court Justice: An Empirical Ranking of Judge Performance*, 78 S. CAL. L. REV. 23 (2004).



courts in Texas and Oklahoma as, in effect, separate states. We thus have fifty-two “states.”

We use these years so that we can compile enough out-of-state citations (used as our opinion quality measure) for meaningful comparison (up through 2006). Thus, we measure how often courts cited the cases decided from 1998 to 2000 in opinions published through the end of 2006. Unfortunately, many judges on the bench in the period have retired, and many judges on the benches are new. Nonetheless, our ranking is relatively comprehensive.

There are 408 judges in our data set, about 8 per court. The average judge was in office 2.65 years of the 3 years that we examine and wrote about sixty-seven opinions over the 3-year period. We examine the productivity, opinion quality, and independence of all of the judges on the bench during the period. We aggregate our judge-level metrics to produce productivity, citations, and independence measures for the *courts*, and rank them accordingly.

#### A. *Productivity*

“Productivity” refers to the number of opinions a judge publishes in a year. All else being equal, a judge who publishes more opinions is better than a judge who publishes fewer opinions. There are two reasons for this. First, if all opinions are published, then a judge who publishes more opinions decides more cases, thus resolving more disputes between people. Dispute resolution is a judge’s core function, and the more disputes a judge resolves, the greater is the service that she is providing. Note that in some states judges decide cases without issuing opinions. In these states, one cannot assume that judges who publish more opinions also decide more cases. States also vary in terms of whether intermediate appellate courts screen cases before they get to the high court and in terms of the degree to which the high court’s jurisdiction is discretionary. Although we do not do it here, one can, to a limited extent, control for those institutional differences by using information about publication and jurisdictional rules and practices.<sup>11</sup> Further, scholarship from judges and court watchers tells us that published opinions are more likely to involve effort from the judges themselves, whereas unpublished dispositions and short orders

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11. See Choi et al., *supra* note 6 (manuscript at 26). Controlling for these institutional differences does not have a meaningful effect on our regression results in this Article.

are more likely to be the work of secondary personnel.<sup>12</sup> Publication rates, therefore, can provide a better measure of individual-judge effort than overall case-decision rates. Second, a judge who publishes an opinion shares her reasoning with the parties and with other judges who seek to understand the resolution of the dispute. High publication rates in this way benefit the system and suggest a high-quality judge.

The most productive court in our 1998 to 2000 dataset was Georgia's (58.33 opinions per judge-year); the least productive was New Mexico's (10.07 opinions per judge-year); the median state was Kansas (23.0 opinions per judge per year). A judge who publishes frequently might write lower-quality opinions than a judge who writes and publishes less frequently. So productivity is only a partial measure of a judge's merits. We address opinion quality (our measure of influence) in Section B below.

### *B. Opinion Quality*

We measure opinion quality by using a proxy: the number of times that out-of-state courts cited the opinion. For these purposes, we consider only the citation rate of published majority decisions of the state high court in question. We measure this value by totaling the number of times the opinion in question was cited by other state courts, federal courts (other than the home federal circuit), and the U.S. Supreme Court. One can use other proxies for quality as well, such as law review citations; these measures are highly correlated with out-of-state citations by state high courts.<sup>13</sup> We assume that a high-quality opinion is more likely to be useful for out-of-state courts and therefore is more likely to be cited.<sup>14</sup>

The citations measure can be given two different interpretations. We use it as a proxy for the intrinsic quality of the reasoning in the opinion. A high-quality opinion benefits the litigants themselves and everyone in the state whose activities might bring them under the law at issue. But out-of-state citations are also a (more) direct measure of out-of-state influence. It is not entirely clear whether a state's residents would prefer to have judges who are influential out of state or not; these judges might be better than are necessary to get the job done, and they benefit outsiders rather than residents. On the other

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12. See Alex Kozinski & Stephen Reinhardt, *Please Don't Cite This!: Why We Don't Allow Citation to Unpublished Dispositions*, CAL. LAW., June 2000, at 43–44, 81.

13. *Id.*

14. See, e.g., Landes et al., *supra* note 5, at 271.

hand, influence and high quality opinions are highly correlated. Focusing on influence therefore will likely measure an attribute—high quality opinions—that benefits litigants and in-state residents.

Citation measures, while extensively used to measure quality across a variety of disciplines, have also been criticized. We will not rehash the general debate over citation measures, but mention a couple of issues that are more specific to the type of data at which we are looking. With judges, critics argue that citation counts measure the wrong quality. In contrast to academic work, in which creativity and innovation are highly valued, judicial decisionmaking is better when it is conservative and minimalist. Citation counts, the argument goes, likely reward judges who are more creative and expansive in their articulations of the law, since courts are more likely to cite such articulations.<sup>15</sup> If anything, high citation counts may be a measure of bad judging if the “better” approach to lawmaking is to decide cases narrowly.

We are skeptical of this argument because, if the premise is that most judges are seeking to make “good” law and that type of law is narrow and minimalist, then it seems likely that these judges will look to precedent from judges who write opinions in a narrow and minimalist fashion. In other words, if judges value minimalism, then minimalist opinions will be cited more, not the creative and expansive ones. One way to test this premise is to separate out the judges who have the highest citation counts and then to ask whether these are judges who are viewed (for example, in the press) as the ones who are known for their creativity and expansiveness in opinion writing.

Citation counts are also often subject to “superstar” effects, under which the top performer grabs the vast majority of the credit and the next best performers, even though they have also produced a high quality product, get very few citations.<sup>16</sup> When one is aggregating performance across a number of subject areas, the superstar effect can skew one’s results in that it can potentially give disproportionate credit to the top performers in particular areas and inadequate credit to those finishing at lower levels. So, to illustrate the point, let us say that North Carolina judges write the third-best opinions in all ten subject areas and that Montana judges write the best opinions in one area (for example, natural resource conservation) but terrible opinions in the

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15. RICHARD A. POSNER, *HOW JUDGES THINK* 149 (2008).

16. See Daniel A. Farber, *Supreme Court Selection and Measures of Past Judicial Performance*, 32 FLA. ST. U. L. REV. 1175, 1183 (2005).

other nine subject areas. Because of superstar effects, Montana's one first-place finish could cause it to finish, in the aggregate count, ahead of North Carolina. A partial correction for these effects can be implemented by breaking down the citation counts for both courts and judges by subject areas.

Overall, California was the most-cited court for the 1998 to 2000 period, with 33.76 outside citations per judge-year (majority opinions only). Oklahoma's criminal high court was the least cited, with 3.69 outside citations per judge-year. The median state was South Dakota (13.07 outside citations per judge-year).

### C. Independence

"Independence" refers to the judge's ability to withstand partisan pressures, or disinclination to indulge partisan preferences, when deciding cases. Independence is a hallmark of judicial quality: judicial decisions should be based on the legal merits of the case, not on the judge's political preferences or other irrelevant considerations such as the political power of a party to litigation. Our measure of independence captures part of this idea, namely, that a judge's decision should be unrelated to partisanship. Our measure gives a judge a high score if he is more likely to vote with opposite-party judges and a low score if he is more likely to vote with same-party judges. We focus on votes by judges when they face an opposing opinion, defined as either a majority opinion when the judge writes a dissent or a dissent when the judge joins the majority. We assume that a judge exhibits independence when she writes an opposing opinion against a copartisan.

For each judge, we obtained information on the political affiliation of the judge. In a few states, all the high court judges belong to the same party in our data set, and so we cannot assign those judges an independence score.<sup>17</sup> In our sample, 220 judges were classified as Democrats and 170 as Republicans (with 16 no-data or Independent Party judges).

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17. For a description of our independence measure, see Choi et al., *supra* note 6 (manuscript at 17). In another paper, Choi and Gulati treat a 0 independence score as highest on the theory that zero independence means that party affiliation makes no difference to case outcomes. See Choi & Gulati, *supra* note 10, at 66. For purposes of this Article, we treat a judge who votes against partisan affiliation as likely to be more independent, as it shows that she feels strongly about the outcome. It is possible that the judge switched ideologies while sitting, but prior scholarship indicates that this is unusual. See JEFFREY A. SEGAL & HAROLD J. SPAETH, *THE SUPREME COURT AND THE ATTITUDINAL MODEL REVISITED* 180 (2002).

Two variables are relevant to calculating the independence of each judge: *Opposite\_Party* and *Opposite\_Pool*. We define *Opposite\_Party* as the number of opposing opinions written by the judge of interest against a judge of the opposite party divided by the number of opposing opinions written against a judge of either party from 1998 to 2000. This variable measures a judge's propensity to side with copartisans. Not all opposing opinions are driven by ideology. A judge who dissents at random would dissent 70 percent of the time against an opposite party judge if the background pool of majority opinions consisted of 70 percent opposite party authored opinions. To take into account the background pool of opinions, we define *Opposite\_Pool* as the total number of majority opinions authored by an opposite party judge divided by the total number of majority opinions authored by either an opposite or same party judge (not including the judge in question) from 1998 to 2000.

We define independence as *Opposite\_Pool* minus *Opposite\_Party*. A more negative independence score corresponds to a judge who writes opposing opinions against opposite-party judges more frequently than the background pool of majority opinions authored by opposite-party judges. Conversely, a more positive independence score corresponds to an authoring judge who writes opposing opinions less frequently against opposite-party judges compared with the background pool of opinions (and thus more frequently against copartisans). We treat a more positive independence score as indicative of a more independent judge.

Our independence measure does not capture all the meanings of judicial independence. Judges who take bribes or favor wealthy or powerful litigants are not independent, but our independence measure does not capture such activity.<sup>18</sup> One can also imagine cases in which a judge's policy preferences influence her decisions, which is improper, but these policy preferences are idiosyncratic and do not track partisan divisions. Our measure misses these cases as well. Our goal in creating this measure was to get as close as possible to a measure of partisanship—that is, Republicans siding with other Republicans simply because they were Republicans. This approach contrasts with

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18. In many countries, the concern about judges taking bribes is a real one. And in those contexts, the relevant measure of independence should include some measure of judicial corruption. But in the United States, where high court judges have the option of earning higher sums in private practice, this concern may be misplaced. It is unlikely that these judges would engage in corrupt behavior and risk criminal sanctions when they could instead simply move into the private sector.

the more general approach in the academic literature on political bias, which looks at voting as a function of certain policy positions—in which one is counted as voting in a liberal or conservative fashion if one supports a particular policy position (for example, ruling against the hospital and for the plaintiff in a medical malpractice case might be measured as a liberal outcome).<sup>19</sup> The more general approach, in our view, might capture policy preferences but does not isolate partisanship.

The independence score ranges from -1 (least independent) to 1 (most independent). The court with the highest mean independence score among judges for the 1998 to 2000 period was Rhode Island's, with a mean independence score of 0.19; the least independent court was that of Mississippi, which had a mean independence score of -0.31. The median was -0.02.

#### *D. Composite Measures*

Suppose that a court ranks highly on one measure but not so well on the other two measures, whereas another court does worse on the first measure but better on the other two. Which court is better? Ideally, we would have a theory that tells us how much to weigh each measure, but we have no such theory. One might think that independence is much more important than productivity and quality, or one might think not. Equal weight for each measure is no less arbitrary than counting only one measure and ignoring the other two.

This problem is not necessarily serious. Suppose courts that do well on one measure also tend to do well on other measures. If the rankings along each measure are largely consistent, then overall rankings can easily be obtained. As the rankings become less consistent, noise is introduced into the rankings, but it does not defeat the exercise. Plus, users can decide for themselves how much they weight the different measures and interpret our results accordingly.

Our approach allows for various weightings. Under this composite approach, we construct rankings under several possible weightings, and we display them in a manner that allows the reader to focus on whatever measures she believes are most important.

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19. E.g., Joanna M. Shepherd, *The Influence of Retention Politics on Judges' Voting*, 38 J. LEGAL STUD. (forthcoming 2009) (manuscript at 14), available at <http://ssrn.com/abstract=997491>.

## II. RANKING THE STATE HIGH COURTS

### A. *The U.S. Chamber of Commerce Rankings*

The most influential ranking of state courts—focusing on the entire legal systems, not just the high courts—has been produced by the U.S. Chamber of Commerce. The Chamber of Commerce conducts annual surveys of lawyers that ask them for their evaluations of state courts.<sup>20</sup>

The Chamber of Commerce surveys ask senior lawyers at corporations that earn more than \$100 million per year in revenues to grade state court systems, from A to F, and aggregate their responses.<sup>21</sup> In the next Section, we compare the Chamber of Commerce rankings and rankings produced by other academics with our rankings. At the outset, we should note a number of reasons that might explain why the Chamber's rankings might diverge somewhat from academic rankings. First, academic studies all rate state high courts, whereas the Chamber of Commerce evaluates the entire judicial system. It is possible (although, we suspect, unlikely) that good state high courts preside over mediocre trial and lower appellate courts. Second, an important element of the academic studies is out-of-state influence, whereas the Chamber of Commerce focuses on in-state performance. Out-of-state influence might be a good proxy for the quality of high court opinions (and we use it as just such a proxy in our rankings), but it also might not be; it is possible that a supreme court that writes influential opinions is not fair or predictable, though it is hard to believe that it is not competent. Third, as noted, academic studies (that use external citations to opinions as a key element), in effect, survey out-of-state judges, whereas the Chamber of Commerce surveys business lawyers. Business lawyers might have systematically different attitudes toward judicial decisionmaking than other lawyers. Business lawyers probably give high marks to courts that decide cases in a manner businesses

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20. Related are reports of so-called judicial hellholes put out by organizations like the American Tort Reform Association (that the U.S. Chamber of Commerce applauded). See Press Release, U.S. Chamber of Commerce, Report Bolsters Harris Poll Finding on Abusive Legal Climates (Dec. 15, 2004), <http://www.uschamber.com/press/releases/2004/december/04-163.htm>.

21. Inst. for Legal Reform, State Resources Center: Executive Summary, [http://www.instituteforlegalreform.com/index.php?option=com\\_ilr\\_harris\\_poll&id=1&view=lawsuit\\_climate&Itemid=60](http://www.instituteforlegalreform.com/index.php?option=com_ilr_harris_poll&id=1&view=lawsuit_climate&Itemid=60) (last visited Feb. 11, 2009); Inst. for Legal Reform, State Resources Center: Methodology, [http://www.instituteforlegalreform.com/index.php?option=com\\_ilr\\_harris\\_poll&id=7&view=lawsuit\\_climate&Itemid=60](http://www.instituteforlegalreform.com/index.php?option=com_ilr_harris_poll&id=7&view=lawsuit_climate&Itemid=60) (last visited Feb. 11, 2009).

like—rejecting punitive damages, for example—whereas out-of-state judges need not share these views.

