A Statistical Analysis of Trade Secret Litigation in State Courts

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I. INTRODUCTION

This Article is a first—it presents, for the first time, a comprehensive statistical analysis of trade secret litigation in state courts. We refer to it as the "state study."

This Article is also a second. In March 2010, the five authors of this state study published *A Statistical Analysis of Trade Secret Litigation in Federal Courts*.[6] That article, which we call the "federal study," presented the first comprehensive statistical analysis of trade secret litigation in federal courts.[7]

Together, these two studies present the most complete objective analysis of trade secret litigation published to date. Both studies are necessary because trade secret litigation takes place in both state and federal courts. State courts exercise original jurisdiction over trade secret claims because substantive trade secret law is primarily state law.[8] Federal courts exercise supplemental or diversity jurisdiction over trade secret claims as well as exclusive jurisdiction over claims under the Economic

6. David S. Almeling et al., *A Statistical Analysis of Trade Secret Litigation in Federal Courts*, 45 GONZ. L. REV. 291 (2010) [hereinafter "Federal Study"].

7. *See id.* at 292-95.

8. *See* JAMES POOLEY, TRADE SECRETS § 10.07[2] (2010) ("Trade secret law, at least as to civil actions, is primarily a matter of state jurisprudence."); DAVID W. QUINTO & STUART H. SINGER, TRADE SECRETS: LAW & PRACTICE 1 (2009) ("In the civil arena, trade secret protection in the United States is provided almost exclusively under state law.").

Espionage Act of 1996, the federal statute that criminalizes certain types of trade secret misappropriation.[9]

Throughout the state and federal studies, we worked with statisticians to ensure that the data were as robust and valid as possible.[10] For this state study, we read 2,077 state appellate court decisions issued between 1995 and 2009. Of those, 358 met our definition of a trade secret case.[11] We coded those cases for 17 criteria, including what type of trade secret was at issue, who was the alleged misappropriator, what law did the court apply, what reasoning did the court use, and who won.[12] Many of the criteria were the same or similar to those we employed in the federal study, which was based on 394 trade secret cases culled from 1,523 federal district court decisions issued between 1950 and 2008.[13]

Unlike the federal study, in which we analyzed decisions of federal trial courts, here we analyze state appellate court decisions—a shift due largely to the fact that many state trial courts do not publish their decisions.[14] Even in those states that do publish decisions, the decisions are frequently not in a format that permits an analysis of their content.[15] For the purposes of the state study, appellate court decisions were defined as those issued by intermediate courts of appeal and the highest courts of each state.

The state study contains original data about trade secret litigation in state courts, data that we believe make a significant contribution—on their own and in comparison with the federal study—to an understanding of trade secret law. Here are some of our key findings:

- In the vast majority of trade secret cases, the alleged misappropriator was someone the trade secret owner knew. Specifically, the alleged misappropriator was an employee or a business partner 93% of the time

9. Economic Espionage Act of 1996,18 U.S.C. §§ 1831-1839 (2006). For a recent summary of the Economic Espionage Act and suggested changes, see generally R. Mark Halligan, *Protection of U.S. Trade Secret Assets: Critical Amendments to the Economic Espionage Act of 1996*, 7 J. MARSHALL REV. INTELL. PROP. L. 656 (2008). Trade secret litigation also takes place before the U.S. International Trade Commission, which can address certain acts of unfair competition, including trade secret misappropriation. *See* 19 U.S.C. § 1337 (2006).

10. We thank Jenjira J. Yahirun, a Ph.D. candidate in the Department of Sociology at University of California, Los Angeles, for her expertise and assistance. For complete summaries of the methodologies in the federal study and state study, see Federal Study, *supra* note 6, at 295-301 and *infra* Part II.

11. *See infra* Part II.A for our definition of a "trade secret case."

12. See *infra* Appendix A, for a complete list of the criteria and their definitions.

13. See Federal Study, *supra* note 6, at 299-300, app. A, for an explanation of the federal case selection and a complete list of the criteria used in the federal study.

14. *See infra* note 38.

15. See *infra* Part II.A for detailed analysis of the selection of state cases.

in this state study.[16] That figure was comparable to that of the federal study, which showed the alleged misappropriator to be an employee or a business partner in 90% of cases.[17] One key difference between state and federal courts is that while 78% of state cases involved alleged employee misappropriators, only 53% of federal cases did.[18]

- About half of all state appellate cases are heard in only five states: California (16%), Texas (11%), Ohio (10%), New York (6%), and Georgia (6%).[19]
- State appellate courts affirmed trade secret decisions 68% of the time and reversed them 30%.[20]
- Alleged misappropriators won more often than trade secret owners on appeal, winning 57% of the time and losing 41%.[21] Alleged misappropriators also have an advantage on appeal in terms of affirmance/reversal rates. Appellate courts reverse lower court decisions in favor of trade secret owners more often (58%) than they reverse lower court decisions in favor of alleged misappropriators (42%).[22]
- State courts appear to be a tougher venue for trade secret owners who are suing business partners than for those suing employees—trade secret owners won 42% of the time on appeal when the owner sued an employee, but only 34% when the owner sued a business partner.[23]
- Of the varied subject matter that can qualify as a trade secret, two categories comprise the vast majority (94%) of trade secrets litigated in state courts: internal business trade secrets (i.e., customer lists and internal business information) and technical trade secrets (i.e., formulas, technical information, and software or computer programs). Internal business trade secrets were litigated in 70% of state cases, and technical trade secrets were litigated in 36%. Those figures compare to 48% and 56%, respectively, in federal cases.[24]
- For over forty years after its publication in 1939, the *Restatement (First) of Torts* "was almost universally cited by state courts, and in effect

16. *See infra* Part III.B.
17. *See infra* Part III.B.
18. *See infra* Part III.B.
19. *See infra* Part III.D.
20. *See infra* Part IV.B.
21. *See infra* Part IV.A.1.
22. *See infra* Part IV.C. These numbers exclude "mixed" outcomes.
23. *See infra* Part IV.A.2. These numbers exclude "mixed" outcomes.
24. *See infra* Part III.C. The numbers add up to more than 100% because many cases involve more than one category of trade secret.

became the bedrock of modern trade secret law."[25] Those days are over. Only 5% of the cases in this state study of 1995-2009 decisions cited the *Restatement (First) of Torts*.[26]

- Unlike federal courts, which cite persuasive authority in more than a quarter of cases, state courts cited persuasive authority in only 7% of cases.[27]
- As one element of its case, a trade secret owner must establish that it took reasonable measures to protect its purported trade secrets.[28] Of all the measures trade secret owners took in the state and federal cases we coded, only two measures—confidentiality agreements with employees and confidentiality agreements with third parties—statistically predicted that the court would find that this element was satisfied.[29] In short, both the state and federal studies confirm that confidentiality agreements with employees and business partners are the most important factors when courts decide reasonable measures.
- In contrast to the exponential growth of federal court trade secret litigation—doubling in the seven years from 1988 to 1995 and again in the nine years from 1995 to 2004—state trade secret appellate decisions are increasing, but only in a linear pattern at a modest pace.[30]

We present this study in five parts. Part I is this introduction. Part II details our methodology. Parts III and IV present the data from this study, explain what the data add to an understanding of trade secret law, and compare the data from this state study to the data from the federal study. Part III, specifically, presents data on trade secret litigation in state courts from 1995–2009 and compares that data to the data presented in the federal study. Part IV presents data on, among other things, who wins trade secret litigation in state courts and at what rates state appellate courts affirm and reverse lower court decisions. Part V concludes and suggests additional areas of empirical research.

Before we proceed, a note about our data: the state and federal studies include clearly defined categories of cases, and the data are obviously limited to those cases. Accordingly, when we describe the data using the shorthand "federal cases," we mean the federal cases that we coded in the federal study—i.e., cases in which a federal district court issued a written opinion based on trade secret law between 1950

25. POOLEY, *supra* note 8, § 2.02[1].

26. *See infra* Part III.G.

27. *See infra* Part III.F.

28. *See* Federal Study, *supra* note 6, at 321.

29. *See infra* Part III.H.

30. See *infra* Part III.A, including *infra* note 57 for a caveat regarding comparing growth rates in federal and state cases.

and 2008. And when using the shorthand "state cases," we mean the state cases that we coded in this state study—i.e., cases in which a state appellate court issued a written opinion based on trade secret law between 1995 and 2009.

II. METHODOLOGY

Because the federal study was the first statistical analysis of trade secret litigation in federal courts, we had to devise our own methodology.[31] For this analysis of state courts, we largely duplicated the methodology of the federal study and modified it to address the peculiarities of state court systems and the shift from studying federal district court decisions to state appellate court decisions. This Part briefly presents how we selected and coded the cases for this study.[32]

A. *Selection of Opinions*

This study analyzes state trade secret cases issued between January 1, 1995, and November 30, 2009.[33] We limited our analysis to the last fifteen years because we believe that a recent population of cases yields the most useful data for courts, lawyers, employers, employees, scholars, and others interested in trade secret law.

For the purposes of this Article, we defined "trade secret cases" as written decisions[34] in which a state appellate court expressly decided an appeal on a substantive issue based on trade secret law.[35] "State appellate courts" included both intermediate courts of appeal as well as the states' highest courts. We excluded from the definition cases that involved issues similar to trade secret law but were decided under a different rule of law, such as a claim for breach of a nondisclosure

31. For additional information about methodology, please consult the federal study. *See* Federal Study, *supra* note 6, at 295-301.

32. The federal study provided a literature review of statistical scholarship about intellectual property law. *See* Federal Study, *supra* note 6, at 296-97 nn.30-31. As a supplement, we note that the following articles have been published since the federal study. *See generally e.g.*, Scott E. Atkinson, et al., *The Economics of a Centralized Judiciary: Uniformity, Forum Shopping, and the Federal Circuit*, 52 J.L. & ECON. 411 (2009); John M. Golden, *The Federal Circuit and the D.C. Circuit: Comparative Trials of Two Semi-Specialized Courts*, 78 GEO. WASH. L. REV. 553 (2010); Matthew Sag, et al., *Ideology and Exceptionalism in Intellectual Property: An Empirical Study*, 97 CALIF. L. REV. 801 (2009).

33. While the federal study included separate analyses for a sample study of historical cases (1950-2008) and a population study of modern cases (2009), this state study is a population study of all of the state cases together in one dataset.

34. Both precedential and nonprecedential cases were included in this study, as many other scholars have done. *See, e.g.*, Federal Study, *supra* note 6, at 298 n.38.

35. In other words, the trade secret owner must have won or lost on appeal based on substantive trade secret law for the case to be included in this state study.

agreement.[36] We further limited the definition to decisions in which the appellate court addressed an issue decided in the state trial court in one of the following four procedural postures: (1) motion for preliminary injunction, temporary restraining order, or writ of attachment; (2) motion for adjudication on the pleadings, such as a demurrer, motion to dismiss, or motion on the pleadings; (3) motion for adjudication based on the undisputed factual record, such as a motion for summary adjudication or summary judgment, which we separated into (a) motions by the trade secret owner and (b) motions by the alleged misappropriator; and (4) trial, either bench or jury, including post-trial motions concerning the outcome of the case.

Identifying state trade secret cases posed several challenges. For the federal study, we limited our analysis to decisions of district courts, which are generally the trial courts in the federal system.[37] We could not, however, analyze trial courts in the state system because in many states the trial courts do not publish written decisions.[38] Even in those states that do publish trial court decisions, those decisions are not always in a format that permits detailed analysis. For example, a state may publish only the final judgment without explaining the facts or the court's reasoning.[39] We thus focused our analysis on the only readily available state court decisions, which are from courts that hear appeals from trial courts, including both intermediate appellate courts and the states' highest courts.

Additional challenges to studying state courts included the structural and procedural differences between state court systems. State court structures vary widely from state to state. New York, for example, has three levels of courts, the lowest of which is the Supreme Court and the highest of which is the Court of Appeals; New York also has an Appellate Division, an intermediate court taking

36. This limitation excludes a host of trade secret-like cases and cases that some might consider trade secret cases under another name, such as noncompetition agreements or other methods to protect proprietary information. These related rights deserve examination, but are beyond the scope of this study.

37. *See* Federal Study, *supra* note 6, at 293.

38. Alaska State Courts, for example, do not publish trial court opinions. *See Legal Research-Alaska Resources,* ALASKA COURT SYSTEM, http://www.courts.alaska.gov/aklegal.htm (last visited Oct. 1, 2010) ("Only the decisions of the Alaska appellate courts — the supreme court and court of appeals — are published and may be cited as precedent. Trial court decisions are not published and have no precedential authority."). Neither do Arizona courts. *See* Maureen Garmon, *Courts and Civil Procedure in Arizona: Basic Information and Law Library Resources*, THE UNIVERSITY OF ARIZONA DANIEL F. CRACCHIOLO LAW LIBRARY, http://www.law.arizona.edu/Library/research/guides/civ_pro.cfm (last visited Oct. 1, 2010) ("Judgments from the lower courts are not published.").

39. For an in-depth overview of state court public access and publication policies, see *Privacy/Public Access to Public Records: Resource Guide*, NAT'L CENTER FOR ST. COURTS (last visited Oct. 1, 2010), http://www.ncsc.org/topics/access-and-fairness/privacy-public-access-to-court-records/resource-guide.aspx.

appeals from the Supreme Court.[40] Georgia has a similar structure but with different names; specifically, a court of general jurisdiction called the Superior Court, an intermediate Court of Appeals, and a Supreme Court that serves as the court of last resort.[41] Delaware has an intricate structure: the entry-level court is called the Justice of the Peace Court; the Family Court and the Court of Chancery are specialized entry-level courts; the Superior Court serves as an intermediate appeals court, and the Supreme Court is the court of last resort.[42] The path to appeal in Delaware is not always straightforward, either. For example, civil appeals from the Family Court go directly to the Supreme Court, but criminal appeals from the Family Court go to the Superior Court.[43] To address these and other structural differences, we included in this state study all state courts that hear appeals from state trial courts.

A similar challenge to analyzing state courts involves the great diversity of state procedure. All federal district courts follow the Federal Rules of Civil Procedure.[44] Each state, in contrast, has its own rules of procedure.[45] While there is some procedural overlap from state to state (e.g., all states have some sort of an adjudication on the pleadings, whether it is called a demurrer, motion to dismiss, motion on the pleadings, or something else), different rules apply in different states.[46] It was not possible to eliminate these variations, but we tried to minimize procedural irregularities by defining the four relevant procedural postures in terms of function and not nomenclature.

Because there was no pre-designed search that yielded all cases that met our definition of a trade secret case, we created an over-inclusive search and then winnowed the results.[47] We performed this over-inclusive search by beginning with all state cases that contained the phrase "trade secret" at least three times and were issued between January 1, 1995, and November 30, 2009.[48] There were a total of 2,077 such cases.[49]

40. *Court Structure*, N.Y. ST. UNIFIED CT. SYS., http://www.courts.state.ny.us/courts/structure.shtml (last updated Aug. 9, 2004).

41. *Courts of Georgia*, ADMIN. OFF. COURTS GA., http://www.georgiacourts.org/ (follow "Courts" hyperlink) (last visited Sept. 25, 2010).

42. *Overview of the Delaware Court System*, DEL. ST. COURTS, http://courts.delaware.gov/overview.stm (last visited Sept. 25, 2010).

43. *Id.*

44. FED. R. CIV. P. 1 ("These rules govern the procedure in all civil actions and proceedings in the United States district courts . . . .").

45. For a complete listing of all state civil procedure statues, see *Civil procedure – State Statutes,* CORNELL UNIV. L. SCH. LEGAL INFO. INST., http://topics.law.cornell.edu/wex/table_civil_procedure (last visited Sept. 25, 2010) (listing links to all state civil procedure statutes).

46. *Id.*

47. The use of a broad initial search and subsequent winnowing has many precedents. Federal Study, *supra* note 6, at 299 & n.45.

48. Our search in the LexisNexis state cases database was: atleast3("trade secret!") with a

After reading each of the 2,077 cases, we excluded those that did not meet our definition. The majority of the cases did not meet our definition because while they contained the phrase "trade secret" at least three times, they did not involve a decision on a substantive issue based on trade secret law. Other cases did not meet our definition because they did not involve an appeal of proceedings in one of the four identified procedural postures, were not issued by an appellate court, or were opinions by specialized state courts, such as tax courts. After the winnowing process, 358 cases met our definition.

B. *Coding of Opinions*

We coded the 358 cases that met our definition for 17 criteria. We explain these criteria in Parts III–IV and Appendix A. Many of these 17 criteria are the same ones we used in the federal study.[50] The criteria were derived from reviewing empirical research on other intellectual property ("IP") litigation, researching trade secret case law and scholarship to determine what issues interested courts and scholars, and incorporating ideas from well-known scholars and practitioners who reviewed early drafts of the state and federal studies. As litigators of trade secret cases, we also added criteria for issues that arise repeatedly in our practices.

C. *Limitations of the Methodology*

In the Methodology section of the federal study, we described several limitations that apply to all statistical legal scholarship.[51] Those same limitations apply to this state study. For example, one such limitation is that some of the coding decisions we made required discretion, which could potentially introduce bias into the study. We addressed this issue in the federal study by randomly selecting 10% of the federal cases to be reviewed by two of the coders and then determining the level of intercoder agreement.[52] We used the same coders in the state study to ensure that we continued to achieve a high level of intercoder agreement.

There are also limitations that are unique to the study of state courts. For example, differences between state court systems make it difficult to compare data

date range after December 31, 1994, and before December 1, 2009.

49. The same search, with the same date range, performed on LexisNexis on July 12, 2010, resulted in 2,109 cases. The difference is likely due to the fact that it takes certain courts several weeks to publish cases on the LexisNexis database.

50. See Federal Study, *supra* note 6, at app. A for a complete list of the criteria and their definitions in the federal study.

51. Federal Study, *supra* note 6, at 300-01.

52. *Id.* at 300-01 & nn.51-52 and accompanying text.

across states, which, as already explained,[53] have different laws and adhere to different procedural rules. Further, differences between state appellate courts (the focus of this study) and federal trial courts (the focus of the federal study) necessitate caution in making comparisons between them. Another limitation is that cases that are appealed may not be representative of cases that are not. In our experience, appeals tend to involve disputes with closer questions of fact or law or disputes with more at stake.

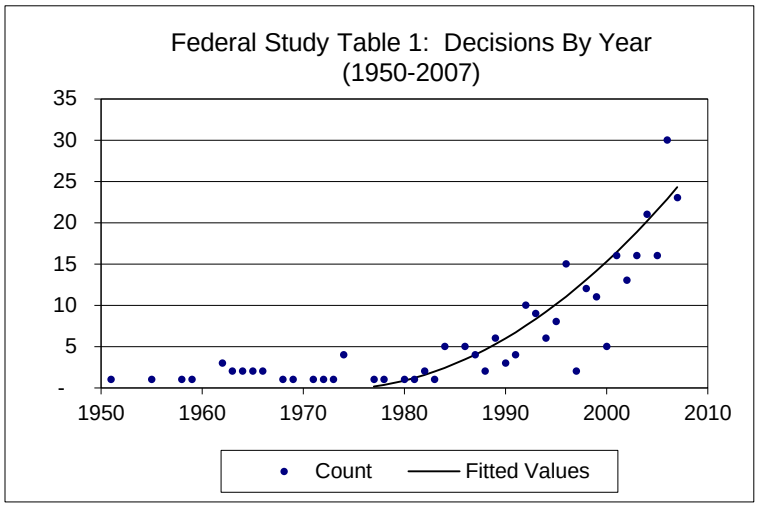
Despite these limitations, the data collected remain useful and reliable for purposes of these studies and as a foundation for future research.

III. TRADE SECRET LITIGATION IN STATE COURTS

This Part presents data on trade secret litigation in state courts from 1995–2009 and compares that data to the data presented in the federal study.

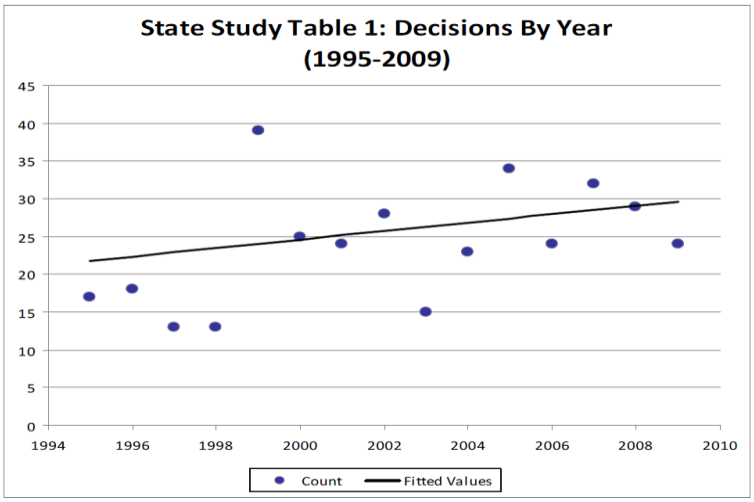
A. *The Comparatively Modest Growth of Trade Secret Cases in State Courts*

The federal study showed that trade secret litigation in federal courts is growing exponentially.[54] In fact, that data showed that trade secret cases doubled in the seven years from 1988 to 1995, and doubled again in the nine years from 1995 to 2004. At the projected rate, trade secret cases will double again by 2017.[55] Federal Study Table 1[56] presents the data:



53. *See supra* Part II.A.
54. Federal Study, *supra* note 6, at 301-02.
55. *Id.* at 293 & nn.13-14 and accompanying text.
56. *Id.* at 302 tbl.1.

In contrast to the rapid growth of federal court trade secret litigation,[57] state trade secret appellate decisions are increasing in a linear pattern at a modest pace.[58] During the fifteen-year period of this state study, trade secret litigation in state courts had not doubled and, at the current rate of growth, is not expected to double for more than two decades. State Study Table 1 presents the data:



The growth of trade secret cases is generally faster than the growth of litigation in both state and federal courts.[59] The National Center for State Courts reports that from 1998 to 2007, incoming state civil caseloads increased by 18% and incoming state criminal caseloads increased by 9%.[60] As showed by the fitted line, the growth in state appellate trade secret cases over that same period

57. As explained in Part II.A, the state and federal studies used different units of analysis — i.e., the state study analyzed appellate courts and the federal study analyzed trial courts. Accordingly, we stress that comparing growth rates in state and federal courts based on our units of analyses requires qualification.

58. We used an Ordinary Least Squares (OLS) regression to fit a line of the expected number of state cases by year. The estimated equation based on this model is the following: number of cases per year = -1095.44 + .56*Year. The coefficient of .56 is statistically significant at the $p<.01$ level. It is possible, however, that trade secret cases are increasing rapidly at the trial court level but for some reason there has not been a commensurate increase in appeals.

59. *See generally* R. Mark Halligan, *Trade Secrets v. Patents: The New Calculus*, LANDSLIDE July/Aug. 2010, at 10, 10-13) (arguing that for a host of reasons, more companies may decide to pursue trade secrets instead of patents to protect their information).