We have more to say about the methodological assumptions of the Chamber of Commerce study.<sup>22</sup> For now, it is sufficient to point out that the Chamber of Commerce rankings have been more influential than the academic studies. They have been cited by state legislators to criticize their judiciaries and ask for reform, by a judicial pay compensation commission to justify a salary increase, and by two governors to advertise the attractiveness of their states for big business.<sup>23</sup> The Chamber of Commerce has used its annual survey of state court systems to pressure state legislatures to improve their court systems.<sup>24</sup> It has also run advertisements in major newspapers in states ranking low on its surveys before some elections.<sup>25</sup> Other reform organizations such as the American Legislative Exchange Council have incorporated the Chamber of Commerce's rankings into their broader measures of state performance and analyses of the reasons for differences in state economic success rates.<sup>26</sup> Some academics have also used the rankings in empirical studies of the relationship between judicial quality and institutional design.<sup>27</sup> Groups like the ABA and

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22. See *infra* Part II.C.5.

23. See *supra* note 2.

24. See Press Release, Tom Donohue, President & CEO, U.S. Chamber of Commerce, Release of the 2006 Harris Poll State Liability Rankings (Mar. 27, 2006), [http://www.uschamber.com/press/speeches/2006/060327\\_jlr\\_rankings\\_remarks.htm](http://www.uschamber.com/press/speeches/2006/060327_jlr_rankings_remarks.htm) ("But there's still quite a ways to go before we can rid our courts of lawsuit abuse and correct the deep flaws in our legal system. One of the key weapons in our arsenal is the annual State Liability Systems Ranking Study. Since the inception of the study, it has become the benchmark against which businesses, elected officials, the media and other opinion leaders measure their state's legal climate. They want to see how they stack up against other states, and also how well—or poorly—the system is serving employers, workers and consumers.").

25. See ABA Div. for Bar Servs., Bar Associations' Response to Chamber of Commerce Ad Campaign, <http://www.abanet.org/barserv/tortreform.html> (last visited Feb. 2, 2009) (reporting on advertisements run in both national newspapers like the *New York Times*, the *Washington Post*, and the *Wall Street Journal* and in local newspapers in Illinois, West Virginia, California, and Mississippi).

26. See ARTHUR B. LAFFER & STEPHEN MOORE, RICH STATES, POOR STATES 40 (2007) (using the 2002 Chamber of Commerce rankings as one of sixteen factors in their state competitiveness rankings).

27. E.g., Russell S. Sobel & Joshua C. Hall, *The Effect of Judicial Selection Processes on Judicial Quality: The Role of Partisan Politics*, 27 CATO J. 69, 71 (2007); Russell S. Sobel, Matt E. Ryan & Joshua C. Hall, *Electoral Pressures and the Legal System: Friends or Foes?*, in LAW WITHOUT ROMANCE: PUBLIC CHOICE AND LEGAL INSTITUTIONS (E. Lopez ed.) (forthcoming) (manuscript at 5), available at <http://joshua.c.hall.googlepages.com/electoralpressures.pdf>; Daniel Berkowitz & Karen Clay, *Initial Conditions, Institutional Dynamics and Economic Performance: Evidence from the American States* 7–8 (William Davidson Inst., Working Paper No. 615, 2004),



Public Citizen, the Ralph Nader-led organization, have complained that these rankings are biased toward the interests of big business.<sup>28</sup> But in the absence of meaningful competitive rankings, these objections are the equivalent of law schools urging students to ignore the *U.S. News and World Report* rankings. It just will not work.

### *B. Prior Academic Literature on Ranking State Courts*

We are aware of five academic articles that rank the state high courts.

Lawrence Friedman, Robert Kagan, Bliss Cartwright, and Stanton Wheeler examined a data set consisting of approximately six thousand cases from the state high courts for discrete intervals of time in the 1870–1970 period.<sup>29</sup> Focusing on sixteen state high courts, the study uses the evolution in patterns of opinion writing style and citations over a century to draw inferences about court behavior. The study does not provide a detailed ranking of all the state high courts in terms of citations but does give a rough sense of which states dominated over the different periods during that century. In the quarter century 1870–1895, the stars were New York, Massachusetts, and California. New York stood out during the early portion of that period, but its influence began to wane by the end. By 1925, the courts in Illinois, Michigan, Wisconsin, and Pennsylvania began to emerge as influential. Finally, in 1945–1970, California emerged as a star. New Jersey, Texas, and Illinois also were among the more influential states

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available at <http://ssrn.com/abstract=485003> (using the 2002 Chamber of Commerce rankings to measure court quality in the different states); see also Michael J. Hicks, *Reduce the Cost of Civil Litigation and Depoliticize the Courts*, in UNLEASHING CAPITALISM 185, 189 (Russell S. Sobel ed., 2007) (referring to a study by Professors Sobel and Hall that uses the Chamber of Commerce rankings). Neither of the latter two studies mentions that the Chamber and Commerce data reflect the views of only lawyers at corporations with annual revenues of at least \$100 million.

28. See Press Release, Pub. Citizen, New U.S. Chamber of Commerce Poll Ranking States' Liability Systems Is Part of a Disinformation Campaign to Restrict Consumer Rights (Mar. 9, 2005), <http://www.commondreams.org/news2005/0309-10.htm>; see also PUB. CITIZEN, CLASS ACTION "JUDICIAL HELLHOLES": EMPIRICAL EVIDENCE IS LACKING 2 (2005), available at <http://www.citizen.org/documents/OutlierReport.pdf> (featuring a complaint regarding the judicial hellholes reports); Letter from Dennis W. Archer, President, Am. Bar Ass'n, to Thomas J. Donohue, U.S. Chamber of Commerce 1 (Mar. 11, 2004), <http://www.abanet.org/media/statementsletters/chamberopenletter.pdf> (accusing the Chamber of Commerce of mounting a campaign against members of the legal system to avoid taking responsibility for the nation's financial problems).

29. Lawrence M. Friedman et al., *State Supreme Courts: A Century of Style and Citation*, 33 STAN. L. REV. 773, 774 (1981).

in terms of citations. Overall, for 1870–1970, the four top states were New York, California, Massachusetts, and Illinois.

Rodney Mott's 1936 study covers a more limited period, roughly from 1900 to 1930.<sup>30</sup> Mott uses multiple measures of court prestige that include (1) a survey of law professors who were asked about the esteem with which they held the various courts, (2) the extent to which cases from the different courts found their way into casebooks, (3) citations from other state high courts, and (4) citations from the U.S. Supreme Court. Table 1 reports the top and bottom ten states in Mott's composite ranking. Consistent with the numbers from Friedman et al., Mott reports New York, Massachusetts, California, and Illinois as among the top performers. The steep drop in numbers from the top two states, New York and Massachusetts, and the others—on all of Mott's measures—is worth noting. This superstar effect, where a couple of states dramatically outdo the others, suggests the strong possibility that modifications of the measures—for example, adjusting for the number of judges on the court—would still leave the superstar states at the top. At the bottom end in Mott's composite rankings are Florida and the western states of Nevada, Arizona, New Mexico, and Wyoming. Many of the western states were still relatively young, and their low ranks may have been due to their less-developed bodies of case law.

Roughly fifty years later, building on Mott's work but focusing exclusively on citation measures, Gregory Caldeira reranked the state high courts.<sup>31</sup> Caldeira looks at a single year, 1975, and his method of calculation differs from Mott's; Caldeira adjusts the citation numbers to discount for the propensity of some states to make outside citations for reasons other than the quality of the state high courts. For example, Alaska's court might have cited to more outside state courts than did other state courts because it didn't have much of its own case law. Caldeira also looks only at a single measure, citations from the high courts to each other. Table 1 reports the top and bottom performers in Caldeira's rankings. Despite the half-century gap between his study and Mott's, the states in the top ten are similar. The only difference between 1930 and 1975 in the top ten states is that Washington replaces Minnesota. The suggestion of a superstar effect present in Mott's results—with the top two states significantly

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30. Rodney L. Mott, *Judicial Influence*, 30 AM. POL. SCI. REV. 295, 295–96 (1936).

31. Gregory A. Caldeira, *On the Reputation of State Supreme Courts*, 5 POL. BEHAV. 83, 87–93 (1983).

outdoing the others—remains, except that the two superstar states are now California and New York as opposed to New York and Massachusetts. At the bottom, there are a number of new states, the three holdovers at the bottom being Nevada, South Dakota, and Wyoming.

In 2002, Scott Comparato updated Caldeira's study with data from 2000 using similar measurement methods.<sup>32</sup> Whereas Caldeira's study looks at every case cited in 1975, Comparato uses random samples of thirty cases from each state court. Despite the twenty-five-year gap, the identities of the top performing states remain remarkably stable. California and New York take the top two superstar spots and remain a good way ahead of the others. New entrants into the top ranks include Minnesota and Colorado. At the bottom, there is more turnover, with Texas, Vermont, Louisiana, and Tennessee showing up.

In 2007, Jake Dear and Edward Jessen offered a ranking based on a novel measure of influence.<sup>33</sup> Contending that the standard measure of outside court citations was crude, Dear and Jessen count the number of times the Shepherd's citation service designated a decision as "followed or used as persuasive authority for the period from 1940 to 2005."<sup>34</sup> California again dominates, with Washington coming in second. Massachusetts and New York remain in the top ten, and states such as Oregon and Kansas show up for the first time. At the bottom are some new entrants, including Virginia and Delaware. For our purposes, the portion of their data that is most interesting is that which covers the same years that our study does, that is, 1998–2000. In Table 1, we report the rankings using the "followed" citations for cases decided from 1998–2000. A caveat: this is not the ranking that Dear and Jessen use in their article; they do not attach too much weight to comparisons of followed citations from relatively recent time periods since followed citations take time to accumulate.<sup>35</sup>

The final ranking comes from the Chamber of Commerce study (for purposes of our discussion, we focus on the 2002 rankings)

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32. Scott A. Comparato, *On the Reputation of State Supreme Courts Revisited* (Apr. 2002) (unpublished manuscript, on file with the *Duke Law Journal*).

33. Jake Dear & Edward W. Jessen, "Followed Rates" and *Leading State Cases, 1940–2005*, 41 U.C. DAVIS L. REV. 683, 690–93 (2007).

34. *Id.*

35. For 1940–2005, the top ten states, in order, are California, Washington, Colorado, Iowa, Minnesota, Kansas, Massachusetts, Wisconsin, Oregon, and New York. *Id.* at 694.

discussed above.<sup>36</sup> In this study, close to 1,500 senior lawyers working at firms with revenues of at least \$100 million annually were surveyed each year since 2001 for their evaluations of the different state legal systems. Two of the survey questions asked for evaluations of judicial performance, and presumably the performance of the high courts is correlated with that of the lower courts in the state. These rankings are at odds with the other rankings discussed. The states showing up at the top in 2002, for example, include Delaware, Virginia, and Nebraska, states that have not shown up at the top on any of the citation based rankings (in fact, Delaware and Virginia have shown up closer to the bottom on some of the citation counts). At the other end, the Chamber of Commerce surveys have the perennial superstar performer on the citation measures, California, near the bottom (ranked thirty-fourth for judicial impartiality, twenty-eighth for judicial competence, and forty-fifth under the “overall” ranking), along with another perennial front runner in the citation studies, Illinois (ranked thirty-eighth for judicial impartiality, thirty-ninth for judicial competence, and thirty-fourth under the “overall” ranking).<sup>37</sup>

*Table 1. Prior Studies*

*Panel A. Top Ten Performing States by Study*

1945– 1970	1900–1930	1975	2000	1998– 2000	2002	2002
Kagan <i>et al.</i> , Citation Ranking	Mott Composite Ranking	Caldeira Citation Ranking	Comparato Citation Ranking	Followed Citations	Chamber of Commerce Survey— Judges’ Impartiality	Chamber of Commerce Survey— Judges’ Competence
CA	NY	CA	CA	CA	DE	DE

36. For the latest rankings and associate advertising, see Inst. for Legal Reform, <http://www.instituteforlegalreform.com> (last visited Feb. 2, 2009).

37. Less directly on point are a handful of other studies that could also be read to contain rankings of the states but that we do not discuss because they are tangential to our inquiry. For example, a 1981 study by Professors Canon and Baum compared the states’ innovativeness in terms of being willing to adopt a set of twenty-three plaintiff-friendly tort law doctrines. Bradley C. Canon & Lawrence Baum, *Patterns of Adoption of Tort Law Innovations: An Application of Diffusion Theory to Judicial Doctrines*, 75 AM. POL. SCI. REV. 975, 975 (1981). Also, a number of other studies examine the citation patterns of individual state courts. Professor Merryman, for example, in two studies twenty years apart, looked at the citation practices of the California Supreme Court, which could be read to be California’s ranking of the rest of the state high courts. John Henry Merryman, *The Authority of Authority: What the California Supreme Court Cited in 1950*, 6 STAN. L. REV. 613, 613–14 (1954); John Henry Merryman, *Toward a Theory of Citations: An Empirical Study of the Citation Practice of the California Supreme Court in 1950, 1960, and 1970*, 50 S. CAL. L. REV. 381, 381 (1977).

NJ	MA	NY	NY	WA	CO	WA
TX	IL	NJ	MN	NE	WA	VA
IL	NJ	PA	PA	KS	IA	IA
	CA	MA	CO	MA	WI	MN
	PA	WI	MI	CT	CT	CO
	MI	IL	WA	MT	NE	AZ
	MN	WA	IL	IA	OR	CT
	WI	IA	NJ	MD	VA	NY
	IA	MI	WI	TX_CIV	MN	WI

*Panel B. Bottom Ten Performing States by Study*

<i>1870– 1895 Kagan et al., Ranking</i>	<i>1900–1930 Mott Composite Ranking</i>	<i>1975 Caldeira Citation Ranking</i>	<i>2000 Comparato Citation Ranking</i>	<i>1998– 2000 Followed Citations</i>	<i>2002 Chamber of Commerce Survey— Judges’ Impartiality</i>	<i>2002 Chamber of Commerce Survey— Judges’ Competence</i>
N/A	MT	ME	TX	ID	AR	SC
	AR	SC	LA	AZ	SC	KY
	UT	WV	WV	UT	HI	HI
	SD	NV	RI	DE	NM	AR
	ID	ND	ND	LA	MT	TX
	WY	RI	TN	OR	TX	MT
	FL	VT	NV	KY	AL	WV
	NV	HI	AK	HI	WV	LA
	AZ	SD	ME	NM	LA	AL
	NM	WY	VT	MO	MS	MS

Bottom 10 performers are listed from highest ranked state to lowest ranked state (e.g., Mississippi is the lowest ranked state based on the 2002 Chamber of Commerce rankings reported in the table).