60. Robert C. LaFountain, et al., *Examining the Work of State Courts: An Analysis of 2007 State Court Caseloads*, NATIONAL CENTER FOR STATE COURTS: COURT STATISTICS PROJECT 1, 21 (2009), *available at* http://www.ncsconline.org/d_research/csp/2007B_files/EWSC-2007-v21-online.pdf.

was 24%, and 36% over the fifteen-year range of our study.[61] To be sure, an increase in state cases generally is not perfectly analogous to an increase in state appellate cases (the unit of analysis in this study), but it provides basis for a rough comparison.

The data for federal courts are even more compelling. While the growth in federal trade secret cases was exponential, the Administrative Office of the U.S. Courts reports that from 2000 to 2009, total civil filings decreased by 2%.[62] Again, although the data do not overlap exactly, they provide a rough comparison.

B. *Most Alleged Misappropriators Are Someone the Trade Secret Owner Knows—Either an Employee or a Business Partner*

To answer the question of who is most likely to be alleged to have misappropriated trade secrets, we divided alleged misappropriators into four categories. These categories were the same ones we used in the federal study:[63] the alleged misappropriator (1) was, or was assisted by, a current or former employee of the trade secret owner; (2) was, or was assisted by, a current customer, or a former or expected business partner of the trade secret owner, such as a licensee, original equipment manufacturer, joint venturer, distributor, or supplier;[64] (3) was an unrelated third party, which we defined as someone who was not, or was not assisted by, a current or former employee or business partner but whose identity was known; or (4) was some other kind of entity or unknown individual.[65]

These categories are not mutually exclusive; we listed each category involved. State Study Table 2 quantifies the identities of the alleged misappropriator in the state cases we coded:

61. *See supra* State Study Table 1.

62. *Judicial Business of the United States Courts,* ADMINISTRATIVE OFFICE OF THE U.S. COURTS, 11 (2009), *available at* http://www.uscourts.gov/Statistics/JudicialBusiness/JudicialBusiness.aspx?doc=/uscourts/Statistics/JudicialBusiness/2009/JudicialBusinespdfversion.pdf.

63. *See* Federal Study, *supra* note 6, at 302.

64. *See* R. MARK HALLIGAN & RICHARD F. WEYAND, TRADE SECRET ASSET MANAGEMENT: AN EXECUTIVE'S GUIDE TO INFORMATION ASSET MANAGEMENT, INCLUDING SARBANES-OXLEY ACCOUNTING REQUIREMENT FOR TRADE SECRETS 67-80 (2006) (describing security against misappropriation by "outsiders").

65. *See infra* Appendix A (defining categories of "alleged misappropriators").

State Study Table 2. Identity of Alleged Misappropriator

	1995-2009
Employee or former employee	77% (278)
Business partner	20% (70)
Unrelated third party	9% (31)
Other or unknown	3% (10)

Federal Study Table 2 shows the same type of data for federal cases:[66]

Federal Study Table 2. Identity of Alleged Misappropriator

	1950-2007	2008
Employee or former employee	52% (142)	59% (71)
Business partner	40% (109)	31% (37)
Unrelated third party	3% (8)	9% (10)
Other or unknown	7% (19)	5% (6)

The state and federal studies showed that most alleged misappropriators are someone the trade secret owner knows. In 93% of state cases, the alleged misappropriator is either an employee or a business partner.[67] In federal cases, that number is 90%.[68] The data suggest that a prudent trade secret owner should focus its efforts in large part on protecting trade secrets from unscrupulous employees and, to a somewhat lesser extent, business partners.[69] This focus can be tricky. As described by one commentator, "viewing employees simultaneously as valued members of the corporate family and as threats to the company's trade secrets can be a delicate balancing act," but "considering the

66. *See* Federal Study, *supra* note 6, at 302-04.

67. This percentage is smaller than the sum of the top two rows in State Study Table 2 for the same reason that the percentages in State Study Table 2 add up to over 100%: some cases involved both employees and business partners.

68. Federal Study, *supra* note 6, at 303. Unlike the 85% figure in the federal study, the 90% figure is weighted. See *infra* note 71 for an explanation of weighting.

69. To be clear, trade secret misappropriation is two-way street: businesses must protect their own company's trade secrets and avoid stealing another company's secrets. We note, however, that the need for certain types of protection against third parties may be changing with the rise of hacking and other forms of computer espionage. *See, e.g.*, Elizabeth A. Rowe, *Contributory Negligence, Technology, and Trade Secrets*, 17 GEO. MASON L. REV. 1, 14-26 (2009).

risks objectively, it would not be prudent to overestimate employee loyalty and trustworthiness."[70]

One area in which the data in the state and federal studies differ is that state cases involve a higher number of alleged employee misappropriators (78%) than federal cases (53%[71]).[72] The converse is true regarding business partners: state cases have fewer alleged business partner misappropriators (20%) than federal cases (39%[73]).[74]

One likely explanation for this difference is that state courts are courts of general jurisdiction and thus can hear cases involving trade secret, employment, breach of contract, and other claims predicated on state law.[75] Indeed, state courts are often the only venue that can hear trade secret and other cases against employees. Federal courts, by contrast, have limited jurisdiction and can hear trade secret cases only as part of the federal court's supplemental jurisdiction[76] or diversity jurisdiction.[77] Plaintiffs often assert trade secret claims with other causes of action based on federal law, such as claims for patent infringement,[78] copyright infringement,[79] violation of the Computer Fraud and Abuse Act,[80] and others.[81] These federal causes of action may be more likely to involve another company than an employee.

70. Elizabeth A. Rowe, *Information Security and Trade Secrets*, *in* HARBORING DATA: INFORMATION SECURITY, LAW, AND THE CORPORATION 92, 98 (Andrea M. Matwyshyn ed., 2009).

71. This number, along with many other numbers from the federal study that are cited in this state study, is weighted. In the federal study, we describe our two sample sizes and how to extract one number using a weighting process. See Federal Study, *supra* note 6, at 295-301, 313 n.104, for a complete description of the weighting process. In short, the federal study sample had two components: (1) "historical" cases decided between 1950 and 2007, and (2) "current" cases decided in 2008. Due to the large number of cases decided between 1950 and 2007, we only coded a randomly selected 25%; due to their relatively small number, we coded all cases in 2008. To correct for this bias, we created balance by weighting the data proportionally to the inverse of the sampling rate. *Id*. at 313 n.104.

72. This difference is statistically significant at the $p<.01$ level.

73. See *supra* note 71 for an explanation of weighting.

74. This difference is statistically significant at the $p<.01$ level.

75. QUINTO & SINGER, *supra* note 8, at 54-71 (describing various state-law claims that are often alleged along with a claim for trade secret misappropriation).

76. 28 U.S.C. § 1367 (2006).

77. 28 U.S.C. §§ 1331-1332 (2006).

78. 35 U.S.C. § 271 (2006).

79. 17 U.S.C. § 501 (2006).

80. Computer Fraud and Abuse Act (CFAA),18 U.S.C. § 1030 (2006).

81. QUINTO & SINGER, *supra* note 8, at 71-77 (describing various federal claims that are often alleged along with a claim for trade secret misappropriation).

Another explanation is the potential for lack of diversity jurisdiction for employee cases. Employees are likely to reside in the same state as their employer. Unless the defendant employee resides in another state and works remotely or has moved to another state,[82] or the trade secret owner can bring another federal cause of action to establish supplemental jurisdiction,[83] employee cases are likely to remain in state courts. Business partners, however, may not be as geographically limited as employees and thus may be more likely to create diversity jurisdiction.[84]

C. *Most Litigated Trade Secrets Are One of Two Types: Internal Business Information or Technical Information*

Trade secrets are not limited to a particular type of subject matter: "As long as the definitional requirements are met, virtually any subject matter or information can be a trade secret."[85]

To determine which types of trade secrets are litigated most often, we coded for nine types. These were the same nine we coded in the federal study.[86] State Study Table 3 identifies the types of alleged trade secrets in state courts, which roughly divide between internal business trade secrets (i.e., customer lists and internal business information) and technical trade secrets (i.e., formulas, technical information, and software or computer programs):[87]

82. Diversity jurisdiction is available against an employee who has relocated to another state. *See* Gillian Lester & Elizabeth Ryan, *Choice of Law and Employee Restrictive Covenants: An American Perspective*, 31 COMP. LAB. L & POL'Y J. 389, 407 (2010) ("[I]t is not unusual for federal courts to exercise diversity jurisdiction in cases involving employees who have relocated to another state.").

83. *See generally* Graham M. Liccardi, *The Computer Fraud and Abuse Act: A Vehicle for Litigating Trade Secrets in Federal Court*, 8 J. MARSHALL REV. INTELL. PROP. L. 155, 156 (2008) (proposing the CFAA as "a means to secure access to the federal courts in order to meet the needs of complex trade secret litigation").

84. This explanation may change based on *Hertz Corp. v. Friend* in which the Supreme Court recently resolved a circuit split over the interpretation of the "principle place of business" of a corporation for diversity jurisdiction purposes, holding that principle place of business should be interpreted narrowly to be the corporation's "nerve center." 130 S. Ct. 1181, 1192 (2010).

85. MICHAEL A. EPSTEIN, EPSTEIN ON INTELLECTUAL PROPERTY § 1.02[E][1] (5th ed. 2008 & Supp. 2009).

86. *See* Federal Study, *supra* note 6, at 329.

87. See *infra* Appendix A for definitions of each category of trade secret.

State Study Table 3. Type of the Alleged Trade Secrets

	1995-2009
Formulas	5% (16)
Technical information and know-how	27% (98)
Software or computer programs	6% (23)
Customer lists	52% (187)
Internal business information	42% (150)
External business information	3% (10)
"Combination" trade secrets	0% (0)
"Negative" trade secrets	0% (0)
Other or unknown	6% (23)

Federal Study Table 3 identifies the types of alleged trade secrets in federal courts, which also roughly divide between internal business trade secrets and technical trade secrets:[88]

Federal Study Table 3. Type of the Alleged Trade Secrets

	1950-2007	2008
Formulas	4% (12)	9% (11)
Technical information and know-how	46% (126)	35% (42)
Software or computer programs	11% (29)	10% (12)
Customer lists	32% (86)	31% (38)
Internal business information	31% (84)	35% (42)
External business information	2% (5)	1% (1)
"Combination" trade secrets	2% (5)	1% (1)
"Negative" trade secrets	1% (2)	0% (0)
Other or unknown	5% (14)	9% (11)

In federal cases, internal business trade secrets were litigated in 48% of cases, while technical trade secrets were litigated in 58% of cases.[89] In state

88. *See* Federal Study, *supra* note 6, at 304 tbl.3.

89. *See* Federal Study, *supra* note 6, at 305. These percentages add up to more than 100% because some cases involved multiple types of trade secrets. Both of these numbers are weighted. *See supra* note 71 for an explanation of weighting.

cases, internal business trade secrets were litigated in 70% of cases, while technical trade secrets were litigated in 36% of cases.[90]

State cases have a higher percentage of cases involving internal business trade secrets and a lower percentage of cases involving technical trade secrets than federal cases.[91] One possible explanation for this difference is that plaintiffs often bring both trade secret claims and patent claims in the same case. Because federal courts have exclusive jurisdiction over patent claims,[92] those cases must be brought in federal court. And because patent cases involve inventions, which are more akin to technical trade secrets than internal business trade secrets, it follows that a greater number of federal cases might involve technical trade secrets than internal trade secrets.