Our study differs from these prior studies in several ways. First, we use three measures rather than one measure of judicial quality—productivity, independence, and opinion quality. Second, for opinion quality we use citations (a broader measure than the number of followed citations that Dear and Jessen used), but we do not adjust

them for state size (unlike Caldeira and Comparato). Third, we did not survey lawyers. The differences between our approach and the earlier studies are driven partly by a different focus—the quality of the courts rather than (only) their influence—and partly by our different judgments about how to measure influence. We return to these differences when we compare our results to those of the earlier studies.

### *C. Ranking the Courts*

1. *The Court Systems.* All states have a hierarchical system, with trial courts at the bottom and a supreme or highest court at the top. Most, but not all, states have intermediate appellate courts. Two states—Texas and Oklahoma—have two high courts, one for criminal appeals and the other for civil appeals. Many high courts have mandatory jurisdiction: they must hear appeals. Others have discretionary jurisdiction. Most have a combination of mandatory jurisdiction for some types of cases (such as death penalty cases) and discretionary jurisdiction for other types of cases. Courts have different rules and norms for a range of practices, such as whether opinions must, or need not, be published. No doubt courts have different internal cultures reflecting different attitudes toward dissenting, writing quickly or slowly, writing comprehensively or briefly, citing generously or minimally, and so forth. Some high courts might benefit from the high-quality work of lower courts or suffer from their low-quality work.

Two features of high courts have received considerable public and scholarly attention lately: their selection systems and judicial pay. The selection system refers to how judges are selected and retained. There are, roughly, three systems. In appointments systems, the governor (sometimes the state legislature) selects judges, sometimes with the advice of a commission. In merit systems, a nonpartisan or bipartisan body picks judges; at the end of the judge's term, a retention election (up or down vote) determines whether the judge has another term. In electoral systems, judges are elected; these systems can be further divided into partisan and nonpartisan systems—in partisan systems, the judge's party appears on the ballot; in nonpartisan systems, it is not. Table 2 identifies the selection systems of all of the states as of 1998–2000, the period from which we take our data.

*Table 2. Selection Systems*

Appointed (A)	Merit Selection (M)	Nonpartisan Election (NE)	Partisan Election (PE)
Connecticut	Alaska	Georgia	Alabama
Delaware	Arizona	Idaho	Arkansas
Hawaii	Colorado	Kentucky	Illinois
Massachusetts	Iowa	Louisiana	North Carolina
Maine	Indiana	Michigan	New Mexico
New Hampshire	Kansas	Minnesota	Pennsylvania
New Jersey	Maryland	Mississippi	Texas
New York	Missouri	Montana	West Virginia
Rhode Island	Nebraska	North Dakota	
Vermont	Oklahoma	Nevada	
South Carolina	South Dakota	Ohio	
Virginia	Utah	Oregon	
	Wyoming	Washington	
	California	Wisconsin	
	Florida		
	Tennessee		

A further point is that judicial terms vary, from as little as four years to as much as fourteen years, with lifetime tenure in three states. Roughly speaking, appointed judges enjoy the longest tenure, merit selection judges the next longest, and elected judges the shortest tenure. One might think of the systems as reflecting the degree to which the public directly affects the identity of judges: they have the least effect in appointment systems, the most effect in electoral system, with the merit system in between.

Judicial compensation also varies. In 2007, the median income of high court judges was \$149,200 and ranged from \$106,185 to \$209,521.<sup>38</sup> The employment conditions of judges differ in other ways as well. Judges enjoy different levels of secretarial and clerical support.

38. NAT'L CTR. FOR STATE COURTS, SURVEY OF JUDICIAL SALARIES 1 (2007), *available at* [http://www.ncsconline.org/WC/Publications/KIS\\_JudComJudSal070107Pub.pdf](http://www.ncsconline.org/WC/Publications/KIS_JudComJudSal070107Pub.pdf).

Roughly speaking, elected judges are paid less than appointed judges; they are also more likely to have graduated from a local law school.<sup>39</sup>

Finally, the mix of cases that reach high courts differs from state to state. Some states are highly urban, whereas others are relatively rural; some have certain types of industries that other lack; some have higher crime rates than others; and so on. For this reason, comparing different high courts is hazardous and complex.

2. *Productivity.* Table 3 provides productivity results by state, ranked by published opinions per judge-year. The fourth column provides aggregate productivity (Total Opinion: the total number of published opinions for the 1998 to 2000 time period); the fifth column provides the sum of each judge's presence on the bench during the period of our study (Judge-Years); the last column provides a measure of efficiency—opinions per judge-year. The two measures are highly correlated (correlation coefficient = 0.92; significant at the <1 percent level). In other words, states publishing a lot of opinions are not simply doing so because they have more judges. Judges in Georgia, at close to sixty opinions per judge per year, are doing something different than their colleagues in New Mexico, at closer to ten opinions per judge per year. But perhaps, on further examination, it will turn out that the Georgia opinions are all short, low-quality opinions whereas the ones from New Mexico are carefully crafted gems.

*Table 3. Number of Published Opinions*

<i>Rank</i>	<i>State</i>	<i>Sel. System</i>	<i>Total Opinions</i>	<i>Judge-Years</i>	<i>Opinions/ Judge-Year</i>
1	GA	NE	1225	21	58.33
2	MS	PE	1437	29	49.55
3	AR	PE	1038	21	49.43
4	AL	PE	1417	30	47.23
5	OH	NE	989	21	47.10
6	MT	NE	968	21	46.10
7	PA	PE	941	21	44.81
8	ND	NE	703	16	43.94
9	IN	M	573	15	38.20
10	WY	M	548	15	36.53

39. See Choi et al., *supra* note 6 (manuscript at 41).



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11	FL	M	709	21	33.76
12	CT	A	707	23	30.74
13	NE	M	699	23	30.39
14	ID	NE	477	16	29.81
15	IL	PE	642	22	29.18
16	CA	M	605	21	28.81
17	ME	A	718	26	27.62
18	MA	A	608	23	26.43
19	IA	M	715	28	25.54
20	AK	M	446	18	24.78
21	UT	M	420	17	24.71
22	SD	M	366	15	24.40
23	SC	A	387	16	24.19
24	MD	M	523	22	23.77
25	TN	M	373	16	23.31
26	WV	PE	346	15	23.07
27	KS	M	483	21	23.00
28	TX_CRIM	PE	583	26	22.42
29	LA	NE	525	24	21.88
30	NH	A	366	17	21.53
31	WA	NE	578	28	20.64
32	VA	A	413	21	19.67
33	MN	NE	452	24	18.83
34	KY	NE	411	22	18.68
35	WI	NE	386	21	18.38
36	VT	A	274	15	18.27
37	RI	A	273	15	18.20
38	NY	A	380	22	17.27
39	CO	M	386	23	16.78
40	MI	NE	389	24	16.21
41	OK_CIV	M	435	28	15.54
42	NV	NE	259	18	14.39
43	OK_CRIM	M	230	16	14.38
44	NJ	A	376	27	13.93
45	TX_CIV	PE	347	27	12.85
46	HI	A	225	18	12.50
47	OR	NE	245	21	11.67
48	AZ	M	172	15	11.47
49	MO	M	252	22	11.45
50	NC	PE	262	23	11.39
51	DE	A	163	15	10.87

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52	NM	PE	151	15	10.07
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One striking result is that the top four—Georgia, Mississippi, Arkansas, Alabama—do not show up at the top of any of the earlier ranking studies using citations. Mississippi, Arkansas, and Alabama do show up in the top ten of the Chamber of Commerce survey, suggesting that the senior business lawyers who were surveyed might recognize that the courts of those states work hard. These traditionally overlooked states may deserve more credit.<sup>40</sup>

3. *Citations.* Table 4 provides out-of-state citations to majority opinions produced by a court. The fourth column (Total Citations) reports the total outside state citations to majority opinions issued from 1998 to 2000 and provides a measure of the overall influence of the court; the last column (Citations/Judge-Year) provides a measure of efficiency, focusing on number of outside citations per judge-year for the state. The two measures are highly correlated (correlation coefficient = 0.89; significant at the <1 percent level).

At the top, California is far ahead of the other states in both total number of citations and citations per judge-year. The number of outside citations per judge per year is close to thirty-five for California judges, whereas the equivalent number for judges at the courts at the bottom is under five. The inference we draw is that the quality of opinions being produced by courts at the top and those at the bottom are likely different. After California, there is a sharp drop in the numbers of citations (from over thirty-three per judge per year to around twenty-two per judge per year) and also more clustering, with Delaware, Montana, and Washington being close together in the twenty-two-citation range. New York, a star on prior citation count studies does not appear in the top twenty (it is number twenty-four), below states like Arkansas and South Carolina, whose judiciaries have

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40. A ready objection to using the number of published opinions is that some states have norms of producing and publishing short opinions and others use longer and more detailed opinions. If one assumes that the shorter opinions involve less effort (a questionable, but plausible assumption), then the better measure of effort might be the number of published pages. Alternatively, one could look at the number of Westlaw KeyCites, which would provide a sense of the number of issues that opinion tackled (shorter and more routine opinions would have fewer Westlaw KeyCites). Unreported here, we calculated state rankings on each of these measures as well. The rankings do change. On the Westlaw KeyCite measure, for example, the top five states are South Carolina, Montana, Pennsylvania, New Jersey and Georgia. On the number of pages measure, the top states are Montana, Pennsylvania, California, Mississippi and Maryland.

traditionally had weaker reputations. Massachusetts, another historically dominant state, remains among the top performers.

Finally, to go back to the Georgia–New Mexico comparison from the discussion of productivity, we see that, on quality, Georgia drops from the top position to twenty-eighth position and New Mexico rises from the bottom to the thirty-seventh position. At least at first cut, maybe the Georgia judges produce more opinions at the expense of quality (and vice versa for New Mexico).

*Table 4. Out-of-State Citations to Majority Opinions*

<i>Rank</i>	<i>State</i>	<i>Sel. Type</i>	<i>Total Citations</i>	<i>Judge-Years</i>	<i>Citations/ Judge-Year</i>
1	CA	M	709	21	33.76
2	DE	A	336	15	22.40
3	MT	NE	468	21	22.29
4	WA	NE	611	28	21.82
5	MA	A	469	23	20.39
6	MD	M	448	22	20.36
7	ND	NE	316	16	19.75
8	KS	M	388	21	18.48
9	CT	A	405	23	17.61
10	NJ	A	474	27	17.56
11	CO	M	382	23	16.61
12	IN	M	244	15	16.27
13	NE	M	371	23	16.13
14	IL	PE	354	22	16.09
15	AR	PE	337	21	16.05
16	OH	NE	337	21	16.05
17	PA	PE	336	21	16.00
18	SC	A	245	16	15.31
19	AK	M	273	18	15.17
20	TN	M	242	16	15.13
21	IA	M	403	28	14.39
22	WV	PE	206	15	13.73
23	VT	A	206	15	13.73
24	NY	A	301	22	13.68
25	MN	NE	321	24	13.38
26	NH	A	225	17	13.24
27	SD	M	196	15	13.07
28	GA	NE	262	21	12.48
29	AZ	M	187	15	12.47

30	VA	A	261	21	12.43
31	WY	M	184	15	12.27
32	WI	NE	256	21	12.19
33	MS	PE	322	29	11.10
34	ME	A	284	26	10.92
35	AL	PE	325	30	10.83
36	FL	M	208	21	9.90
37	NM	PE	143	15	9.53
38	ID	NE	148	16	9.25
39	TX_CIV	PE	243	27	9.00
40	RI	A	131	15	8.73
41	NV	NE	157	18	8.72
42	MI	NE	208	24	8.67
43	HI	A	150	18	8.33
44	UT	M	134	17	7.88
45	NC	PE	170	23	7.39
46	LA	NE	159	24	6.63
47	KY	NE	145	22	6.59
48	OR	NE	137	21	6.52
49	OK_CIV	M	160	28	5.71
50	MO	M	115	22	5.23
51	TX_CRIM	PE	105	26	4.04
52	OK_CRIM	M	59	16	3.69

Next, we compare our top ten states with those of the roughly contemporary citation studies, and the Chamber of Commerce survey measure of competence.

*Table 5. Comparison of Influence Rankings*

Top 10 Performers

<i>Our Citation Results</i>	<i>2000 Comparative Citation Ranking</i>	<i>1998–2000 Followed Citations</i>	<i>2002 Chamber of Commerce Survey—Judges' Competence</i>
California	California	California	Delaware
Delaware	New York	Washington	Washington
Montana	Minnesota	Nebraska	Virginia
Washington	Pennsylvania	Kansas	Iowa
Massachusetts	Colorado	Massachusetts	Minnesota
Maryland	Michigan	Connecticut	Colorado
North Dakota	Washington	Montana	Arizona
Kansas	Illinois	Iowa	Connecticut

Connecticut	New Jersey	Maryland	New York
New Jersey	Wisconsin	Texas-Civil	Wisconsin

#### Bottom 10 Performers

<i>Our Citation Results</i>	<i>2000 Comparato Citation Ranking</i>	<i>1998-2000 Followed Citations</i>	<i>2002 Chamber of Commerce Survey— Judges' Competence</i>
Hawaii	Texas	Idaho	S. Carolina
Utah	Louisiana	Arizona	Kentucky
North Carolina	West Virginia	Utah	Hawaii
Louisiana	Rhode Island	Delaware	Arkansas
Kentucky	North Dakota	Louisiana	Texas
Oregon	Tennessee	Oregon	Montana
Oklahoma Civil	Nevada	Kentucky	W. Virginia
Missouri	Alaska	Hawaii	Louisiana
Texas Criminal	Maine	New Mexico	Alabama
Oklahoma Criminal	Vermont	Missouri	Mississippi

Correl. coeff. between  
our citation results  
and the underlying  
score for each  
influence ranking

0.388  
0.005

0.565  
0.000

0.280  
0.049

Spearman rank coeff.  
between our citation-  
result ranking and  
each influence ranking

0.184  
0.201

0.555  
0.000

0.311  
0.028

\*p-value is from a two-sided t-test of the null hypothesis that there is no correlation.