As we noted in the federal study,[93] it is interesting to observe the split between technical and business trade secrets because that division is unique within IP law. For example, patent law encompasses both utility patents that protect inventions[94] and nonfunctional design patents that protect decorative elements.[95] Different statutes govern the two types of patents, though there is certainly some overlap. Trade secret law, however, is not divided the same way. The same trade secret law applies to both technical and business information. One critical question is whether a single, unified trade secret law is sufficient. We do not address this question, but we highlight it as one area in need of further theoretical and empirical investigation.[96]

D. *California, Texas, and Ohio Have the Most Trade Secret Litigation*

State Study Table 4 identifies the five most active states for trade secret litigation:

90. These figures are not mutually exclusive, as approximately 13% of the cases involved both technical and internal business secrets.

91. Both differences are statistically significant at the $p<.01$ level.

92. 28 U.S.C. § 1338(a) (2006).

93. *See* Federal Study, *supra* note 6, at 305.

94. 35 U.S.C. § 101 (2006).

95. 35 U.S.C. § 171 (2006).

96. There were very few cases involving so-called "combination" or "negative" trade secrets. But this data may be misleading because while courts occasionally addressed what was fairly considered a combination or negative trade secret, courts rarely used the moniker "combination" or "negative" and thus those trade secrets were not coded as "combination" or "negative" in federal and state studies.

State Study Table 4. Top Five Jurisdictions in Trade Secret Litigation

State	1995–2009
California	16% (57)
Texas	11% (41)
Ohio	10% (35)
New York	6% (22)
Georgia	6% (20)

Judging by appellate court activity, the top five jurisdictions for trade secret litigation are California, Texas, Ohio, New York, and Georgia. Together, these five states comprise almost half (49%) of all state appellate decisions.

When one compares this data with that of the federal study,[97] California, Texas, and New York were in the top five in both lists. This stands to reason, because California, Texas, and New York are the three most populous states.[98]

One interesting result is that California has a larger percentage of cases involving customer lists than other states. Specifically, the data showed that 68% of trade secret cases in California involve customer lists, compared to 49% of cases in other states.[99]

Another interesting result is that two of the top five most active states for trade secret litigation (New York and Texas) do not follow the Uniform Trade Secrets Act ("UTSA").[100] We address this point further in the next subpart.

97. Federal Study, *supra* note 6, at 306 tbl.4.

98. As of July 1, 2009, California's population is almost 37 million, Texas's population is almost 25 million, and New York's population is almost 20 million. *Geographical Comparison Table: 2009 Population Estimates*, U.S. CENSUS BUREAU, http://factfinder.census.gov/servlet/GCTTable?_bm=y&-geo_id=01000US&-_box_head_nbr=GCT-T1-R&-ds_name=PEP_2009_EST&-_lang=en&-format=US-40S&-_sse=on (last visited Sept. 20, 2010).

99. This difference is statistically significant at the $p<0.01$ level. For additional information about California trade secret law, see the practice guide drafted by the Intellectual Property Section of the State Bar of California. *See generally* TRADE SECRET LITIGATION AND PROTECTION IN CALIFORNIA (Randall E. Kay & Rebecca Edelson eds., 2009). For additional analysis of California trade secret law that "examines how California's current trade secrets system differs from the historical system, uses case studies to determine the practical effects of those differences, and analyzes how those effects shape the property rights, relational duty, and efficiency theories underlying trade secrets law," see generally Kenneth Shurtz, *Has the CUSTA Furthered or Frustrated the Underlying Theories of Trade Secret Law?*, 50 IDEA 501, 503 (2009).

100. UNIF. TRADE SECRETS ACT (amended 1985), 14 U.L.A. 529-30 (2005); s*ee* QUINTO & SINGER, *supra* note 8, at 1-2.

E. *The Majority of Courts Apply State Civil Statutes; A Minority Continue to Apply Common Law*

Substantive trade secret law is almost always state law.[101] All but four states have enacted the UTSA in some form, and thus their primary trade secret law is by civil statute.[102] Four states (Texas, New York, Massachusetts,[103] and New Jersey) continue to follow common law for their primary trade secret law.[104] Also, more than half of the states have enacted criminal statutes regarding trade secret theft,[105] although such statutes vary widely in the conduct they prohibit and the punishments they impose.[106]

We coded to determine which of these sources of law state courts applied most often. State Study Table 5 presents the data:[107]

101. *See supra* note 8 and accompanying text.

102. *See* 1 MELVIN F. JAGER, TRADE SECRETS LAW § 3:29 & n.1 (2005) (providing citations to statutes in the 45 states, and the District of Columbia that have enacted the UTSA); *see also* WYO. STAT. ANN. § 40-24-101 (2006) (adopted after the section from Melvin Jager's text was printed); V.I. CODE ANN. tit. 11 § 1001 (2007) (adopted after the section from Melvin Jager's text was printed).

103. Massachusetts is an unusual state because it has enacted a trade secret statute based in part on its larceny statute and because its courts follow the *Restatement (First) of Torts* in many respects. QUINTO & SINGER, *supra* note 8, at 36-38, 340-45 (describing trade secret law in Massachusetts); II BRIAN M. MALSBERGER, TRADE SECRETS: A STATE-BY-STATE SURVEY 1871-1925 (Alaf U. Kahn et al. eds., 3d ed. 2006) (explaining Massachusetts trade secret law). Massachusetts was also an important state in the development of trade secret law. *See* CATHERINE L. FISK, WORKING KNOWLEDGE: EMPLOYEE INNOVATION AND THE RISE OF CORPORATE INTELLECTUAL PROPERTY, 1800-1930, at 94-95 (2009) (describing the Massachusetts Supreme Court's 1869 decision in *Peabody v. Norfolk*).

104. QUINTO & SINGER, *supra* note 8, at 1-2.

105. *Id.* at 292 n.84 (listing each state's criminal statute).

106. *Id.* at 292-300 (stating that "[s]tate criminal statutes vary greatly," and listing examples of that variance for statutes in California, New Jersey, and New York); *see also* POOLEY, *supra* note 8, § 13.02 (describing the variance between state criminal trade secret statutes).

107. The criterion of applied law, or law the court applied, has five categories: state criminal, where the court identified a criminal trade secret statute; state civil statute, where the court identified a trade secret statute; state common law, where the court only cited trade secret cases without referencing a statute; mixed, where the court applied more than one source of trade secret law; and other or unknown, where the court did not cite to either a case or statute. The coding required that the court identify a trade secret statute. If the court only cited trade secret cases without referencing a statute, the case was coded as applying state common law.

State Study Table 5. Applied Law

Source of Law	1995–2009[108]
Criminal law	2% (7)
State civil statute	68% (245)
State common law	24% (85)

In the majority of cases (68%), courts applied state civil statutes. A minority of courts (24%) applied state common law. These numbers correspond roughly to the proportion of cases that applied state statutes versus state common law in the federal study.[109]

The category of state common law primarily comprises the four states that have not adopted a version of the UTSA. These states accounted for 18% of all coded state cases, which largely explains why 24% of cases applied state common law.[110] The primary reason for the 6% gap between these two numbers is that this state study covers the time period 1995–2009, and there were several other states that had not yet adopted the UTSA during some part of this fifteen-year period. For example, Pennsylvania's UTSA took effect in April 2004,[111] Tennessee's UTSA took effect in July 2000,[112] and Michigan's UTSA took effect in December, 1998.[113]

One should not underestimate the importance of the common law minority. While forty six states have enacted the UTSA, the four states that have not represent approximately 20% of U.S. GDP.[114]

F. *Unlike Federal Courts, State Courts Rarely Cite Persuasive Authority*

As explained above, each state has its own body of trade secret law, whether based on a statute or on common law. State courts thus need not cite any other law to justify their decisions. To determine how often courts cite other laws, we coded for whether the decision cited "persuasive authority,"

108. These numbers do not add up to 100% because the chart omits cases labeled mixed or other for this element.

109. *See* Federal Study, *supra* note 6, at 306-07 & tbl.4.

110. The percentages by state are as follows: Massachusetts, 0.3%; New Jersey, 0.6%; New York, 6.2%; and Texas, 11.5%.

111. 12 PA. CONS. STAT. ANN. §§ 5301-5308 (West Supp. 2010).

112. TENN. CODE ANN. §§ 47-25-1701 to 47-25-1709 (2000).

113. MICH. COMP. LAWS ANN. §§ 445.1901-.1910 (West 2002).

114. News Release, Bureau of Econ, Analysis, U.S. Dep't of Commerce, State Economic Growth Slowed in 2007 (June 5, 2008), *available at* http://www.bea.gov/newsreleases/regional/gdp_state/2008/pdf/gsp0608.pdf.

which we defined as a citation to legal authority (i.e., cases, statutes, etc., but not treatises or law review articles) of a state other than the state of the applied law.[115]

When we coded for persuasive authority using this definition in the federal study, we found that more than a quarter of federal courts cited some form of persuasive authority.[116] In contrast, when we coded for persuasive authority in state courts, we found that only 7% of state courts did:[117]

State Study Table 6. Persuasive Authority Citation

	1995-2009
Yes	7% (26)
No	93% (332)

State courts rely on persuasive authority less often than federal courts do.[118]

We then divided state courts into intermediate appellate courts and high courts. The data show that 16% of high courts cite persuasive authority while only 6% of intermediate appellate courts do:

State Study Table 7. Persuasive Authority Citation, Type of Court

	Intermediate	High Court
Yes	6% (18)	16% (8)
No	94% (289)	84% (43)

The greater frequency with which high courts cite persuasive authority is understandable. High courts often address novel issues and decide between competing approaches. Thus, the states' highest courts more often reach outside their own limited pool of precedent for additional authority.

The results also illuminate the extent to which state courts use precedent. Of the cases we coded in this state study, only 19 state appellate courts had four

115. *See infra* Appendix A. Our definition of "persuasive authority" is more limited than the common definition. *See* BLACK'S LAW DICTIONARY 143 (8th ed. 2004) (defining "persuasive authority" as "[a]uthority that carries some weight but is not binding on a court").

116. Federal Study, *supra* note 6, at 310-12.

117. For persuasive authority, there are two categories: yes, it was cited or referenced; or no, it was not.

118. This difference is statistically significant at the $p<.01$ level.

or more trade secret cases (that met our limited definition[119]) published on LexisNexis.[120] Given this dearth of precedent, it is somewhat surprising that state appellate courts do not rely more frequently on precedent from other states.

While state courts rarely recited persuasive authority, this in no way suggests that practitioners should not provide the court with persuasive authority from other jurisdictions. Most states have enacted the UTSA, a central purpose of which is to "make uniform the law" of trade secrets.[121] While it is simply wrong to state that state trade secret laws are indeed uniform,[122] consistency and uniformity are worthy goals.[123] Further, trade secret law is complex. To the extent that the practitioner can supply the court with additional authority—even if that authority is from other jurisdictions—that authority improves the courts' decision-making.

G. *Very Few Courts Rely on the Restatements*

For over forty years after its publication in 1939, the *Restatement (First) of Torts* "was almost universally cited by state courts, and in effect became the bedrock of modern trade secret law."[124] In the federal study, we showed that this dominance began to erode in the 1980s as states enacted the UTSA.[125] The drafters of the *Restatement (Second) of Torts* (1997) did not include a section

119. See *supra* Part II.A for our definition of a "trade secret case."

120. The following shows the number of decisions by state for the cases we coded: AL (2); AR (10); AZ (3); CA (57); CO (3); CT (4); DE (2); FL (15); GA (20); IA (10); ID (2); IL (14); IN (15); KS (2); LA (13); MD (2); ME (2); MI (9); MN (14); MO (2); MS (1); NC (9); ND (1); NE (7); NH (1); NJ (2); NM (1); UT (1); VA (2); VT (1); WA (13); WI (7). If a state is omitted, it had no decision that met our definition.

121. UNIF. TRADE SECRETS ACT (amended 1985), 14 U.L.A. 530-32, 656 (2005).

122. We will not catalogue all substantive differences among the states' trade-secret laws, as there are simply too many to mention. A complete list can be found elsewhere, such as in the annually updated, two-volume *Trade Secrets: A State-By-State Survey*, authored by Brian M. Malsberger. *See generally* MALSBERGER, *supra* note 103, at 845-3065. *See also, e.g.*, David S. Almeling, *Practical Case For Federalizing Trade Secret Law*, LAW360 (June 23, 2009), http://www.law360.com/articles/106724 (identifying six examples of interstate variations and presenting the practical problems these variations cause); Marina Lao, *Federalizing Trade Secrets Law in an Information Economy*, 59 OHIO ST. L.J. 1633, 1658–65 (1998); Christopher Rebel J. Pace, *The Case for a Federal Trade Secrets Act*, 8 HARV. J.L. & TECH. 427, 443–45 (1995).

123. *See* Michael Risch, Essay, *A Failure of Uniform Laws*, 159 U. PA. L. REV. (forthcoming 2011) (stating that "[u]niform laws like the UTSA serve at least two important purposes," including providing "a consistent set of rules to provide settled expectations for interstate activities" and allowing "state legislatures to adopt sister-state statutory interpretations when they enact the law").

124. POOLEY, *supra* note 8, § 2.02[1].

125. *See* Federal Study, *supra* note 6, at 307, tbl.5.

on trade secret law, stating that the tort of trade secret misappropriation had developed into its own area of law.[126] The current Restatement addressing trade secret law is the *Restatement (Third) of Unfair Competition* (1995).[127]

To document the relevance of the Restatements that address trade secret law, we coded for whether the court cited either Restatement.[128] State Study Table 8 presents the data:

State Study Table 8. Citations to Restatements That Address Trade Secret Law

	Restatement (First) of Torts	*Restatement (Third) of Unfair Competition*
Yes	5% (18)	2% (7)
No	95% (340)	98% (351)

The data show that very few state courts (5%) cited the *Restatement (First) of Torts*, and even fewer (2%) cited the *Restatement (Third) of Unfair Competition*. These results are consistent with the data from the federal study, which showed that 7% of modern cases cited the *Restatement (First) of Torts* and only 2% of modern cases cited the *Restatement (Third) of Unfair Competition*.[129]

One possible reason for these low numbers is that most states have enacted a version of the UTSA and thus need not cite any Restatement. Another is that the four states that have not enacted the UTSA and follow common law appear to be citing their own case law instead of the Restatements.

Regardless of the cause, the result is plain: few courts continue to cite the Restatements. This is especially true of the *Restatement (Third) of Unfair Competition*, which, despite its limited citation by the courts, has received favorable reviews from many commentators. James Pooley, for example, writes in his treatise that "[t]he reporters of the *Restatement (Third) of Unfair Competition* . . . have done an extraordinary job of correcting some of the shortcomings of the *Restatement [First] of Torts* while providing a clear, accurate and extremely thorough expression of the modern law of trade

126. RESTATEMENT (SECOND) OF TORTS, div. 9, introductory note (1979).

127. RESTATEMENT (THIRD) OF UNFAIR COMPETITION §§ 39–45 (1995). The rules in the *Restatement (Third) of Unfair Competition* are meant to apply to actions under either the UTSA or common law. *Id.* § 39 cmt. b.

128. For each criterion, there are two categories: yes, it was cited or referenced; or no, it was not.

129. Federal Study, *supra* note 6, at 310-12, tbl.8.

secrets."[130] And David Quinto and Stuart Singer state that "[t]he *Restatement (Third) of Unfair Competition* (1995) provides an important, more current, view of trade secret law."[131]

H. *Confidentiality Agreements with Employees and Third Parties Are the Most Important Reasonable Measures*

As detailed in the federal study and elsewhere, a trade secret owner is not entitled to protection unless the owner took reasonable measures to protect its trade secrets.[132] There is no bright-line rule for the number or type of measures necessary to support a finding that such measures are reasonable.[133] For example, in adopting the Economic Espionage Act, Congress stated that "what constitutes reasonable measures in one particular field of knowledge or industry may vary significantly from what is reasonable in another field or industry."[134]

Both the state and federal studies seek to provide objective evidence of the measures courts cite most often, and of the measures that are associated with a finding that the trade secret owner took reasonable measures.[135] Specifically, for those cases in which the court decided whether the trade secret owner engaged in efforts that were reasonable to maintain the secrecy of an alleged trade secret, we coded for the types of measures the plaintiff undertook.[136] State Study Table 9 presents the data from the state study, and Federal Study Table 18 presents the data from the federal study:[137]

130. POOLEY, *supra* note 8, § 2.04[1].

131. QUINTO & SINGER, *supra* note 8, at 2.

132. *See* Federal Study, *supra* note 6, at 321. For a recent summary of the element of reasonable measures, see generally Victoria A. Cundiff, *Reasonable Measures to Protect Trade Secrets in a Digital Environment*, 49 IDEA 359 (2009) (presenting reasons for requiring reasonable measures).

133. Federal Study, *supra* note 6, at 321*; see also* QUINTO & SINGER, *supra* note 8, at 16.

134. 142 CONG. REC. S12,213 (daily ed. Oct. 2, 1996).

135. *See* Federal Study, *supra* note 6, at 321-24.

136. *See infra* Appendix A.

137. Federal Study, *supra* note 6, at 322, tbl.18.

State Study Table 9. Types of Measures Used by Trade Secret Owner

	1995-2009
Confidentiality agreements with employees	11% (39)
Confidentiality agreements with third parties	3% (11)
Computer-based protections	6% (22)
Physical-based protections	8% (28)
Education of employees about secrecy	2% (6)
Label confidential documents	2% (7)
Record keeping	1% (2)
Interviews	0.3% (1)
Surveillance	0.3% (1)
Written policies	2% (6)

Federal Study Table 18. Types of Measures Used by Trade Secret Owner

	1950-2007	2008
Confidentiality agreements with employees	9% (24)	17% (20)
Confidentiality agreements with third parties	6% (17)	11% (13)
Computer-based protections	4% (12)	13% (16)
Physical-based protection	7% (18)	3% (4)
Education of employees about secrecy	2% (5)	2% (2)
Label confidential documents	2% (6)	4% (5)
Record keeping	0% (1)	0% (0)
Interviews	0% (1)	0% (0)
Surveillance	0% (1)	0% (1)
Written policies	1% (2)	4% (3)

Confidentiality agreements with employees are the reasonable measure that courts cite most often in both federal and state cases. Specifically, courts cited such agreements in both 11% of state court cases and 11% of cases in federal courts.[138]

The next three most important measures in both state and federal cases are physical-based protections, computer-based protections, and confidentiality

138. See *supra* note 71 for an explanation of weighting.

agreements with third parties.[139] Physical-based protections include locks and persons who restrict access, and courts cited these protections in 6% of federal cases[140] and 8% of state cases. Computer-based protections include passwords and restricted access, and courts cited these protections in 5% of federal cases[141] and 6% of state cases. Confidentiality agreements with third parties include nondisclosure agreements, and courts cited these protections in 3% of state cases and 7%[142] of federal cases.

Knowing which measures courts cite most often is useful data. But it is more useful to know which measures best predict how a court will rule on this prima facie element. To determine this, we ran a statistical test (called a binomial logistic regression) to model the courts' findings.[143] In the federal study, only three factors predicted that a court would find a plaintiff took reasonable measures to protect its trade secrets: agreements with employees; agreements with business partners; and restricting access to certain persons, such as the adoption of need-to-know rules.[144] In the state study, only two factors[145] predicted the finding that the plaintiff took reasonable measures to protect its trade secrets: confidentiality agreements with employees[146] and confidentiality agreements with third parties.[147] In short, both the state and federal studies confirm that confidentiality agreements with employees and

139. *See supra* State Study Table 9 and Federal Study Table 18.

140. See *supra* note 71 for an explanation of weighting.

141. See *supra* note 71 for an explanation of weighting.

142. See *supra* note 71 for an explanation of weighting.

143. The outcome variable is reported in log odds ratios. Coefficients greater than zero indicate that the presence of a particular measure increases the likelihood that a court will find the owner engaged in reasonable efforts. A negative coefficient would imply that the presence of a particular measure decreases the likelihood of a court finding that the owner engaged in reasonable efforts. These results hold when all measures are included in the model. These results, however, should be interpreted with caution as several cases were dropped due to collinearity. When this happens, the resulting odds ratios may be inflated.

144. Federal Study, *supra* note 6, at 322-23.

145. While several factors predicted the finding that the plaintiff took reasonable measures to protect its trade secrets, we choose, given the small sample size, to interpret only those coefficients that were statistically significant in the model with reasonable standard errors.

146. A court is over 15 times more likely to find that the owner engaged in reasonable efforts if the owner restricted access to employees than if the owner did not. The p-value for this coefficient suggests that it is statistically significant at the $p<0.01$ level with a standard error of 8.69.

147. A court is over 17 times more likely to find that the owner engaged in reasonable efforts if the owner restricted access to third parties than if the owner did not restrict access to third parties. The p-value for this coefficient suggests that it is statistically significant at the $p<0.01$ level and the standard error is 15.54.

business partners are the most important factors in the courts' analysis of reasonable measures.

Confidentiality agreements with third parties are comparatively more important in federal cases (7%[148]) than in state cases (3%).[149] We believe that this is largely the result of the data regarding the identity of the alleged misappropriator, discussed above in Part III.B. Specifically, the federal study contained more cases in which a business partner was the alleged misappropriator, and thus it follows that comparatively more cases would discuss confidentiality agreements with those and other third parties.

As we noted in the federal study, given the uncertainty surrounding what constitutes reasonable measures, the time-tested advice is to implement as many protective measures as reasonably possible.[150] This advice remains sound, but the data show that confidentiality agreements with employees and third parties deserve special attention.[151] Still, such agreements are not necessary for a court to find that the trade secret owner satisfied the reasonable measures element. Other measures can make up for the lack of such agreements, and courts can imply an agreement based on the circumstances.[152]

As we did in the federal study, we add a coda: courts rarely catalogue all of the reasonable measures a putative trade secret owner took (or failed to take) to protect its trade secrets.[153] This is even more of an issue in the context of appellate court decisions, in which the court may not address evidence regarding all of the measures.

I. *More Than 90% of Decisions Fell into Three Types of Procedural Postures*

Our unit of analysis was the written decision from a state appellate court. Not all such decisions are equivalent. The applicable burdens of proof in the trial court and standards of review in the appellate court depend significantly on

148. See *supra* note 71 for an explanation of weighting.

149. This difference was statistically significant at the P<.05 level.

150. Federal Study, *supra* note 6, at 322.

151. Other commentators similarly argue for the importance of confidentiality agreements with employees and third parties. *See, e.g.*, John F. Marsh, *Safeguarding Your Client's Trade Secrets Before, During, and After Litigation*, IP LITIGATOR, May-June 2010, at 11,12 ("Thus, given the importance that courts have affixed to written agreements and the ease with which they can be drafted and executed, it should be the rare case in which these agreements are not executed.").

152. Federal Study, *supra* note 6, at 323; *see also* QUINTO & SINGER, *supra* note 8, at 21-22 (describing different types of relationships—employment, joint ventures, licensing, and others—that courts have interpreted to imply a confidentiality obligation).