\*\*p-value is from a two-sided test of the null hypothesis that the two rankings in question are independent.

Bottom 10 performers are listed from highest ranked state to lowest ranked state (e.g., Oklahoma Criminal is the lowest ranked state based on our citation results).

Our results overlap with the results of all three studies, more so with the two academic citation studies. The correlation coefficients between our outside citation measure and the underlying scores behind each of the three other rankings in Table 5 are all positive and significant. The Spearman rank coefficient between our citation

ranking and the three other rankings, similarly, is positive (although significant only for the followed citation ranking and the Chamber of Commerce rankings). Washington appears on all three lists. Our study and the Chamber of Commerce survey also overlap for Delaware, Washington, and Connecticut. Further, Delaware shows up high on both our study and the Chamber of Commerce study and not at all in the other lists. Both our list and the followed citation list include Montana, Massachusetts, and Connecticut.

As those familiar with corporate law would predict, a “Delaware effect” appears. To test the Delaware effect (the hypothesis that Delaware’s dominance in corporate law is due in part to the quality of its courts), we separate out common and commercial law cases and recalculate our opinion quality measure.<sup>41</sup> Appendix A reports the common and commercial law-only ranking.<sup>42</sup> When we focus solely on common law cases, Delaware moves to a clear first place—a likely result of its specialization in those areas. And, of course, those are the areas that business lawyers likely care the most about. The foregoing then provides something of an explanation for why the Chamber of Commerce results rate Delaware so high—those being surveyed care disproportionately about business law. California provides an interesting contrast. It ranks high in a variety of areas. Even when we separate out the common law cases, California shows up high (second in the citation ranking). And that picture is quite different from the one that the Chamber of Commerce results portray, in which they put California in the bottom half of states (ranked twenty-eighth for judicial competence).

At the bottom of the rankings, there is both disjunction and overlap. On the one hand, the Chamber of Commerce study ranks our best performer (California) in the bottom half of their rankings and one of those in our top ten (Montana) among their bottom ten. On the other hand, the two rankings share a number of states at the bottom

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41. We define “Common and Commercial Law Cases” to include cases in the following subject matter areas: Contracts; Insurance; Private arbitration; Creditor v. Debtor; Lessor-Lessee; Usury Laws; Franchise v. Franchisor; Employment Contractual Disputes; Corporate Law; Piercing the Corporate Veil; Tax; Bankruptcy; Enforcement of mechanics lien; Implied warrant of merchantability; Takings claims; Zoning issues; Property rights; Property Licensing-Related or Permit-Related; Landlord-Tenant-Related; Federal Tort Related Act; Medical Malpractice; Products Liability; Wrongful Death; Libel; and other tort cases.

42. Appendix A also provides a ranking of judges based on common and commercial law productivity. Due to the relatively small number of opposing opinions available to calculate the independence ranking, we do not compute a separate common and commercial law independence ranking.

(including Kentucky, Hawaii, Texas (criminal law), and Louisiana). There is also a correspondence between our rankings and the two other citation-based measures with respect to a number of these low performers. Louisiana, for example, shows up at the bottom in all four rankings—in part, likely a product of the fact that it has a civil law system, which does not generate the kinds of opinions that other courts find useful in their work.

4. *Independence.* Table 6 provides data on independence. Several courts receive no score because of insufficient data. Rhode Island dominates the rankings. It is a state whose judiciary has not traditionally ranked high on citation counts, perhaps because of its small size and the presence of its dominant neighbor, Massachusetts.

Rhode Island's judiciary has been criticized by the Chamber of Commerce. Its drop in the Chamber of Commerce's rankings on "legal fairness" has been the subject of radio ads run by the Chamber's Institute for Legal Reform.<sup>43</sup> Its high scores on our measures suggest at least the possibility that the criticisms of the Rhode Island court might be misplaced. That said, Rhode Island's judiciary had some high profile corruption scandals in the late 1980s and the early 1990s, in which two chief justices were forced to resign.<sup>44</sup> Perhaps our results show that the reforms instituted in 1994 were successful.<sup>45</sup> Another state that also scores high, but that has not traditionally done well in citation studies, is Oregon. And Oregon does well on both our measures and those of the Chamber of Commerce.

*Table 6. Average Independence Score*

<i>Rank</i>	<i>State</i>	<i>Sel. Type</i>	<i>Independence</i>
1	RI	A	0.19
2	NY	A	0.15
3	OR	NE	0.13

43. Inst. for Legal Reform, ILR Advertisement, <http://www.instituteforlegalreform.com/images/stories/images/ads/files/wrongwayri.mp3> (last visited Feb. 2, 2009).

44. See David B. Offer, *Why So Much Political Corruption in Rhode Island? But Not in Maine?*, MORNING SENTINEL (Waterville, Me.), Mar. 13, 2007, at 5A, available at <http://morningsentinel.maintoday.com/view/columns/3708052.html>.

45. After a wave of scandals, the judicial appointments process was reformed from having the legislature choose supreme court justices to having the governor choose justices from a list of names provided by a nonpartisan commission (subject to legislative approval). See Barton P. Jenks, III, *Rhode Island's New Judicial Merit Selection Law*, 1 ROGER WILLIAMS U. L. REV. 63, 66–67 (1996); Michael J. Yelnosky, *Rhode Island's Judicial Nominating Commission: Can "Reform" Become Reality?*, 1 ROGER WILLIAMS U. L. REV. 87, 88 (1996).

4	UT	M	0.10
5	OK_CIV	M	0.09
6	NH	A	0.06
7	TX_CIV	PE	0.04
8	OH	NE	0.03
9	MS	PE	0.03
10	IL	PE	0.03
11	AR	PE	0.03
12	WV	PE	0.03
13	AZ	M	0.02
14	NE	M	0.02
15	TN	M	0.01
16	FL	M	0.01
17	LA	NE	0.01
18	ND	NE	0.01
19	CA	M	0.00
20	SD	M	N/A
21	NM	PE	N/A
22	MD	M	N/A
23	GA	NE	N/A
24	SC	A	N/A
25	MA	A	-0.00
26	VT	A	-0.00
27	KS	M	-0.01
28	IA	M	-0.02
29	WA	NE	-0.03
30	PA	PE	-0.03
31	TX_CRIM	PE	-0.03
32	MN	NE	-0.04
33	NJ	A	-0.04
34	HI	A	-0.04
35	KY	NE	-0.05
36	NV	NE	-0.05
37	MT	NE	-0.06
38	ME	A	-0.07
39	CO	M	-0.07
40	AL	PE	-0.08
41	VA	A	-0.08
42	WY	M	-0.09
43	AK	M	-0.09
44	DE	A	-0.12



45	NC	PE	-0.13
46	OK_CRIM	M	-0.14
47	MO	M	-0.14
48	ID	NE	-0.15
49	WI	NE	-0.16
50	CT	A	-0.18
51	IN	M	-0.21
52	MI	NE	-0.31

Note: "N/A" means no score because the court lacks partisan diversity.

Comparing our results to the Chamber of Commerce's 2002 survey of judicial impartiality, we see no statistically significant correlation between our underlying independence scores and the judge impartiality scores reported in the 2002 survey (correlation coefficient = -0.1810; not significant).<sup>46</sup> States the Chamber of Commerce ranks high, like Delaware, Colorado, Wisconsin, Virginia, and Connecticut, show up nearer the bottom in our independence rankings. Table 7 shows our rankings for the top ten of the Chamber of Commerce survey for judicial impartiality.

*Table 7. Comparison of Independence Rankings*

2002 Chamber of Commerce Survey—Top Ten for Judges' Impartiality	<i>Our Rankings</i>
Delaware	44
Colorado	39
Washington	29
Iowa	28
Wisconsin	49
Connecticut	50
Nebraska	14
Oregon	3
Virginia	41
Minnesota	32

The lack of correlation may reflect the difference in methodologies. The Chamber of Commerce survey reveals whether senior lawyers at big corporations think that the courts are impartial, whereas we examine whether partisan considerations influence judges.

46. See U.S. CHAMBER OF COMMERCE, STATES LIABILITY SYSTEMS RANKING STUDY, FINAL REPORT 25 (2002). We also calculate the Spearman Rank Correlation Coefficient = -0.1576 (p-value of two-sided test of null hypothesis that the two are independent = 0.2745).

Suppose that Republican judges tend to favor business interests and that the survey respondents believe that decisions that favor business interests are “impartial.” If so, those lawyers would give high grades to courts dominated by Republican judges who vote together, whereas those same courts would receive low independence scores because of partisan voting.

There are other possible explanations for the lack of correlation. The Chamber of Commerce survey asks for evaluations of the entire judiciary, whereas we examine the high courts. Lawyers face trial judges more than high court judges, and therefore their impartiality rankings might reflect the performance of the former rather than the latter. Finally, it is possible to imagine a state—take Delaware as an example—where all the judges may be pro-big business but may have strong partisan divisions on other topics. If such a state of affairs existed, the state could easily rank high on the Chamber of Commerce rankings and low on ours.

5. *Composite Measures.* There are a number of ways of aggregating our measures. Because the range of our productivity, influence, and independence measures are different, we cannot simply find the average of the three measures to generate a composite measure. Instead, for each measure (total opinions per judge-year, outside citations per judge-year, and independence) we computed the standard deviation for each state from the mean of the sample. Converting each measure into its standard deviation from the mean gives us a common metric with which to interpret each measure—a score of 1, for example, under the transformed measure means that the state is one standard deviation above the mean for the measure. For states without an independence score, we substituted the mean independence score for the other states in computing the standard deviation. We then combined the three standard deviation scores with equal weights to generate the equal-weight composite score. Table 8 reports a composite measure that gives identical weightings to each of the three direct measures.

Table 8. *Equal Weight Composite Ranking*  
(All Subject Matter Areas)

State	Standard Dev. of Total-Opinion Score	Standard Dev. of Outside-Citation Score	Standard Dev. of Indep. Score	Equal-Weight Composite Score
CA	0.294	3.661	0.389	1.448

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AR	2.006	0.500	0.654	1.053
ND	1.550	1.160	0.427	1.046
MT	1.729	1.613	-0.317	1.008
OH	1.812	0.500	0.697	1.003
GA	2.746	-0.138	0.009	0.872
MS	2.016	-0.383	0.669	0.767
PA	1.623	0.491	-0.005	0.703
MA	0.097	1.275	0.323	0.565
NE	0.425	0.514	0.593	0.511
IL	0.325	0.507	0.660	0.497
NY	-0.664	0.077	1.984	0.466
WA	-0.384	1.530	0.043	0.396
MD	-0.124	1.270	0.009	0.385
RI	-0.587	-0.806	2.525	0.377
KS	-0.188	0.933	0.209	0.318
AL	1.824	-0.431	-0.587	0.269
NH	-0.311	-0.002	0.992	0.226
TN	-0.162	0.335	0.488	0.220
FL	0.705	-0.597	0.456	0.188
WV	-0.183	0.086	0.652	0.185
UT	-0.047	-0.958	1.437	0.144
IA	0.022	0.204	0.138	0.122
SC	-0.090	0.368	0.009	0.096
WY	0.935	-0.175	-0.656	0.035
SD	-0.072	-0.033	0.009	-0.032
VT	-0.581	0.086	0.313	-0.061
NJ	-0.942	0.769	-0.074	-0.082
AK	-0.041	0.342	-0.690	-0.129
IN	1.074	0.539	-2.041	-0.143
CT	0.454	0.778	-1.670	-0.146
DE	-1.196	1.633	-0.987	-0.183
OR	-1.129	-1.200	1.757	-0.191
CO	-0.705	0.600	-0.474	-0.193
MN	-0.534	0.023	-0.071	-0.194
AZ	-1.146	-0.140	0.620	-0.222
ME	0.195	-0.415	-0.465	-0.228
OK_CIV	-0.808	-1.345	1.315	-0.279
TX_CIV	-1.031	-0.758	0.818	-0.324
LA	-0.282	-1.182	0.438	-0.342
VA	-0.465	-0.146	-0.600	-0.404

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ID	0.377	-0.714	-1.346	-0.561
TX_CRIM	-0.236	-1.644	-0.012	-0.631
NM	-1.262	-0.663	0.009	-0.639
KY	-0.547	-1.188	-0.193	-0.643
NV	-0.903	-0.808	-0.248	-0.653
HI	-1.060	-0.877	-0.092	-0.676
WI	-0.572	-0.189	-1.423	-0.728
NC	-1.152	-1.046	-1.139	-1.112
MO	-1.147	-1.432	-1.226	-1.268
OK_CRI	-0.905	-1.707	-1.223	-1.278
M				
MI	-0.752	-0.818	-3.102	-1.557

Note: For each measure (total opinions per judge-year, outside citations per judge-year, and independence) we computed the standard deviation from the mean of the sample for each state. For those states without an independence score, we substituted the mean independence score for the other states in computing the standard deviation. We then combined the three standard deviation scores with equal weights to generate the equal-weighted composite score.

California comes out at the top, as it has in other academic studies. More surprisingly, Arkansas and North Dakota, not traditional powerhouses, come in second and third.

However, there is no reason to think that each measure should receive equal weighting. Table 9 provides a triangle chart that varies the weight given to each of the three different measures. At each apex, the measure in bracket is given sole weight and the other measures are given zero. Between the apexes, the measures are given the weights in parentheses (in the order of quality, productivity, independence). For example, if one gives equal weight to productivity and independence, and no weight to influence, then the top five states are Georgia, Mississippi, Arkansas, Ohio, and North Dakota.<sup>47</sup>

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47. Weighting choices matter more for the independence measure, which is uncorrelated with influence and productivity; influence and productivity have a correlation coefficient of 0.3.

Table 9. *Linear Combinations of Influence, Productivity, and Independence for All Subject Matter Areas (Productivity, Opinion Quality, Independence)*

					<b>[Productivity]</b>				
					<b>GA, MS, AR,</b>				
					<b>AL, OH</b>				
					<b>(1,0,0)</b>				
					<b>GA, MT, AR,</b>		<b>GA, MS, AR,</b>		
					<b>OH, ND</b>		<b>OH, ND</b>		
					<b>(.75,.25,0)</b>		<b>(.75,0,.25)</b>		
					<b>GA, AR, OH,</b>				
					<b>MS, MT</b>				
					<b>(.67,.16,.16)</b>		<b>GA, MS, AR,</b>		
<b>CA, MT, ND,</b>					<b>OH, ND</b>				
<b>GA, AR</b>					<b>(.5,0,.5)</b>				
<b>(.5,.5,0)</b>									
					<b>CA, MT, ND,</b>		<b>AR, GA, OH,</b>		
					<b>AR, GA</b>		<b>MS, ND</b>		
					<b>(.42,.42,.16)</b>		<b>(.42,.16,.42)</b>		
					<b>CA, AR, ND, MT, OH</b>				
					<b>(.33,.33,.33)</b>				
<b>CA, MT, ND,</b>					<b>RI, NY, UT,</b>				
<b>WA, MA</b>		<b>CA, MT, ND,</b>			<b>RI, NY, CA,</b>		<b>OR, MS</b>		
<b>(.25,.75,0)</b>		<b>WA, MA</b>			<b>AR, OH</b>		<b>(.25,0,.75)</b>		
		<b>(.16,.67,.16)</b>			<b>CA, ND, MT,</b>		<b>(.16,.16,.67)</b>		
					<b>AR, OH</b>				
					<b>(.16,.42,.42)</b>				
<b>CA, DE, MT,</b>		<b>CA, WA, MT,</b>		<b>CA, NY, RI</b>		<b>RI, NY, CA,</b>		<b>RI, NY, OR</b>	
<b>WA, MA</b>		<b>MA, DE</b>			<b>MA, ND</b>		<b>OR, UT</b>		<b>UT, OK_CIV</b>
<b>(0,1,0)</b>		<b>(0,.75,.25)</b>		<b>(0,.5,.5)</b>		<b>(0,.25,.75)</b>		<b>(0,0,1)</b>	
<b>[Opinion Quality]</b>					<b>[Independence]</b>				

*Table 10. Top Ranking States (From Table 9)*

State	Number of #1 Rankings	Number of #1 to #3 Rankings	Number of #1 to #5 Rankings	Common and Commercial Law Cases (Number of #1 to #3 Rankings)
AR	1	7	11	5
CA	9	11	11	5
ND	0	6	11	0
MT	0	8	10	1
OH	0	2	9	0
GA	5	6	8	0
MS	0	3	6	9
MA	0	0	5	0
NY	0	5	5	8
RI	4	5	5	7
WA	0	1	4	0
OR	0	1	3	2
UT	0	1	3	4
DE	0	1	2	4
AL	0	0	1	11
OK_CIV	0	0	1	0
MD	0	0	0	1

No state emerges as a clear winner, but a strong case can be made that California has the best high court. It has the most number 1 rankings on the triangle chart, and the most number 1 to 3 rankings, and is tied for the most number 1 to 5 rankings. (See Table 10.) The top contenders are Arkansas, North Dakota, Montana, and Georgia. If one focuses on common and commercial law cases only, where arguably state-specific factors should play the smallest role, then Mississippi, New York, Rhode Island, and Alabama emerge as the top states (see Appendix A for composite rankings based on common and commercial law case productivity and opinion quality rankings).

Compare our overall composite rankings with the three most recent studies, the 2000 Comparato study, the followed case measures drawn from the 2007 Dear and Jessen data, and the 2002 Chamber of Commerce survey (overall rankings).

*Table 11. Comparison of Rankings of Courts*

Best Performers			
<i>Our Study— Composite</i>	<i>2000 Comparato Citation Ranking</i>	<i>1998–2000 Followed Citations</i>	<i>2002 Chamber of Commerce Survey— Overall Score</i>
Arkansas	California	California	Delaware
California	New York	Washington	Virginia
North Dakota	Minnesota	Nebraska	Washington
Montana	Pennsylvania	Kansas	Kansas
Ohio	Colorado	Massachusetts	Iowa
Georgia	Michigan	Connecticut	Nebraska
Mississippi	Washington	Montana	Colorado
Massachusetts	Illinois	Iowa	Utah
Rhode Island	New Jersey	Maryland	South Dakota
New York	Wisconsin	Texas	Connecticut
Correl. coeff. between our composite results and the underlying score for each ranking			
	0.139	0.673	-0.158
p-value*			
	0.335	0.000	0.275
Spearman rank coeff. between our composite result ranking and each ranking			
	0.030	0.629	-0.132
p-value**			
	0.835	0.000	0.362

Our equally weighted composite measure is not correlated with the Comparato or Chamber of Commerce rankings. If anything, our rankings are negatively correlated with the Chamber of Commerce rankings. Only the followed citation rankings are positively correlated with our composite measure.

Further, several southern states—Arkansas, Georgia, and Mississippi—appear on the top ten list. Perhaps judges sitting on the high courts of these states think of their judicial role more in terms of

deciding disputes and less in terms of crafting high-quality opinions.<sup>48</sup> An alternative view is that cultural differences between southern and non-southern states are great enough that courts do not cite courts from the other region as much as they cite courts from their own region, in which case the greater number of northern states produces a bias in the citation measure. If so, the prior citation studies have undervalued the courts of the southern states.

As discussed in a prior article, elected judges tend to publish more opinions, whereas appointed judges tend to publish more-cited opinions.<sup>49</sup> The influence of the selection system, then, might also explain why southern states—where electoral systems are more common—do well under our composite measure. Different states, as a function of their selection systems, appear to focus on different aspects of the judicial task. Citations capture but an aspect of that, as do surveys of corporate lawyers. Our goal is to improve on the existing rankings by providing a broader set of measures than prior rankings. Broadening the measures enables us to capture more aspects of the job than the prior rankings have.

*D. Digging Deeper: Ranking Courts while Controlling for State-Specific Factors*

An objection to our rankings may be that we do not control for state-specific factors. Suppose, for example, that the Montana high court is more productive than the California high court (both in the aggregate and per judge) because cases in Montana are simpler. Montana is a less populous, less commercially complex, and more homogenous state, and it is possible that in such states courts can resolve cases quickly. Controlling for the complexity of the legal environment, it might turn out that the California court is in fact more productive than the Montana court.

To control for state-specific factors, we computed what we call “abnormal” rankings. For each of our three measures of performance, we estimated an ordinary least squares model using the performance measure as the dependent variable and state-level controls for the age of the state, the log of the population, the log of the aggregate population of neighboring states, the state’s crime rate, the median age of the population, the log of the gross state product, the state’s median

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48. Cf. Choi et al., *supra* note 6 (manuscript at 41).

49. *Id.*



income level for 1997, the fraction of the population that is African American, and a measure of citizen ideology for the state based on election results in each district which are used to compute a statewide average (ultimately based on interest group ratings of a given state's federal congressional delegation) (termed the *Citizen Ideology Score*).<sup>50</sup> (Variable definitions are in Appendix D.) We computed predicted scores for each measure using the model and then calculated the difference between the actual and predicted scores. This difference is the abnormal score for the performance measure. If the residual is positive, the state is outperforming its predictors. And if the residual is negative, the state is underperforming its predictors. The details of our computation method and the abnormal rankings for each of the three performance measures are in Appendix B. Table 12 displays the triangle diagram for our composite measure.

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50. The data are from William D. Berry et al., *Measuring Citizen and Government Ideology in the American States, 1960-93*, 42 AM. J. POL. SCI. 327, 330-31 (1998). Updated data are available at State Citizen and Government Ideology, [http://www.uky.edu/%7Erford/Home\\_files/page0005.htm](http://www.uky.edu/%7Erford/Home_files/page0005.htm) (last visited Mar. 26, 2009).

Table 12. Linear Combinations of Influence, Productivity, and Independence for All Subject Matter Areas Using Abnormal Rankings (Productivity, Opinion Quality, Independence)

[Productivity]				
GA, OH, AR,				
PA, MT				
(1,0,0)				
GA, OH, AR,		GA, OH, AR,		
MT, PA		PA, ND		
(.75,.25,0)		(.75,0,.25)		
		GA, OH, AR,		
		MT, PA		
CA, MT, AR,		(.67,.16,.16)	GA, OH, AR,	
GA, OH			PA, NE	
(.5,.5,0)			(5,0,.5)	
	CA, MT, AR,		OH, GA, AR,	
	GA, OH		PA, CA	
	(.42,.42,.16)	CA, AR, OH,	(42,.16,.42)	
		MT, GA		
CA, MT, AR,		(.33,.33,.33)	NY, OK_CIV, OR,	
ND, WA	CA, MT, AR,	NY, OK_CIV, NH,	NH, RI	
(.25,.75,0)	WA, ND	NE, OH	(25,0,.75)	
	(.16,.67,.16)	CA, AR, MT,	(16,.16,.67)	
		OH, NE		
		(16,.42,.42)		
CA, MT, DE,	CA, MT, WA,	CA, KS, NE	NY, OK_CIV, NH,	OK_CIV, NY, NH
WA, AR	KS, AR	WA, AR	CA, NE	RI, OR
(0,1,0)	(0,.75,.25)	(0,.5,.5)	(0,.25,.75)	(0,0,1)
[Opinion Quality]			[Independence]	

We did not control for state court characteristics (such as judge selection system, number of clerks, presence of an intermediate appellate court, and so on) in our abnormal rankings. We treated these variables, unlike the state-specific factors, as part of the choice set available to a state when designing its state court system. The abnormal rankings therefore give a measure of how well a state is doing based on its own court system–related choices while controlling

for factors out of the control of a state-level decisionmaker (such as state population).

Table 12 reveals that the composite results do not differ much from our “normal” rankings, and the correlation coefficients for each of the rankings are high (correlation coefficient = 0.8548; significant at the <1 percent level) (see Appendix B). California has the highest number of number one rankings under both our original composite rankings (in Table 9) and our abnormal composite rankings in Table 12.

#### *E. The U.S. Chamber of Commerce Study: Some Observations*

Why do the Chamber of Commerce’s surveys differ from our results? The methodologies are different, of course. Our study measures productivity, influence and quality, and independence. The Chamber of Commerce surveys senior lawyers at corporations that have annual revenues of at least \$100 million. A problem with the Chamber of Commerce survey is that the attitudes of business lawyers probably tell us more about the value of a judicial system for business than about its overall quality.<sup>51</sup> Plus the Chamber of Commerce is hardly a neutral organization; it is a lobbying group that even becomes involved in individual elections, spending large sums attacking and supporting different candidates.<sup>52</sup> Still, our methodology has problems as well; the relevant question is which methodology is more accurate?

To probe the differences between methodologies, we ran regressions of the Chamber of Commerce 2002 overall scores (CC Score) and rankings (CC Rank) on various state and court variables to see whether we could predict a significant portion of the Chamber’s rankings using variables proxying for political affiliation or conservative bias.

We used an ordinary least squares model where the dependent variable is the Chamber of Commerce overall score for a state and an ordered logit when the dependent variable is the ordinal overall rank. We included a set of independent variables to assess the importance of politics in the ranking: *Republican Governor* (defined to equal 1 if the governor is Republican and 0 otherwise); *Legis. Republican* (defined

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51. For related criticisms of U.S. Chamber of Commerce studies, see Elizabeth G. Thornburg, *Judicial Hellholes, Lawsuit Climates and Bad Social Science: Lessons from West Virginia*, 110 W. VA. L. REV. 1097, 1100–07 (2008).

52. See, e.g., Nina Totenberg, *Report: Spending on Judicial Elections Soaring*, NAT’L PUB. RADIO, May 18, 2008, <http://www.npr.org/templates/story/story.php?storyId=10253213>.

to equal 1 if the legislature is controlled by Republicans); and *Legis. Democrat* (defined to equal 1 if the legislature is controlled by Democrats). We used legislatures with split control between Democrats and Republicans as the base category for *Legis. Republican* and *Legis. Democrat*. We also included a variable, *Common Law*, defined as the number of property, torts, and commercial law opinions divided by all opinions for a particular state from 1998 to 2000. The Chamber of Commerce survey may look more favorably on states that focus their attention on private law issues important to the business constituency of the Chamber. For state-level independent variables, we used the same variables we used in our abnormal performance model discussed above.

We also added a number of court-level independent variables. We included an indicator variable for whether the state selects high court judges through partisan election, nonpartisan election, or merit selection (with appointment states as the base category). We included measures for the average high court associate justice salary (*Adjusted Associate Justice Salary*) and the average partner salary in the state (*Adjusted Partner Salary*). The salary variables were adjusted for the cost of living for the metro area in which the high court is located. We included an indicator variable for whether the judges on the high court remained the same throughout our sample time period from 1998 to 2000 (*Stable Court*) and the size of the bench during the 1998 to 2000 period (*Number of Active Judges on Bench*). We included an indicator variable for whether the judges in a specific court do not face mandatory retirement (*No Mandatory Retirement*). As a measure of resources available to high court judges, we included the average number of clerks per judge for the 1998 to 2000 period (*Number of Clerks per Judge*) and an indicator variable for whether the clerks are tenured for at least one year (*Long-Term Clerk*). To capture the opportunity cost of being a law clerk, the difference between the average salary of an entering associate at law firm in that state and the law clerk salary was used (Law Clerk Opportunity Cost). We included the log of the number of trial cases in the state measured in 1998 ( $\ln(\text{Number of Trial Cases in the State})$ ) and an indicator variable for the presence of an intermediate appellate court (*Intermediate Appellate Court*). Specific court rules may affect the workload that judges face, affecting the level of judicial output. We lastly included an indicator variable for whether judges face a mandatory publication rule (*Mandatory Publication*). (Variable definitions are in Appendix D.) Table 13 provides the results.