153. Federal Study, *supra* note 6, at 323-24.

the procedural posture in which the trial court decided an issue. We coded for five procedural postures, defined above.[154] State Study Table 10 presents the data:

State Study Table 10. Procedural Postures

	1995-2009
Preliminary injunction or TRO	26% (94)
Motion to dismiss	6% (20)
Owner moved for summary judgment	2% (6)
Alleged misappropriator moved for summary judgment	30% (108)
Trial	36% (130)

The data shows that the trial court results most likely to be appealed roughly fell into three categories: trial decisions at the end of the case (36%),[155] summary judgment decisions on motions brought by the alleged misappropriator in the middle of the case (30%), and preliminary injunction decisions on motions by the trade secret owner at the beginning of the case (26%).[156] Together, these three postures constituted more than 90% of the postures for the cases we coded.

154. *See supra* Part II.A.

155. For example, Ohio applies the standard of review on a trial decision by jury of legal sufficiency, requiring that "after viewing the evidence in a light most favorable to the prosecution, any rational trier of fact could have found the essential elements of the crime proven beyond a reasonable doubt." State v. Diar, 120 Ohio St. 3d 460, 2008-Ohio-6266, 900 N.E.2d 565, at ¶ 113 (quoting State v. Jenks, 574 N.E.2d 492, 503 (Ohio 1991)). Texas applies the standard of review on a trial decision by jury of deference if the jury's decision "can be upheld on any legal theory that finds support in the evidence." Sun Glo Juices v. Davidson, No. 13-03-533-CV, 2005 Tex. App. LEXIS 6793, at *9-10 (Tex. App. Aug. 22, 2005).

156. *See* Andrew S. Friedberg, *Possession As Threat: Temporary Injunctions To Protect Trade Secrets*, 45 ADVOC. (TEX.) 77, 79 (2008), *available at* http://www.litigationsection.com/ ("Jurisdictions vary in their approaches, with some unwilling to recognize a threat from anything short of actual, overt manifestation of intent to disclose, and others permitting a[temporary] injunction based on the inevitability of disclosure in certain factual circumstances."); William Lynch Schaller, *Secrets of the Trade: Tactical and Legal Considerations from the Trade Secret Plaintiff's Perspective*, 29 REV. LITIG. 729, 806-07 (2010) ("The standards governing injunctive relief are roughly the same from jurisdiction to jurisdiction, with occasional nuances in procedure or the weight to be given particular elements of proof, such as plaintiff's likelihood of prevailing on the merits or plaintiff's showing of irreparable harm." (footnotes omitted)). The standard of review on the grant of a preliminary injunction is usually abuse of discretion. *See, e.g.*, Hunt v. Superior Court, 987 P.2d 705, 716 (Cal. 1999); Powell v. Studstill, 441 S.E.2d 52, 54 (Ga. 1994); Doe v. Axelrod, 532 N.E.2d 1272, 1272 (N.Y. 1988); Charles Penzone, Inc. v. Koster, 2008-Ohio-327, at ¶ 15 (Ohio Ct.

The data share similarities and differences with the data from the federal study, presented in Federal Study Table 13:[157]

Federal Study Table 13. Procedural Postures

	1950-2007	2008
Preliminary injunction or TRO	30% (82)	27% (33)
Motion to dismiss	16% (45)	25% (30)
Owner moved for summary judgment	1% (3)	4% (5)
Alleged misappropriator moved for summary judgment	34% (92)	36% (44)
Both parties moved for summary judgment	2% (6)	1% (1)
JMOL	3% (9)	2% (2)
Bench trial	13% (36)	5% (6)

The primary similarity between the procedural postures in the federal and state studies is that roughly one-third of all cases were preliminary injunctions and roughly another third were motions for summary judgment filed by the alleged misappropriators. The primary difference is that while very few federal court decisions were opinions related to trial, more than one-third of state court decisions were. The cause of this difference is likely our unit of analysis: in this state study we coded appellate decisions and in the federal study we coded trial court decisions.

IV. WHO WINS TRADE SECRET CASES IN STATE COURTS

This Part presents data on, among other things, who wins trade secret litigation in state courts and at what rates state appellate courts affirm and reverse lower court decisions.

App. 2008) (citing Garono v. State, 524 N.E.2d 496, 498 (Ohio 1988)); Walling v. Metcalfe, 863 S.W.2d 56, 58 (Tex. 1993).

157. Federal Study, *supra* note 6, at 316 tbl.13.

A. *Win-Loss Rates*

1. Alleged Misappropriators Win More Often Than Trade Secret Owners

We coded for who won the case—i.e., whether the winner was the trade secret owner or the alleged misappropriator. And because we coded state appellate decisions that reviewed trial court decisions, we coded for which party won at both the trial and appellate court levels. State Study Table 11 presents the win rates at both levels:[158]

State Study Table 11: Outcomes in Trial and Appellate Courts

Prevailing Party	Trial Court	Appellate Court
Owner	41% (148)	41% (145)
Alleged misappropriator	58% (206)	57% (204)

In the cases we coded, the trade secret owner won 41% of the time in the trial court and the alleged misappropriator won 58%. On appeal, the trade secret owner again won 41% of the time and the alleged misappropriator won 57%.[159] This consistency is striking, and it shows that alleged misappropriators won more often than they lost.[160]

The appellate court data are robust and revealing because we coded all appellate court decisions during the time period of our study. There is thus no reason to doubt that, on appeal, alleged misappropriators won more often than they lost. The results at the trial court level, however, require caution because we coded only appellate court cases. This means that the trial court outcomes we coded may not be representative of all cases at the trial court level because, by definition, we coded only those decisions that were appealed.

158. As in the federal study, the factor "outcome" in this state study has three categories: yes, the trade secret owner prevailed; no, the trade secret owner did not prevail; and mixed, in which there were multiple trade secrets, claims, or issues, and the trade secret owner prevailed on some but not others.

159. Neither sets of numbers added up to 100% because we omitted the category "mixed."

160. A one-sample test of proportion indicates that there is no statistically significant difference between the overall distributions at the trial court and appellate court levels. That is, the misappropriator is more likely to win than the trade secret owner, regardless of whether the decision is made at the court or the appeal level.

2. A Trade Secret Owner's Win Rate Was Lower When the Alleged Misappropriator Was a Business Partner Instead of an Employee

To generate more nuanced information about win-loss rates, we divided the outcome data by type of defendant and analyzed win rates for cases where the alleged misappropriators were employees or business partners. State Study Table 12 presents the data:

State Study Table 12. Outcomes for Employee and Partner Cases

Prevailing Party	Employee		Partner	
	Trial Court	Appeal	Trial Court	Appeal
Owner	44% (121)	42% (114)	32% (22)	34% (24)
Alleged misappropriator	56% (153)	58% (155)	68% (47)	66% (46)

In both trial and appellate state courts, a trade secret owner's win rate was lower when the alleged misappropriator was a business partner than when the alleged misappropriator was an employee.[161] When the trade secret owner sued an employee, the owner won 44% of the time at the trial court level and 42% of the time on appeal. The same numbers dropped to 32% and 34% when the owner sued a business partner. Accordingly, and subject to the caveat in the previous subsection regarding trial courts, state courts thus appear to be a tougher venue for trade secret owners to sue business partners than employees.

Given the fundamentally different units of analysis in this state study (appellate courts reviewing trial court decisions that were appealed) and in the federal study (trial court decisions), this Article cannot answer a question asked by many trade secret owners: Should I file in state or federal court?[162] Indeed,

161. In trial courts, the trade secret owner had a lower rate of winning when the alleged misappropriator was a partner compared to when the alleged misappropriator was the employee (statistically significant at the $p<.05$ level). By contrast, in courts of appeal, the owner was as likely to lose in cases where the alleged misappropriator was a partner as when the alleged misappropriator was the employee (statistically significant at the $p<.05$ level). Note that overlapping cases (i.e., cases in which the partner and the employee were misappropriators and cases in which neither are misappropriators) are excluded from the test. Cases in which the outcome was "mixed" were also excluded from this test and table.

162. There are many factors to consider when deciding whether to bring suit in federal or state court, including perceived bias in the forum, quality of the available judges, populations from which juries are drawn, precedential rulings, local court rules, convenience, court docket speed,

given that many states do not publish trial court decisions or only publish such decisions with limited information,[163] we suspect that there may be no statistically rigorous answer to that question. But the data in the state and federal studies provide part of the answer. For example, if a trade secret owner is contemplating suing a business partner, the owner should seriously consider whether it can file in federal court, because state courts hear relatively fewer cases against business partners[164] and because cases against business partners appear to be tougher to win in state courts than cases against employees.[165]

B. *State Appellate Courts Affirmed Trade Secret Decisions at a Rate of More Than Two-to-One*

State Study Table 13 shows that, on average, state appellate courts affirmed trade secret decisions at a rate of more than two-to-one:

State Study Table 13. Appeal Disposition

Affirmed	68% (242)
Not affirmed[166]	30% (107)
Mixed	3% (9)

The majority of the time (68%) the appellate court affirmed the trial court, but in a sizable minority of cases (30%) the appellate court reversed.

The affirmance/reversal rates of state trade secret cases on appeal are similar to the reversal rates of other types of IP cases. For appeals of claim construction rulings in patent cases, the Federal Circuit reversed, vacated, or remanded 30% of cases.[167] And in appeals of fair use rulings in copyright cases, the appellate court reversed 34%.[168]

litigation costs, and countless others. Robert G. Bone, *Revisiting the Policy Case for Supplemental Jurisdiction*, 74 IND. L.J. 139, 145 (1998) ("A rational plaintiff chooses between federal and state court by comparing the expected costs and benefits of each forum."); Neal Miller, *An Empirical Study of Forum Choices in Removal Cases Under Diversity and Federal Question Jurisdiction*, 41 AM. U. L. REV. 369, 400 (1992).

163. See *supra* Part II.A for detailed analysis of the limitations of studying state court cases.

164. *See supra* State Study Table 2.

165. *See supra* State Study Table 12.

166. The category not affirmed included trial court decisions that were reversed, remanded, and vacated.

167. David L. Schwartz, *Practice Makes Perfect? An Empirical Study of Claim Construction Reversal Rates in Patent Cases*, 107 MICH. L. REV. 223, 249 (2008); *see also* Kimberly A. Moore, Markman *Eight Years Later: Is Claim Construction More Predictable?*, 9 LEWIS & CLARK L. REV.

The 30% reversal rate of trade secret decisions in state courts also tracks closely with general state court reversal rates. Theodore Eisenberg and Michael Heise conducted a study of state court trials on appeal using 2001 data from the Bureau of Justice Statistics and the National Center for State Courts.[169] In 2001, the overall reversal rate for state trials was 32.1%.[170] Of these state trials, the reversal rate for jury trials was 34% and was 28% for bench trials.[171] Interestingly, Eisenberg and Heise's study reports that the highest reversal rate belongs to employment contract cases—overturned 50% of the time.[172] Finally, the state trade secret reversal rate of 30% is similar to that of the U.S. Supreme Court, which has a 32% overall reversal rate.[173]

As already noted,[174] a trade secret owner's win-loss rate was lower when the alleged misappropriator was a business partner than when the alleged misappropriator was an employee. There was no such difference in affirmance rates. State Study Table 14 shows that the affirmance rates are more or less the same for both types of alleged misappropriators:[175]

State Study Table 14: Appeal Dispositions for Employee and Partner Cases

	Employee	Partner
Affirmed	71% (190)	73% (51)
Not affirmed	29% (79)	27% (70)

231, 239 (2005) (reporting a 29.7% reversal rate for erroneous claim construction from April 23, 1996, to December 31, 2003).