*Table 13. Chamber of Commerce Models*

	Model 1	Model 2	Model 3	Model 4
	OLS	OLS	Ordered Logit	Ordered Logit
Dependent Variable	CC Score	CC Score	CC Rank	CC Rank
Independent Variables				
Republican Governor	0.005 (0.06)	0.051 (0.33)	-0.223 (-0.36)	-0.249 (-0.22)
Legis. Republican	0.030 (0.28)	-0.018 (-0.17)	0.334 (0.45)	-0.031 (-0.03)
Legis. Democrat	-0.216** (-2.14)	-0.037 (-0.24)	1.591** (2.22)	0.345 (0.27)
Common Law	0.487 (0.89)	1.164*** (3.10)	-6.720** (-2.17)	-20.279*** (-4.54)
State Age	0.004* (1.77)	0.005** (2.54)	-0.015 (-1.26)	-0.043** (-2.47)
ln(State Population)	-0.833 (-1.68)	-0.801* (-2.03)	5.281 (1.61)	11.941** (2.39)
ln(Pop. in Border States)	0.075 (1.18)	-0.045 (-0.63)	-0.739* (-1.76)	-0.505 (-0.74)
Crime Index	0.000** (2.10)	0.000** (2.16)	-0.001* (-1.94)	-0.001** (-2.49)
Median Age of Population	0.012 (0.48)	0.026 (1.03)	-0.159 (-0.95)	-0.272 (-1.15)
ln(Gross State Product)	0.754 (1.53)	0.726** (2.15)	-4.712 (-1.46)	-11.435** (-2.47)
State Median Income	0.000 (0.70)	0.000 (1.17)	0.000 (-1.3)	0.000 (-1.58)
Black Population Fraction	-2.477** (-2.47)	-2.664*** (-3.31)	14.197** (2.38)	34.060*** (3.48)
Citizen Ideology Score	-0.004 (-0.81)	-0.004 (-1.02)	0.058* (1.83)	0.082* (1.78)
Election Partisan		0.098 (0.51)		-0.237 (-0.17)

Election Nonpartisan	0.238 <sup>*</sup>	-1.828
	(1.79)	(-1.21)
Merit Plan	0.199	-3.388 <sup>**</sup>
	(1.51)	(-2.40)
Adj. Associate Justice Salary	0.000	0.003
	(-0.19)	(0.67)
Adjusted Partner Salary	0.000	-0.002 <sup>*</sup>
	(1.40)	(-1.73)
Stable Court	-0.058	-1.075
	(-0.65)	(-0.99)
Number of Active Judges	-0.083 <sup>***</sup>	0.857 <sup>**</sup>
	(-2.87)	(2.07)
No Mandatory Retirement	0.126	-1.826
	(1.10)	(-1.41)
Long-Term Clerk	0.012	0.262
	(0.14)	(0.34)
Number of Clerks per Judge	-0.262 <sup>***</sup>	3.764 <sup>***</sup>
	(-3.83)	(4.51)
Law Clerk Opportunity Cost	-0.004 <sup>*</sup>	0.068 <sup>**</sup>
	(-2.07)	(2.56)
ln(Trial Cases in the State)	0.162 <sup>**</sup>	-2.198 <sup>**</sup>
	(2.68)	(-2.52)
Intermediate Appellate	0.094	-0.444
	(0.42)	(-0.24)
Mandatory Publication	-0.002	-1.092
	(-0.02)	(-0.99)
Constant	-7.360	-9.139 <sup>**</sup>
	(-1.66)	(-2.52)
N	50	49
Adjusted R <sup>2</sup> or Pseudo R <sup>2</sup>	0.487	0.113
	0.721	0.278

The significance levels for the coefficients are as follows: <sup>\*</sup>10% level; <sup>\*\*</sup>5% level; <sup>\*\*\*</sup><1% level.

Models 1 and 2 use the raw Chamber of Commerce score (from 0 to 4, best), while Models 3 and 4 use the Chamber of Commerce ranking (from 1, best, to 50). Because high scores are good and low

ranks are bad, the coefficients should have opposite signs (and they do). Models 1 and 3 control for state-specific factors only; Models 2 and 4 control for court-specific factors as well.

The following types of states do worse in Chamber of Commerce surveys: those with Democratic legislatures (in Models 1 and 3);<sup>53</sup> those with fewer common law cases (as a proportion of all cases); younger states; more populous states; poorer states; states with larger African-American populations; and states with more liberal populations (in Models 3 and 4). As for institutional factors, states with more judges who are active on the bench do worse; so do states with more law clerks, and so do states with fewer trials.<sup>54</sup>

It is not surprising that business lawyers do not like the judicial systems in more liberal and poorer states.<sup>55</sup> Most likely, in these states populist tendencies affect the performance of judges or result in the appointment or election of judges who place less weight on the interests of large businesses than judges in more conservative, commercial, or wealthier states.

### III. COURTS OR JUDGES?

As argued above, ranking courts is a necessary, even if difficult, exercise. Courts perform important public functions and there is good reason to believe that the institutional design of courts can contribute to the quality of their work. Consider, by way of comparison, efforts to identify municipal police departments that successfully reduce crime. Admired police departments are identified, and then other police departments send representatives to learn about the factors that contribute to success. Similarly, judiciaries ought to pay attention to

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53. Democratic legislatures do worse compared with the base category of split legislatures in Models 1 and 3. The coefficient on *Legis. Democrat* loses significance, however, once state court-level controls are added. In addition, the difference between *Legis. Democrat* and *Legis. Republican* is significant at the 10 percent level for Model 1 (although the difference is insignificant in the other models).

54. A study by Professors Russell Sobel and Joshua Hall, Sobel & Hall, *supra* note 27, at 75, runs a similar regression but finds that states with electoral systems have the lowest Chamber of Commerce ratings. We suspect that our inclusion of a number of control variables that are correlated with the type of selection system explains the difference (they also used Chamber of Commerce ratings from 2004, whereas we used 2002 ratings). They also found that Republican-controlled state supreme courts during their period had a higher judicial quality rating than Democratic-controlled state supreme courts. *Id.* at 77.

55. We also checked whether the partisan composition of the bench affected Chamber of Commerce scores. A variable equal to the fraction of Republican judges is not significantly different from zero for all four of the models in Table 13: Chamber of Commerce Models.

what other judiciaries do, and the best courts probably have something to teach less successful courts.

The question arises whether state judges should be ranked as well. Prior work has ranked federal judges.<sup>56</sup> Care should be taken in interpreting such rankings. People who read rankings often mistakenly assume that rankings reflect uniform quality differences, when in fact they do not. On the other hand, where a judge consistently scores at the bottom of objective rankings, those reviewing the judge's performance (whether for promotion to a higher judgeship or for re-election in a state with judicial elections) may wish to probe further to see if the judge's poor ranking correlates with general poor judicial performance.

Using our objective metrics, we identify the top judges using our composite ranking methodology. We urge scholars to take a look at their opinions and see whether these opinions stand out for their quality or independence. Table 14 provides our triangle diagram. One objection to the results in Table 14 is that it likely overweighs the importance of the numerous short dissents and concurrences that judges in certain states wrote during the period of our study. Hence, some cantankerous judges might do especially well. As an alternative, Appendix C reports the triangle using published majority opinions instead of total published opinions.

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56. *E.g.*, Landes et al., *supra* note 5, at 271.



Table 14. Judge Ranking: Linear Combinations of Influence, Productivity, and Independence for All Subject Matter Areas (Productivity, Opinion Quality, Independence)

[Productivity]				
Berdon' [CT]				
McRae [MS]				
Johnstone [AL]				
(1,0,0)				
Berdon' [CT]		Berdon' [CT]		
McRae [MS]		McRae [MS]		
Stratton [OH]		Stratton [OH]		
(.75,.25,0)		(.75,0,.25)		
Berdon' [CT]				
Stratton [OH]				
McRae [MS]				
Brown [CA]		Berdon' [CT]		
Boehm [IN]		Maddox' [AL]		
Stratton [OH]		Stratton [OH]		
(.5,.5,0)		(.5,0,.5)		
Brown [CA]		Stratton [OH]		
Stratton [OH]		Berdon' [CT]		
Boehm [XX]		Maddox' [AL]		
(.42,.42,.16)		(.42,.16,.42)		
Stratton [OH]				
Brown [CA]				
Nelson [MT]				
Brown [CA]		Walsh [DE]		
Baxter [CA]		Leeson [OR]		
Greaney [MA]		Ciparick [NY]		
(.25,.75,0)		(.25,0,.75)		
Brown [CA]		Walsh [DE]		
Baxter [CA]		Ciparick [NY]		
Greaney [MA]		Leeson [OR]		
(.16,.67,.16)		(.16,.16,.67)		
Walsh [DE]				
Brown [AR]				
Baxter [CA]				
(.16,.42,.42)				
Brown [CA]	Brown [CA]	Walsh [DE]	Walsh [DE]	Walsh [DE]
Baxter [CA]	Baxter [CA]	Brown [AR]	Ciparick [NY]	Leeson [OR]
Johnson [WA]	Greaney [MA]	Baxter [CA]	Leeson [OR]	Ciparick [NY]
(0,1,0)	(0,.75,.25)	(0,.5,.5)	(0,.25,.75)	(0,0,1)
[Opinion Quality]				[Independence]

'Judge retired prior to 2002.

We also ran regressions to identify factors that may contribute to individual judicial quality. We ran ordinary least squares regressions with the log of the total number of opinions authored (Opinions Model), the log of 1 + the number of outside state citations (Citations Model) as dependent variables (both on judge-year-level data). We also estimated an ordinary least squares regression with our independence measure as the dependent variable for judge-level data (Independence Model). For all three models, we used as independent variables several judge-characteristic variables, including whether a judge is the chief judge (*Chief Judge*), the number of years the judge sat on the court (*Yrs. Court Experience*), the number of years since the judge graduated from law school (*Yrs. Legal Experience*), whether the judge retired prior to 2002 (*Retired before 2002*), the age of the judge (*Age*), the gender of the judge (*Female*), whether the judge was engaged in private practice prior to becoming a judge (*Private Prac. Exp.*), whether the judge made election-related expenditures in the year in question, an ideology score for the judge developed by Brace, Hall & Langer (ranging from 0=more conservative to 1=more liberal) (*Judge Ideology*),<sup>57</sup> the *U.S. News* ranking of the judge's law school measured as of 2005 (*U.S. News Law School Ranking*), and whether the judge attended an in-state law school (*Attended In-State Law School*). (Variable definitions are in Appendix D.) Table 15 provides our results.

*Table 15. State-Fixed Effects Model*

(Judge-Year Data)

	Opinions	Citations	Independence
Chief Judge	-0.167***	-0.094	-0.008
Yrs. Court Experience	0.016***	0.011*	0.003
Yrs. Legal Experience	-0.002	-0.006	-0.001
Retired before 2002	-0.168***	-0.130*	0.035
Age	0.004	0.005	0.000
Female	-0.052	-0.070	0.090***
Private Prac. Exp.	-0.025	0.061	-0.042
Election Spending	0.021	0.021	

57. See Paul Brace, Laura Langer & Melinda Gann Hall, *Measuring the Preferences of State Supreme Court Judges*, 62 J. POL. 387, 393–98 (2000).

Judge Ideology	0.002	0.002	0.001
<i>U.S. News</i> Law School Ranking	0.001	0.000	-0.001 <sup>*</sup>
Attended In-State Law School	-0.063	0.062	0.061
1999 Case	-0.084	-0.132 <sup>*</sup>	
2000 Case	-0.039	-0.281 <sup>***</sup>	
State-Fixed Effects	Yes	Yes	Yes
N	1007	999	329
R <sup>2</sup>	0.38	0.24	0.15

The significance levels for the coefficients are as follows: <sup>\*</sup> 10% level; <sup>\*\*</sup> 5% level; <sup>\*\*\*</sup> <1% level. Note: The opinions variable is the natural log of total opinions; the citations variable is the natural log of the total outside citations to all majority opinions authored by a particular judge for a specific year. South Dakota, New Mexico, Maryland, Georgia, and South Carolina judges are dropped from the independence regressions because of lack of party variation in those states.

We used fixed effects for the states, so the regression captured the effect of judge-specific characteristics, such as where a judge went to law school, on the outcomes. The model shows that chief judges write fewer opinions, no doubt because they have administrative responsibilities. Also not surprisingly, judges with more experience on the bench write more opinions and opinions that are cited more often. Judges approaching retirement slow down and write fewer opinions, but not worse opinions. Surprisingly, age, years of legal experience, private practice experience, law school ranking, and political ideology have little effect on any of the measures. We do find that female judges are significantly more independent than their male counterparts.<sup>58</sup>

We also ran the regression using the composite measure as the dependent variable; none of the independent variables was statistically significant.

58. Putting aside the findings with respect to gender effects, our results overall are similar to those of the Landes et al. study on federal circuit judges, although they have some different variables in their regressions. They find that judges who graduate from Harvard and Yale Law Schools are cited more often than other judges, but these results are weak and do not hold for top-twenty law schools, and that race, sex, measures of academic achievement, prior experience, ideology, and ABA ratings are mostly insignificant. Landes et al., *supra* note 5, at 324–25.

## CONCLUSION

Many people are uncomfortable with rankings. They argue that rankings unavoidably disregard important aspects of the ranked institution's performance and encourage people to compete with respect to only measurable aspects of performance. Competitions to perform well on rankings then prompt a downward spiral as institutions neglect important but hard-to-measure aspects of their missions to improve their rank.

We agree that rankings can be misused, but as far as state courts are concerned, the genie is out of the bottle. Not only do annual rankings of state courts such as the Chamber of Commerce survey exist, but there are at least two websites that enable the aggregation of public ratings of judges.

We have presented our rankings cautiously, recognizing that readers will weight aspects of judicial performance differently. We urge readers to treat the rankings as an *information-forcing* device. Assume that a low ranking creates a *prima facie* case that a state high court is low quality, but allow its defenders to advance arguments why special circumstances may account for the court's performance. If the explanations ring false in light of objective metrics of judicial performance, such as those we advance in this Article, then it might be a good idea to urge reform (or at least seek further justification for why a low ranking court is in fact performing well). And courts, other scholars, and other interested parties, we hope, will develop their own rankings. Competition to develop rankings will lead to greater information about courts. Competition will also help uncover hidden criteria used in currently non-transparent rankings, such as the U.S. Chamber of Commerce rankings, and encourage research into difficult-to-measure aspects of performance. Concern about difficult-to-measure aspects of performance should encourage researchers to develop new measurement instruments, such as surveys that are distributed to a more representative sample of the population than those financed by the Chamber of Commerce. If multiple rankings converge, then the case for reform of state high courts that repeatedly appear at the bottom will be strengthened.

## APPENDIX A: COMMON LAW AREAS ONLY

*Number of Opinions (Common and Commercial Law Areas Only)*

<i>State</i>	<i>Sel. System</i>	<i>Opinions</i>	<i>Judge-Years</i>	<i>Opinions/ Judge-Year</i>
AL	PE	860	30	28.667
MS	PE	502	29	17.310
AR	PE	304	21	14.476
MT	NE	289	21	13.762
PA	PE	284	21	13.524
GA	NE	282	21	13.429
ID	NE	214	16	13.375
OH	NE	276	21	13.143
ME	A	340	26	13.077
UT	M	211	17	12.412
NE	M	266	23	11.565
VA	A	236	21	11.238
ND	NE	170	16	10.625
WY	M	158	15	10.533
SD	M	153	15	10.200
AK	M	157	18	8.722
CT	A	199	23	8.652
IA	M	232	28	8.286
TX_CIV	PE	211	27	7.815
LA	NE	183	24	7.625
MD	M	166	22	7.545
WI	NE	157	21	7.476
RI	A	112	15	7.467
NY	A	159	22	7.227
CA	M	150	21	7.143
NH	A	120	17	7.059
MI	NE	166	24	6.917
WV	PE	102	15	6.800
IN	M	99	15	6.600
IL	PE	143	22	6.500
WA	NE	180	28	6.429
VT	A	96	15	6.400
OK_CIV	M	179	28	6.393
KS	M	132	21	6.286
MN	NE	150	24	6.250

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SC	A	90	16	5.625
FL	M	112	21	5.333
KY	NE	111	22	5.045
CO	M	115	23	5.000
MA	A	114	23	4.957
MO	M	103	22	4.682
HI	A	83	18	4.611
NJ	A	121	27	4.481
TN	M	69	16	4.313
DE	A	61	15	4.067
OR	NE	77	21	3.667
NC	PE	84	23	3.652
NV	NE	59	18	3.278
NM	PE	35	15	2.333
AZ	M	29	15	1.933

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We define "Common and Commercial Law Cases" to include cases in the following subject matter areas: Contracts; Insurance; Private arbitration; Creditor v. Debtor; Lessor-Lessee; Usury Laws; Franchise v. Franchisor; Employment Contractual Disputes; Corporate Law; Piercing the Corporate Veil; Tax; Bankruptcy; Enforcement of mechanics lien; Implied warrant of merchantability; Takings claims; Zoning issues; Property rights; Property Licensing-Related or Permit-Related; Landlord-Tenant-Related; Federal Tort Related Act; Medical Malpractice; Products Liability; Wrongful Death; Libel; and other tort cases.

*Out-of-State Citations to Majority Opinions (Common and Commercial Law Areas Only)*

<i>State</i>	<i>Sel. System</i>	<i>Citations</i>	<i>Judge-Years</i>	<i>Citations/ Judge-Year</i>
DE	A	246	15	16.400
CA	M	247	21	11.762
MD	M	205	22	9.318
WA	NE	237	28	8.464
MT	NE	170	21	8.095
NY	A	175	22	7.955
AL	PE	237	30	7.900
VA	A	163	21	7.762
NJ	A	205	27	7.593
ND	NE	119	16	7.438
IA	M	188	28	6.714
CT	A	153	23	6.652
CO	M	151	23	6.565
TX_CIV	PE	176	27	6.519
IL	PE	138	22	6.273
OH	NE	130	21	6.190
WV	PE	92	15	6.133
PA	PE	126	21	6.000
KS	M	125	21	5.952
IN	M	89	15	5.933
AR	PE	120	21	5.714
MA	A	131	23	5.696
AK	M	101	18	5.611
SD	M	81	15	5.400
SC	A	84	16	5.250
ME	A	134	26	5.154
MN	NE	123	24	5.125
WI	NE	104	21	4.952
TN	M	77	16	4.813
NE	M	110	23	4.783
FL	M	98	21	4.667
WY	M	69	15	4.600
MS	PE	131	29	4.517
UT	M	74	17	4.353
ID	NE	67	16	4.188
MI	NE	99	24	4.125

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HI	A	74	18	4.111
RI	A	61	15	4.067
VT	A	57	15	3.800
NH	A	62	17	3.647
AZ	M	52	15	3.467
NM	PE	49	15	3.267
OR	NE	68	21	3.238
NV	NE	58	18	3.222
GA	NE	65	21	3.095
OK_CIV	M	84	28	3.000
NC	PE	65	23	2.826
LA	NE	59	24	2.458
MO	M	51	22	2.318
KY	NE	37	22	1.682

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We define “Common and Commercial Law Cases” to include cases in the following subject matter areas: Contracts; Insurance; Private arbitration; Creditor v. Debtor; Lessor-Lessee; Usury Laws; Franchise v. Franchisor; Employment Contractual Disputes; Corporate Law; Piercing the Corporate Veil; Tax; Bankruptcy; Enforcement of mechanics lien; Implied warrant of merchantability; Takings claims; Zoning issues; Property rights; Property Licensing-Related or Permit-Related; Landlord-Tenant-Related; Federal Tort Related Act; Medical Malpractice; Products Liability; Wrongful Death; Libel; and other tort cases.



*Common and Commercial Law-Only Equal-Weight Composite Ranking*

<i>State</i>	<i>Standard Dev. of Total-Opinion Score</i>	<i>Standard Dev. of Outside-Citation Score</i>	<i>Standard Dev. of Indep. Score</i>	<i>Equal-Weight Composite Score</i>
AL	4.417	1.417	-0.608	1.742
MS	1.957	0.810	0.641	1.136
NY	-0.228	1.427	1.950	1.050
UT	0.895	0.781	1.406	1.027
RI	-0.176	0.730	2.489	1.014
AR	1.343	1.025	0.626	0.998
OH	1.054	1.110	0.670	0.945
MT	1.188	1.452	-0.340	0.766
ND	0.508	1.334	0.400	0.748
CA	-0.246	2.110	0.363	0.742
PA	1.136	1.076	-0.030	0.728
NE	0.712	0.858	0.565	0.712
TX_CIV	-0.100	1.169	0.789	0.619
GA	1.116	0.555	-0.016	0.552
MD	-0.159	1.672	-0.016	0.499
ME	1.040	0.925	-0.487	0.492
OK_CIV	-0.408	0.538	1.284	0.471
VA	0.641	1.392	-0.622	0.471
WV	-0.320	1.100	0.625	0.468
IL	-0.385	1.125	0.632	0.457
SD	0.416	0.969	-0.016	0.456
NH	-0.264	0.654	0.963	0.451
IA	0.002	1.204	0.113	0.440
OR	-0.999	0.581	1.724	0.435
WA	-0.401	1.518	0.018	0.379
DE	-0.912	2.942	-1.007	0.341
KS	-0.432	1.068	0.183	0.273
LA	-0.141	0.441	0.411	0.237
WY	0.489	0.825	-0.678	0.212
FL	-0.638	0.837	0.429	0.209
MA	-0.720	1.022	0.297	0.200
VT	-0.407	0.682	0.287	0.187
ID	1.104	0.751	-1.364	0.164
TN	-0.859	0.863	0.461	0.155
NJ	-0.822	1.362	-0.098	0.147

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AK	0.096	1.007	-0.711	0.131
MN	-0.439	0.919	-0.095	0.128
SC	-0.575	0.942	-0.016	0.117
CO	-0.710	1.178	-0.497	-0.010
AZ	-1.374	0.622	0.592	-0.053
HI	-0.794	0.737	-0.116	-0.058
CT	0.081	1.193	-1.687	-0.138
KY	-0.700	0.302	-0.216	-0.205
NM	-1.288	0.586	-0.016	-0.239
WI	-0.174	0.888	-1.440	-0.242
NV	-1.083	0.578	-0.272	-0.259
IN	-0.364	1.064	-2.056	-0.452
MO	-0.779	0.416	-1.245	-0.536
NC	-1.002	0.507	-1.158	-0.551
MI	-0.295	0.740	-3.111	-0.889

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We use the common and commercial law productivity and opinion quality rankings for the composite rankings. Due to the relatively small number of opposing opinions available to calculate the independence ranking, we use the independence ranking based on all opinions.

For each measure (total opinions per judge-year, outside citations per judge-year, and independence) we computed the standard deviation from the mean of the sample for each state. For those states without an independence score, we substituted the mean independence score for the other states in computing the standard deviation. We then combined the three standard deviation scores with equal weights to generate the equal-weight composite score.

Correlation coefficient between common law composite rankings and composite rankings (all subject matter areas) in Table 9 = 0.754 (t-statistic = 8.811; significant at the <1 percent level).

## APPENDIX B: ABNORMAL SCORE RANKINGS

*Number of Opinions (Abnormal Score)*

<i>State</i>	<i>Sel. System</i>	<i>Opinions</i>	<i>Judge-Years</i>	<i>Ab. Opinions per Judge-Year</i>
GA	NE	1225	21	29.712
OH	NE	989	21	21.263
AR	PE	1038	21	18.589
PA	PE	941	21	16.909
MT	NE	968	21	15.231
IN	M	573	15	13.831
CT	AP	707	23	13.418
ND	NE	703	16	13.145
WY	M	548	15	12.623
FL	M	709	21	11.214
AL	PE	1417	30	10.754
MA	AP	608	23	7.800
UT	M	420	17	6.501
IL	PE	642	22	6.372
NE	M	699	23	5.298
CA	M	605	21	4.451
MS	PE	1437	29	3.082
AK	M	446	18	2.201
NV	NE	259	18	2.174
WA	NE	578	28	2.096
IA	M	715	28	1.076
ID	NE	477	16	-0.054
AZ	M	172	15	-1.335
OR	NE	245	21	-1.384
TN	M	373	16	-2.386
MN	NE	452	24	-2.716
CO	M	386	23	-2.792
MD	M	523	22	-3.084
KS	M	483	21	-3.276
TX_CRIM	PE	583	26	-3.396
SD	M	366	15	-4.101
ME	AP	718	26	-4.741
NM	PE	151	15	-5.087
RI	AP	273	15	-6.133
HI	AP	225	18	-6.422
DE	AP	163	15	-6.525

WI	NE	386	21	-6.733
VT	AP	274	15	-6.746
NH	AP	366	17	-6.881
NJ	AP	376	27	-7.715
SC	AP	387	16	-8.702
NY	AP	380	22	-8.963
WV	PE	346	15	-9.003
MI	NE	389	24	-9.120
OK_CIV	M	435	28	-10.752
LA	NE	525	24	-10.913
VA	AP	413	21	-11.563
OK_CRIM	M	230	16	-11.912
KY	NE	411	22	-12.525
TX_CIV	PE	347	27	-12.967
MO	M	252	22	-13.324
NC	PE	262	23	-16.490

Abnormal total opinions per judge-year was calculated by first estimating a model using total opinions per judge-year as the dependent variable and state-level controls for the age of the state, the log of the population, the log of the aggregate population of neighboring states, the state's crime rate, the median age of the population, the log of gross state product, the median income level for 1997, the black fraction of the population, and a measure of citizen ideology for the state based on election results in each district which are used to compute a statewide average (ultimately based on interest group ratings of a given state's federal congressional delegation) (from Berry et al. 1998) (the Citizen Ideology Score). (See Appendix D for definitions.) We estimated the model using pooled state-level data over the 1998 to 2000 sample period using ordinary least square as follows:

$$\text{Total opinions per judge-year}_i = \alpha + \sum \beta_{ji} \text{State-Level Controls}_{ji} + \varepsilon_i$$

Second, we computed predicted scores for total opinions per judge-year using the model and then calculated the difference between the actual and predicted scores. We term this residual the "abnormal" score for total opinions per judge-year (for example, the abnormal total opinions per judge-year for a state = the actual total opinions per judge-year minus the predicted total opinions per judge-year).

Correlation coefficient between abnormal opinions per judge-year score and opinions per judge-year score (all subject matter areas) in Table 4 = 0.8548 (t-statistic = 11.64; significant at the <1 percent level).

*Out-of-State Citations to Majority Opinions (Abnormal Score)*

<i>State</i>	<i>Sel. System</i>	<i>Citations</i>	<i>Judge-Years</i>	<i>Ab. Citations per Judge-Year</i>
CA	M	709	21	18.472
MT	NE	468	21	10.720
DE	AP	336	15	7.309
WA	NE	611	28	7.047
AR	PE	337	21	5.968
KS	M	388	21	5.800
ND	NE	316	16	5.300
MD	M	448	22	4.597
TN	M	242	16	4.475
SC	AP	245	16	4.142
NE	M	371	23	3.483
AZ	M	187	15	3.467
IN	M	244	15	3.224
MA	AP	469	23	2.811
OH	NE	337	21	2.411
NM	PE	143	15	1.790
CO	M	382	23	1.743
IA	M	403	28	1.153
IL	PE	354	22	0.970
PA	PE	336	21	0.631
WV	PE	206	15	0.526
MS	PE	322	29	0.334
GA	NE	262	21	0.269
SD	M	196	15	0.155
VT	AP	206	15	0.042
WY	M	184	15	-0.001
AL	PE	325	30	-0.523
CT	AP	405	23	-0.647
NJ	AP	474	27	-0.708
AK	M	273	18	-1.021
UT	M	134	17	-1.294
FL	M	208	21	-1.428
ID	NE	148	16	-1.436
NY	AP	301	22	-2.526
MN	NE	321	24	-2.573
NH	AP	225	17	-2.925
LA	NE	159	24	-3.178

VA	AP	261	21	-3.310
NV	NE	157	18	-3.345
WI	NE	256	21	-3.381
TX_CIV	PE	243	27	-3.451
OK_CIV	M	160	28	-3.621
OR	NE	137	21	-4.398
ME	AP	284	26	-4.547
NC	PE	170	23	-5.181
KY	NE	145	22	-5.323
OK_CRIM	M	59	16	-5.648
RI	AP	131	15	-5.895
MI	NE	208	24	-6.027
MO	M	115	22	-7.277
TX_CRIM	PE	105	26	-8.412
HI	AP	150	18	-8.763

We calculated abnormal outside state citations per judge-year by first estimating a model using outside state citations per judge-year as the dependent variable and state-level controls for the age of the state, the log of the population, the log of the aggregate population of neighboring states, the state's crime rate, the median age of the population, the log of gross state product, the median income level for 1997, the black fraction of the population, and a measure of citizen ideology for the state based on election results in each district which are used to compute a statewide average (ultimately based on interest group ratings of a given state's federal congressional delegation) (from Berry et al. 1998) (the Citizen Ideology Score). (See Appendix D for definitions.) We estimated the model using pooled state-level data for our dependent variables over the 1998 to 2000 sample period using ordinary least square as follows:

$$\text{Outside citations per judge-year}_i = \alpha + \sum \beta_j \text{State-Level Controls}_{ji} + \epsilon_i$$

Second, we computed predicted scores for outside state citations per judge-year using the model and then calculated the difference between the actual and predicted scores. We term this residual the "abnormal" score for the outside-state citations per judge-year.