168. Barton Beebe, *An Empirical Study of U.S. Copyright Fair Use Opinions, 1978-2005*, 156 U. PA. L. REV. 549, 574 (2008).

169. Theodore Eisenberg & Michael Heise, *Plaintiphobia in State Courts? An Empirical Study of State Court Trials on Appeal*, 38 J. LEGAL STUD. 121, 123 (2009), *available at* http://scholarship.law.cornell.edu/lsrp_papers/79.

170. *Id.* at 130 tbl.1.

171. *Id.*

172. *Id.* at 134 tbl.2.

173. Kevin M. Scott, *Understanding Judicial Hierarchy: Reversals and the Behavior of Intermediate Appellate Judges*, 40 LAW & SOC'Y REV. 163, 174, 177 tbl.1 (2006).

174. *See supra* Part IV.A.2.

175. "Mixed" cases are excluded from State Study Table 14.

C. *Trial Court Victories by Trade Secret Owners Are Reversed More Often Than Victories by Alleged Misappropriators*

Trial court victories by trade secret owners are reversed more often than trial court victories by alleged misappropriators. To determine this result, we used a statistical test, described in detail here,[176] that essentially asked the following question: Are the observed appellate win/loss rates different from what we would expect assuming the general affirmance rate of 68% and assuming that the identity of the prevailing party below does not affect appellate affirmance rates?[177] State Study Table 15 presents the result:

176. We approached this analysis as though we were testing the hypothesis that appeals from any particular posture would follow the same appellate disposition profile as all cases combined. That is, we calculated the expected rates at which owners and alleged misappropriators would prevail on appeal based on the expectation that 67.60% (rounded to 68% above) of any particular posture would be affirmed, 29.89% (rounded to 30% above) would not be affirmed, 2.51% would receive a mixed appellate disposition, and that these rates would not be affected by whether the owner or alleged misappropriator prevailed in the lower court.

To illustrate, consider our analysis summarized in State Study Table 15. To determine the expected rate at which owners would prevail on appeal, we multiplied the number of owner victories below (148) by the 67.60% affirmance rate to determine the number of expected owner victories affirmed by the appellate court (100.05). We then multiplied the number of alleged misappropriator victories (206) by the 28.89% reversal rate to determine the expected number of owner appeals victories in cases that alleged misappropriators had won in the lower court (59.51). The 100.05 expected owner appellate victories where the appellate court affirmed and 59.51 expected owner appellate victories after reversals were added together to yield an expected 159.56 owner victories on appeal, which would be 45% of the 93 preliminary relief cases we analyzed. A similar analysis yielded 182.01 expected victories for alleged misappropriators, which would be 51% of the cases we coded. We then ran a standard Test of Proportions against the expected and actual appellate victory rates.

177. As detailed in Part IV.A, alleged misappropriators prevailed more often than trade secret owners at both the trial court and appellate level. The rates were essentially the same at both the trial court (58% to 41% in favor of alleged misappropriators) and the appellate level (57% to 41% in favor of alleged misappropriators). Using raw numbers instead of percentages, the data showed that out of the 358 decisions we coded, alleged misappropriators prevailed at the trial court level 1.4 times more often than trade secret owners did. Specifically, there were 206 lower court victories for alleged misappropriators versus 148 for trade secret owners, and out of 107 cases that were coded as "not affirmed," trade secret owners won 54 and alleged misappropriators won 53. This difference means that in the decisions we coded, there were more appeals taken from alleged misappropriator victories at the trial court level.

State Study Table 15. Expected and Actual Outcomes[178]

Prevailing Party	Outcome Below	Expected Outcome on Appeal	Actual Outcome on Appeal
Owner	41% (148)	45%	41% (145)
Alleged misappropriator	58% (206)	51%	57% (204)

D. *The Prima Facie Trade Secrets Case: Courts Are Most Likely to Decide Cases Based on Validity or Misappropriation*

As explained in detail in the federal study and elsewhere, there is no universally accepted formulation for what the plaintiff must prove to succeed on a claim for trade secret misappropriation.[179] Depending on the state, the prima facie case of trade secret misappropriation has anywhere from two to six elements.[180] Further, there are other specific issues to trade secret law that courts may not discuss as part of a "prima facie case" of trade secret misappropriation.

Since there is no single test, we coded four of the most common elements in various courts' formulation of a prima facie case. "Reasonable Measures" refers to whether the trade secret owner engaged in efforts that were reasonable under the circumstances to maintain the secrecy of the alleged trade secret.[181] "Value" refers to whether the trade secret had sufficient value to qualify as a protectable trade secret.[182] "Misappropriation" refers to whether the alleged acquisition was wrongful.[183] "Validity" is whether the alleged trade secret

178. See *supra* note 176 for an explanation of the data in this table.

179. *See* Federal Study, *supra* note 6, at 318.

180. *See* QUINTO & SINGER, *supra* note 8, at 48-50 (presenting examples from different state definitions of the prima facie case of trade secret misappropriation). To give two examples, Florida uses a two-part test and Pennsylvania uses a four-part test. *See Preferred Care Partners Holding Corp. v. Humana, Inc.*, No. 08–20424-CIV, 2009 WL 982433, at *6 (S.D. Fla. Apr. 9, 2009) (defining trade secret misappropriation as "(1) the plaintiff possessed secret information and took reasonable steps to protect its secrecy; and (2) the secrets it possessed [were] misappropriated"); *Crown Coal & Coke Co. v. Compass Point Res., LLC,* No. 07–1208, 2009 WL 891869, at *6 (W.D. Pa. Mar. 31, 2009) (defining trade secret misappropriation as "(1) the existence of a trade secret; (2) communication of the trade secret pursuant to a confidential relationship; (3) use of the trade secret, in violation of that confidence; and (4) harm to the plaintiff").

181. *See infra* Appendix A (defining "reasonable measures").

182. *See infra* Appendix A (defining "value").

183. *See* Appendix A (defining "misappropriation").

constituted information that qualified as a protectable trade secret.[184] Each of the elements is separate, even though courts often conflate them. State Study Table 16 presents the data for common elements of a prima facie case:

State Study Table 16. Prima Facie Elements

	Reasonable Measures	Value	Misappropriation	Validity
Yes, the element was satisfied	17% (62)	13% (48)	28% (101)	34% (122)
No, it was not	14% (51)	6% (23)	28% (100)	34% (121)
Not expressly decided	68% (242)	80% (285)	44% (157)	31% (110)
Mixed	1% (3)	1% (2)	0% (0)	1% (5)
Total	100% (358)	100% (358)	100% (358)	100% (358)

These data provide important insight into which factors are considered most important by the appellate courts. Courts discussed validity most frequently (69% of decisions), followed by misappropriation (56%), reasonable measures (32%), and value (20%).[185] This order of importance closely mirrors the federal study:[186]

Federal Study Table 15. Prima Facie Cases

	Reasonable Measures	Value	Misappropriation	Validity
Yes, the element was satisfied	22% (88)	11% (42)	24% (93)	27% (106)
No, it was not	13% (52)	4% (14)	22% (87)	28% (110)
Not expressly decided	63% (249)	83% (331)	51% (199)	41% (159)
Mixed	1% (6)	12% (7)	4% (14)	5% (19)

To assess why trial court decisions are reversed, it is useful to focus our analysis on those cases that were not affirmed. In those cases, the factors were

184. *See* Appendix A (defining "validity").

185. Each of these values is the sum of all results other than "not decided expressly."

186. *See* Federal Study, *supra* note 6, at 318-19 & tbl.15 and accompanying text (reporting the ranking of prima facie elements as "(1) validity, decided in 60% of cases; (2) misappropriation, decided in 50% of cases; (3) reasonable measures, decided in 37% of cases; and (4) value, decided in 14% of cases").

discussed with roughly the same frequency as in all other cases. Courts mentioned validity (67%) and misappropriation (50%) most frequently, followed by reasonable measures (31%) and value (23%).[187]

V. CONCLUSION

The state and federal studies confirm that trade secret litigation is on the rise. There are many potential causes for this growth, such as the increased importance of intellectual property (including trade secrets) to a company's value and competitive position;[188] the fact that forty-six state legislatures, the District of Columbia, and the U.S. Virgin Islands have adopted trade secret statutes in the past three decades;[189] the increased protection that courts are providing to trade secrets;[190] the interaction between trade secret law and patent law;[191] a changing work environment and other sociological factors;[192] the flexible (and expanding) scope of trade secrets;[193] and technological development.[194]

Regardless of the reasons for the growing importance of trade secrets and trade secret litigation, the fact remains that trade secrets matter more than ever to the American economy. Given this growing significance, everyone who has some stake in trade secrets—employers, employees, judges, legislators,

187. "Mixed" cases are excluded from these numbers.

188. *See* Federal Study, *supra* note 6, at 292-93 nn.6-8; *see also* JOHN R. THOMAS, CONG. RESEARCH SERV., R41391, THE ROLE OF TRADE SECRETS IN INNOVATION POLICY summary (2010) ("As the United States continues its shift to a knowledge- and service-based economy, the strength and competitiveness of domestic firms increasingly depends upon their know-how and intangible assets. Trade secrets are the form of intellectual property that protects this sort of confidential information.").

189. *See supra* note 102 and accompanying text.

190. Some express concern about the increased protection that courts are providing to trade secrets. *See generally, e.g.*, David S. Levine, *Secrecy and Unaccountability: Trade Secrets in Our Public Infrastructure*, 59 FLA. L. REV. 135 (2007) (arguing against the purported expansion of trade secret law into aspects of government and public infrastructure, including voting machines, the Internet, and telecommunications).

191. *See* David S. Almeling, *Four Reasons to Enact a Federal Trade Secrets Act*, 19 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 769, 786-87 (2009) (presenting various reasons that patents are more "expensive to obtain, keep, and enforce" than trade secrets).

192. *See generally* Elizabeth A. Rowe, *A Sociological Approach to Misappropriation*, 58 U. KAN. L. REV. 1 (2009).

193. JAGER, *supra* note 102, § 1:1 ("[T]rade secrets have gained importance because in many fields, the technology is changing so rapidly that it is outstripping the existing laws intended to encourage and protect inventions and innovations.").

194. Cundiff, *surpa* note 132, at 361 (presenting the various reasons that "[t]he digital world is no friend to trade secrets").

lawyers, innovators, and countless others—also has a stake in knowing the best and most current information about trade secret law. Part of this information comes from the esteemed treatises on trade secret law.[195] We hope that our study will add to this information by providing the most complete objective analysis of trade secret litigation published to date.

The state and federal studies do not come close to satisfying the need for statistical analysis of trade secret litigation. When compared to the dozens of statistical analyses on patent, trademark, and copyright law, the empirical study of trade secret law has a long way to go.[196]

As we conclude this Article, we highlight several possible directions for future statistical research on trade secret law.

- ***Other Litigation Issues.*** The state and federal studies contain an analysis of certain content in written decisions. Future research on trade secret litigation might examine the number of cases filed in state and federal courts; the pace at which cases proceed; and at what procedural stages cases are resolved. There are also a host of questions to address about the results of litigation, including the amount for which cases settle; the amount of damages awarded, if any; the amount of punitive damages awarded, if any; whether injunctions were issued, and under what terms; and the win-loss rate in jury trials and bench trials.
- ***Pre-Litigation Issues.***[197] What types of trade secret misappropriation do not result in litigation? How often do such misappropriations occur, and why? What types of trade secrets are misappropriated, and by whom? Does the amount of trade secret misappropriation vary by industry? How—and how often—do trade secret owners and alleged misappropriators try to resolve their disputes outside of litigation?
- ***Claims Other Than Trade Secret Misappropriation.*** Plaintiffs rarely assert only a single claim for misappropriation of trade secrets. That claim is often asserted with other state law claims (such as breach of contract, breach of fiduciary duty, and others)

195. *See generally, e.g.*, ROGER M. MILGRIM & ERIC E. BENSEN, MILGRIM ON TRADE SECRETS (2010); POOLEY, *supra* note 8.