Correlation coefficient between abnormal independence score and independence score (all subject matter areas) in Table 5 = 0.8905 (t-statistic = 13.84; significant at the <1 percent level).

*Independence (Abnormal Score)*

<i>State</i>	<i>Sel. System</i>	<i>Independence</i>	<i>Judge-Years</i>	<i>Ab. Indep.</i>
OK_CIV	M	0.086	28	0.154
NY	AP	0.146	22	0.150
NH	AP	0.057	17	0.138
RI	AP	0.194	15	0.135
OR	NE	0.126	21	0.125
NE	M	0.022	23	0.087
MS	PE	0.028	29	0.075
IL	PE	0.028	22	0.065
NJ	AP	-0.038	27	0.061
OH	NE	0.031	21	0.059
KS	M	-0.013	21	0.053
WV	PE	0.027	15	0.037
MD	M	-0.030	22	0.037
FL	M	0.009	21	0.036
LA	NE	0.008	24	0.033
IA	M	-0.019	28	0.032
AZ	M	0.024	15	0.032
UT	M	0.097	17	0.029
AR	PE	0.027	21	0.028
AK	M	-0.093	18	0.027
PA	PE	-0.032	21	0.026
WA	NE	-0.027	28	0.026
TX_CIV	PE	0.042	27	0.025
TN	M	0.012	16	0.017
ND	NE	0.007	16	0.017
MN	NE	-0.038	24	0.015
CA	M	0.003	21	0.008
VA	AP	-0.085	21	0.006
HI	AP	-0.039	18	0.000
SD	M	-0.030	15	-0.004
GA	NE	-0.030	21	-0.005
CO	M	-0.074	23	-0.009
KY	NE	-0.048	22	-0.010
MA	AP	-0.002	23	-0.011
NV	NE	-0.053	18	-0.012
WY	M	-0.090	15	-0.018
SC	AP	-0.030	16	-0.028
AL	PE	-0.084	30	-0.037

VT	AP	-0.003	15	-0.039
TX_CRIM	PE	-0.032	26	-0.049
MT	NE	-0.060	21	-0.050
DE	AP	-0.119	15	-0.054
NM	PE	-0.030	15	-0.064
OK_CRIM	M	-0.140	16	-0.073
WI	NE	-0.158	21	-0.088
CT	AP	-0.180	23	-0.101
ME	AP	-0.073	26	-0.108
ID	NE	-0.151	16	-0.110
NC	PE	-0.133	23	-0.114
MO	M	-0.141	22	-0.115
IN	M	-0.213	15	-0.175
MI	NE	-0.308	24	-0.259

We calculated the abnormal independence score by first estimating a model using the independence score as the dependent variable and state-level controls for the age of the state, the log of the population, the log of the aggregate population of neighboring states, the state's crime rate, the median age of the population, the log of gross state product, and the median income level for 1997, the black fraction of the population, and a measure of citizen ideology for the state based on election results in each district which are used to compute a statewide average (ultimately based on interest group ratings of a given state's federal congressional delegation) (from Berry et al. 1998) (the Citizen Ideology Score). (See Appendix D for definitions.) We estimated the model using pooled state-level data for our dependent variables over the 1998 to 2000 sample period using ordinary least square as follows:

$$\text{Independence}_i = \alpha + \sum \beta_j \text{State-Level Controls}_i + \epsilon_i$$

Second, we computed predicted scores for independence using the model and then calculated the difference between the actual and predicted scores. For those states without an independence score, we substituted the mean independence score for the other states as the actual independence score. We term this residual the "abnormal" score for independence.

Correlation coefficient between abnormal independence score and independence score (all subject matter areas) in Table 8 = 0.905 (t-statistic = 15.04; significant at the <1 percent level).



*Abnormal Equal-Weight Composite Ranking*

<i>State</i>	<i>Standard Dev. of Abnormal Total-Opinion Score</i>	<i>Standard Dev. of Abnormal Outside- Citation Score</i>	<i>Standard Dev. of Abnormal Indep. Score</i>	<i>Equal-Weight Composite Score</i>
CA	0.432	3.702	0.102	1.412
AR	1.806	1.196	0.355	1.119
OH	2.065	0.483	0.742	1.097
MT	1.479	2.149	-0.629	1.000
GA	2.886	0.054	-0.060	0.960
ND	1.277	1.062	0.211	0.850
NE	0.515	0.698	1.092	0.768
PA	1.642	0.127	0.329	0.699
WA	0.204	1.412	0.322	0.646
IL	0.619	0.194	0.813	0.542
KS	-0.318	1.163	0.662	0.502
MS	0.299	0.067	0.937	0.434
FL	1.089	-0.286	0.448	0.417
MA	0.758	0.563	-0.135	0.395
MD	-0.300	0.921	0.463	0.361
WY	1.226	0.000	-0.227	0.333
AZ	-0.130	0.695	0.395	0.320
TN	-0.232	0.897	0.213	0.293
UT	0.631	-0.259	0.364	0.245
IA	0.104	0.231	0.397	0.244
OR	-0.134	-0.882	1.562	0.182
NY	-0.871	-0.506	1.872	0.165
AL	1.045	-0.105	-0.457	0.161
NH	-0.668	-0.586	1.722	0.156
AK	0.214	-0.205	0.337	0.115
DE	-0.634	1.465	-0.677	0.052
OK_CIV	-1.044	-0.726	1.923	0.051
CO	-0.271	0.349	-0.118	-0.013
RI	-0.596	-1.182	1.693	-0.028
CT	1.303	-0.130	-1.266	-0.031
NJ	-0.749	-0.142	0.757	-0.045
IN	1.343	0.646	-2.184	-0.065
WV	-0.874	0.105	0.467	-0.101
SC	-0.845	0.830	-0.349	-0.121

SD	-0.398	0.031	-0.046	-0.138
MN	-0.264	-0.516	0.186	-0.198
NV	0.211	-0.670	-0.146	-0.202
NM	-0.494	0.359	-0.794	-0.310
VT	-0.655	0.008	-0.482	-0.376
LA	-1.060	-0.637	0.414	-0.428
TX_CIV	-1.260	-0.692	0.307	-0.548
ID	-0.005	-0.288	-1.378	-0.557
VA	-1.123	-0.663	0.071	-0.572
HI	-0.624	-1.756	0.003	-0.792
KY	-1.217	-1.067	-0.126	-0.803
WI	-0.654	-0.678	-1.100	-0.811
TX_CRIM	-0.330	-1.686	-0.618	-0.878
ME	-0.461	-0.911	-1.350	-0.907
OK_CRIM	-1.157	-1.132	-0.909	-1.066
NC	-1.602	-1.038	-1.431	-1.357
MO	-1.294	-1.459	-1.434	-1.396
MI	-0.886	-1.208	-3.241	-1.778

For each measure (abnormal total opinions per judge-year, abnormal outside citations per judge-year, and abnormal independence), we computed the standard deviation from the mean of the sample for each state. We then combined the three standard deviation scores with equal weights to generate the equal-weight composite score.

Correlation coefficient between abnormal composite rankings and composite rankings (all subject matter areas) in Table 9 = 0.936 (t-statistic = 18.84; significant at the <1 percent level).

APPENDIX C: JUDGE RANKING USING MAJORITY OPINION  
PRODUCTIVITY MEASURE

*Linear Combinations of Influence, Productivity, and Independence For  
All Subject Matter Areas (Productivity, Opinion Quality,  
Independence)*

<b>[Productivity]</b>				
<b>Boehm [IN]</b>				
Houston [AL]				
Fletcher [GA]				
(1,0,0)				
		<b>Boehm [IN]</b>		<b>Boehm [IN]</b>
		Hunstein [GA]		Hunstein [GA]
		Houston [AL]		Fletcher [GA]
		(.75,.25,0)		(.75,0,.25)
		<b>Boehm [IN]</b>		
		Hunstein [GA]		
		Carley [GA]		
		(.67,.16,.16)		
<b>Boehm [IN]</b>				<b>Maddox [CT]</b>
Brown [CA]				Walsh [AL]
Nelson [MT]				Wathen <sup>1</sup> [ME]
(.5,.5,0)				(.5,0,.5)
		<b>Boehm [IN]</b>		<b>Walsh [CT]</b>
		Nelson [MT]		Maddox <sup>1</sup> [AL]
		Brown [CA]		Boehm [IN]
		(.42,.42,.16)		(.42,.16,.42)
		<b>Boehm [CA]</b>		
		Nelson [MT]		
		Walsh [NY]		
		(.33,.33,.33)		
<b>Brown [CA]</b>				<b>Walsh [DE]</b>
Baxter [CA]				Ciparick [NY]
Boehm [IN]	<b>Brown [CA]</b>		<b>Walsh [DE]</b>	Leeson [OR]
(.25,.75,0)	Baxter [CA]		Ciparick [NY]	(.25,0,.75)
	Greaney [MA]		Leeson [OR]	
	(.16,.67,.16)	<b>Walsh [DE]</b>	(.16,.16,.67)	
		Brown [CA]		
		Baxter [CA]		
		(.16,.42,.42)		
<b>Brown [CA]</b>	<b>Brown [CA]</b>	<b>Walsh [DE]</b>	<b>Walsh [DE]</b>	<b>Walsh [DE]</b>
Baxter [CA]	Baxter [CA]	Brown [CA]	Ciparick [NY]	Leeson [OR]
Johnson [WA]	Greaney [MA]	Baxter [CA]	Leeson [OR]	Ciparick [NY]
(0,1,0)	(0,.75,.25)	(0,.5,.5)	(0,.25,.75)	(0,0,1)
<b>[Opinion Quality]</b>				<b>[Independence]</b>

<sup>1</sup>Judge retired prior to 2002

## APPENDIX D: VARIABLE DEFINITIONS

*Court-Level Variable Definitions*

Variable	Definition
<i>Adjusted Associate Justice Salary</i>	The associate justice salary reported in 1997 divided by the cost of living adjustment for 1998 (in thousands of dollars).
<i>Adjusted Partner Salary</i>	The average partner salary in 1998 divided by the cost of living adjustment for 1998 (in thousands of dollars).
<i>Stable Court</i>	Indicator variable equal to 1 if the state high court justices stayed the same from 1998 to 2000 and 0 otherwise.
<i>Number of Active Judges on Bench</i>	Number of judges who were active at any time from 1998 to 2000 for the state in question.
<i>No Mandatory Retirement</i>	Indicator variable equal to 1 if the judges on the state high court do not face mandatory retirement and 0 otherwise.
<i>Long-Term Clerk</i>	Indicator variable equal to 1 if state clerks are tenured for more than one year and 0 if tenure is 1 year or less.
<i>Number of Clerks per Judge</i>	Average number of clerks per judge in the 1998 to 2000 time period.
<i>Law Clerk Opportunity Cost</i>	The difference between the average salary of an entering associate at law firm in that state and the law clerk salary (in thousands of dollars).
<i>Number of Trial Cases in the State</i>	Number of trial cases in the entire state in 1998 (in thousands).
<i>Intermediate Appellate Court</i>	Indicator variable equal to 1 if the opinion is in opposition to the opinion of another judge in the same case and 0 otherwise. In the case of a dissenting opinion written by the judge, the opinion is treated as in active opposition to the majority opinion. In the case of a majority opinion by the judge in question, active opposition exists if the majority opinion is opposed by a dissenting opinion.
<i>Mandatory Publication</i>	Indicator variable equal to 1 if judges on the state high court face a mandatory publication rule and 0 otherwise.

*State-Level Variable Definitions*

Variable	Definition
<i>State Age</i>	Age of the state in 1998.
<i>State Population</i>	The population of the state in millions measured in 1997.
<i>Border Population</i>	Total population of all bordering states of the state in question (measured as of 1997 in millions).
<i>Crime Index</i>	Overall crime rate for the state (including property and violent crime) per 100,000 people from the FBI Uniform Crime Report for 1997, available at <a href="http://www.fbi.gov/ucr/97cius.htm">http://www.fbi.gov/ucr/97cius.htm</a> .
<i>Gross State Product</i>	Gross State Product (measured as of 1998 in billion of dollars).
<i>Median Age of Population</i>	Median age of state population (2000 U.S. Census).
<i>State Median Income</i>	Median per capita income of the state population (2000 U.S. Census in thousands of dollars).
<i>Black Population Fraction</i>	Fraction of the population comprised of blacks as obtained from the 2000 Census.
<i>Citizen Ideology Score</i>	Measure of citizen ideology based on election results in each district, which are then used to compute a statewide average (ultimately based on interest group ratings of a given state's federal congressional delegation) (from Berry et al. 1998).

*Judge-Level Variable Definitions*

Variable	Definition
<i>Chief Judge</i>	For the Opinions and Citations models, indicator variable equal to 1 if the judge in question is the chief judge of the court in the year the opinion was authored and 0 otherwise. For the Independence model, indicator variable equal to 1 if the judge in question is the chief judge of the court for any year from 1998 to 2000 and 0 otherwise.
<i>Yrs. Court Experience</i>	For the Opinions and Citations models, the difference between the year the opinion was authored and the year the judge first joined the high court. For the Independence model, the difference between 1998 and the year the judge first joined the high court (if the judge started on the court in 1998 or later court experience is set to 0).
<i>Yrs. Legal Experience</i>	The difference between 1998 and the year the judge graduated law school.
<i>Retired before 2002</i>	Indicator variable equal to 1 if the judge retired prior to 2002 and 0 otherwise.
<i>Age</i>	Age of the judge in years measured as of 1998 for the Independence model and as of the year the opinion was authored for the Opinions and Citations models.
<i>Female</i>	Indicator variable equal to 1 if the judge is female and 0 if male.
<i>Private Prac. Exp.</i>	Indicator variable equal to 1 if the judge had private practice experience before becoming a judge and 0 otherwise.
<i>Election Spending</i>	Indicator variable equal to 1 if the judge raised funds relating to election campaign expenditures for the year the opinion was authored (for the Opinions and Citations models) and 0 otherwise.
<i>Judge Ideology</i>	Ideology score for each judge as developed by Brace, Hall & Langer (2000). These scores locate judges on a political continuum from highly conservative (0) to highly liberal (100).
<i>U.S. News Law School Ranking</i>	The <i>U.S. News</i> ranking of the judge's law school measured as of 2005.
<i>Attended In-State Law School</i>	Indicator variable equal to 1 if the judge attended an in-state law school and 0 otherwise.

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