196. *See* Federal Study, *supra* note 6, at 296-97 nn.30-31.

197. There have been a few surveys of how companies protect their trade secrets. One example is surveys published by the American Society for Industrial Security ("ASIS"), a professional organization for security professionals. *See generally* ASIS INT'L, TRENDS IN PROPRIETARY INFORMATION LOSS 1 (2007), *available at* http://www.asisonline.org/newsroom/surveys/spi2.pdf.

or federal claims (such as patent infringement, copyright infringement, violation of the Computer Fraud & Abuse Act,[198] and others). Interesting questions about the overlap of these claims include the frequency with which these claims are brought; whether the mix of claims affect the outcome of cases; which ones are successful and why; and which ones are more likely to result in settlement or damages and for what amount.

- ***Innovation Policy.*** As recognized by the U.S. Supreme Court and countless others, one of the primary goals of trade secret law is "the encouragement of invention."[199] This raises questions about the role of trade secrets in innovation: Does greater or lesser trade secret protection benefit innovation for trade secret owners and society as a whole? How does the amount of trade secret protection interact with the amount of protection for patents and other types of intellectual property? What industries rely most on trade secret law, and why?
- ***A Unified Trade Secret law?*** The above statistics show that while virtually any subject matter can qualify as a trade secret, the two categories most often litigated are technical information, such a chemical formulas or software, and business information, such as a customer list.[200] Should trade secret law have different rules for different subjects?
- ***Effective Trade Secret Policies.*** Companies adopt policies and practices to protect their own trade secrets and to avoid misappropriating trade secrets from others. We discuss these policies and practices in Part III.H, and report on which measures courts cite most often and which measures best predict how a court will find. Another interesting area of investigation would be a comparison of which measures are most effective at preventing theft or misappropriation in the first place.

198. 18 U.S.C. § 1030 (2006).

199. Kewanee Oil Co. v. Bicron Corp., 416 U.S. 470, 480–84 (1974) (discussing objectives of patent and trade secret law); *see also* Mark A. Lemley, *The Surprising Virtues of Treating Trade Secrets as IP Rights*, 61 STAN. L. REV. 311, 331 (2008) (discussing *Kewanee* and arguing that trade secret law serves to incentivize innovation); *cf.* Charles T. Graves & James A. DiBoise, *Do Strict Trade Secret and Non-Competition Laws Obstruct Innovation?*, 1 ENTREPREN. BUS. L.J. 323, 344 (2007) ("We believe that the law is an important factor affecting the growth of innovation communities, and that substantial change is needed in the non-competition and trade secret jurisprudence of almost every state.").

200. *See* Part II.C.

As this non-exhaustive list of potential statistical research shows, trade secret scholarship is at an early stage compared to the other major fields of intellectual property. We hope that our work over the last two years in the state and federal studies—reading more than 3,500 cases, coding more than 750 of those cases for dozens of criteria, and working with statisticians and others to interpret and explain the data—provides useful information about trade secret litigation and sparks further investigation into this important area of the law.

APPENDIX A—CODE BOOK FOR STATE APPELLATE CASES

Definition, is whether the case is a written decision (both precedential and nonprecedential) in which state appellate court (both intermediate and highest courts) decided an appeal on a substantive issue based on trade secret law; in other words, the trade secret owner must have won or lost on appeal based on substantive trade secret law. The decision must be based on trade secret law as such, and thus does not include a decision that, although similar to trade secret law, was nonetheless decided under a different rule of law, such as a claim for breach of an NDA. The case must involve a decision on appeal at one of four postures: (1) a preliminary adjudication, such as a preliminary injunction, TRO, or writ of attachment; (2) an adjudication on the pleadings, such as a demurrer, motion to dismiss, or motion on the pleadings; (3) an adjudication based on the undisputed factual records, such as a summary adjudication or a motion for summary judgment; or (4) trial, either bench or jury, including trial and post-trial motions.

- **Yes**: continue coding
- **No**: stop coding and go to the next case

Jurisdiction, is the name of state in which court sits. Use official abbreviations.[201]

Court, is whether the court was an **intermediate** or **highest** state court.

Criterion 1, Misappropriator, is the identity of those involved with the misappropriation. These categories are not mutually exclusive; list each category involved.

- **Employee**: the misappropriation involved a current or former employee of the trade secret owner
- **Partner**: the misappropriation involved a current, former, or expected business partner of the trade secret owner, such as a licensee, customer, OEM, joint venturer, distributor or supplier
- **Neither** employee or partner but identity is known
- **Other**/unknown

201. Alabama - AL; Alaska - AK; Arizona - AZ; Arkansas - AR; California - CA; Colorado - CO; Connecticut - CT; Delaware - DE; District of Columbia - DC; Florida - FL; Georgia - GA; Hawaii - HI ; Idaho - ID; Illinois - IL; Indiana - IN; Iowa - IA; Kansas - KS; Kentucky - KY; Louisiana - LA; Maine - ME; Maryland - MD; Massachusetts - MA; Michigan - MI; Minnesota - MN; Mississippi - MS; Missouri - MO; Montana - MT; Nebraska - NE; Nevada - NV; New Hampshire - NH; New Jersey - NJ; New Mexico - NM; New York - NY; North Carolina - NC; North Dakota - ND; Ohio - OH; Oklahoma - OK; Oregon - OR; Pennsylvania - PA; Rhode Island - RI; South Carolina - SC; South Dakota - SD; Tennessee - TN; Texas - TX; Utah - UT ; Vermont - VT; Virginia - VA ; Washington - WA; West Virginia - WV; Wisconsin - WI; Wyoming - WY.

Criterion 2, Trade Secret, is the subject matter of the trade secret at issue. These categories are ***not*** mutually exclusive; list each category.

- **Formulas**
- **Technical** information and know-how, including methods and techniques
- software or **Computer** programs
- information about customers, including customer **Lists**
- **Internal** business information, such as marketing, finance, or strategy information
- **External** business information about suppliers, competitors, or other non-customer third parties
- **Combination:** the court must have expressly referred to the trade secret as "combination"
- **Negative:** the court must have expressly referred to the trade secret as "negative"
- **Other** or unknown

Criterion 3, Posture.

- **TRO:** a preliminary adjudication, such as a preliminary injunction or TRO
- **MTD**: an adjudication on the pleadings, such as a demurrer or motion to dismiss
- MSJ: summary adjudication or motion for summary judgment
  - Trade secret **Owner SJ**: the trade secret owner received SJ
  - Alleged **Misappropriator SJ**: the alleged misappropriator received SJ
  - **Both SJ**: both the trade secret owner and misappropriator received SJ
- **Trial**, including trial and post-trial briefs

Criterion 4, Applied Law, is the law the court applied.

- state **Criminal**, is where the court identified a criminal trade secret statute
- state **Civil Statute**, is where the court identified a trade secret statute
- state **Common law**, is where the court only cited trade secret cases without referencing a statute
- **Mixed**, where the court applied more than one source of trade secret law
- **Other** or unknown (i.e., the court did not cite either a case or statute), and identify the law if known

Criterion 5, Restatement (First) of Torts

- **Yes**, it was cited or referenced
- **No**, it wasn't

Criterion 6, Restatement (Third) of Unfair Competition

- **Yes**, it was cited or referenced
- **No**, it wasn't

Criterion 7, Persuasive, is, for the court's discussion of the trade secret issue, a citation to legal authority (i.e., cases, statutes, etc., but not treatises or law-review articles) of a jurisdiction other than the jurisdiction of the law that was applied in the case being coded.

- **Yes**, it was cited or referenced
- **No**, it wasn't

8, 9, 11, and 12, focus on the procedural posture, and code whether the trade secret owner prevailed at that posture. For example, in a MTD or Misappropriator MSJ, if the court addresses reasonable measures and concludes that the pleadings are sufficient and thus can proceed past a MTD or there are triable issues of fact and thus can proceed past a MSJ, code Yes, because the trade secret owner prevailed at that posture. For another example, in a Owner MSJ if the court concludes there are triable issue of fact and thus can proceed past a MSJ, code No, because the trade secret owner did not prevail at that posture. If there were multiple trade secrets and the courts reached different decisions on any criterion, code Mixed.

Criterion 8, Value, whether the trade secret had sufficient value to qualify as a protectable trade secret.

- **Yes**
- **No**
- **NED**: not expressly addressed or decided
- **Mixed**

Criterion 9, Reasonable Measures, whether the trade secret owner engaged in efforts that were reasonable under the circumstances to maintain the secrecy of the alleged trade secret.

- **Yes**
- **No**
- **NED**: not expressly addressed and decided
- **Mixed**

Criterion 10, Measures, is, for cases in which the court expressly addressed and decided the issue defined Criterion 9, the measures employed by the trade secret owner to maintain secrecy. These categories are not mutually exclusive; list by number each type of measure that was used.

1. confidentiality agreements with employees
2. confidentiality agreements with third parties, such as an NDA
3. computer-based protections, such as passwords and restricted access
4. limited access and physical-based protection, such as locks and persons who restrict access
5. education and training of employees about secrecy
6. labeling of confidential documents, such as confidentiality stamps and legends
7. record keeping, such as keeping track of who accessed the trade secret
8. interviews, either entrance or exit
9. security guards and/or security cameras
10. written policies regarding the confidentiality or destruction of documents or data
11. Restriction of access to certain persons, such as providing need-to-know or tiered access

Criterion 11, Validity, is whether the alleged trade secret qualified as a valid, protectable trade secret.

- **Yes**
- **No**
- **NED**: not expressly addressed and decided
- **Mixed**

Criterion 12, Misappropriation, is whether there was misappropriation.

- **Yes**
- **No**
- **NED**: not expressly addressed or decided
- **Mixed**

Criterion 13, State Preemption, is whether the court ruled that a state trade secret law preempts another claim.

- **Yes**: the claim was preempted by state law
- **No**: the claim was not preempted by state law
- **Mixed**: there was a preemption ruling, but it only preempted some claims, not all
- **NED**

Criterion 14, Federal Preemption, is whether the court ruled that a federal trade secret law preempts another claim.

- **Yes**: the claim was preempted by federal law
- **No**: the claim was not preempted by federal law
- **Mixed**: there was a preemption ruling, but it only preempted some claims, not all
- **NED**

Criterion 15, Outcome Below, is the ultimate outcome (on the trade secret aspect of the decision) being appealed.

- **Yes**: the trade secret owner prevails
- **No**: the trade secret owner does not prevail
- **Mixed**: there were multiple trade secrets, claims, or issues, and the trade secret owner prevailed on some but not others
- **Unclear**

Criterion 16, Outcome on Appeal, is the ultimate outcome (on the trade secret aspect of the decision) of the appeal.

- **Yes**: the trade secret owner prevails
- **No**: the trade secret owner does not prevail
- **Mixed**: there were multiple trade secrets, claims, or issues, and the trade secret owner prevailed on some but not others

Criterion 17, Disposition, is the procedural disposition of the appellate court.

Affirmed

- **Not affirmed,** such as remand, reverse, or vacate
- **Mixed,** there were multiple trade secrets, claims, or issues and the court affirmed on some but not others