FIFTY WAYS TO LEAVE YOUR EMPLOYER: RELATIVE ENFORCEMENT OF COVENANTS NOT TO COMPETE, TRENDS, AND IMPLICATIONS FOR EMPLOYEE MOBILITY POLICY

Norman D. Bishara*

Covenants not to compete (“noncompetes”) remain a controversial tool for employers to restrict employee post-employment mobility, particularly in an increasingly cross-jurisdictional business world. Amid the growing attention focused on the impact of noncompetes in legal and business academic literature, scholars have begun to use interpretations of the strength of enforcement of these post-employment restrictions to assess barriers to employee mobility and knowledge diffusion.

Unlike previous research, this article systematically, and with an in-depth examination of both case law and legislation, gauges the relative strength of noncompete enforcement across the United States based on multiple factors at two periods. Accordingly, the article presents trends in noncompete enforcement policy and evaluates these results in light of the legal literature arguing that an interjurisdictional market for law exists. The article concludes with an evaluation of the implications and future use of these findings for policymakers, businesses, and employees, as well as recommendations for additional research.

* Assistant Professor of Business Law and Business Ethics at the University of Michigan’s Stephen M. Ross School of Business. The author thanks the discussants and other participants in the Invited Scholars Colloquium sponsored by the editors of the American Business Law Journal, which was held at the 2010 annual meeting of the Academy of Legal Studies in Business, for their excellent critique and suggestions. The author also gratefully acknowledges the extensive and capable research assistance of Michael Schultz and the research support provided by the Stephen M. Ross School of Business. Errors and omissions remain the author’s responsibility.
However, the status quo on non-compete law is unacceptable, as workers are being unnecessarily chilled out of the job market . . . during this rough economy. Their skills and qualifications are being wasted, and ambitious and productive workers are moving to California, which refuses to recognize such agreements. In the long run, this legislation is good for workers and good for business.¹

Robert S. Mantell, President, Massachusetts Employment Lawyers Association²

I. INTRODUCTION

Controversy surrounding the impact and use of covenants not to compete continues to grow, while at the same time the use of these contract clauses in the employment relationship is also on the rise. Do these agreements have a significant impact on worker mobility? What happens when a worker who signed one of these restrictive covenants crosses state lines to work for a competitor? Do these contracts foster human capital investment more than they hinder innovation? The answers to these important questions depend on the resolution of another crucial question, which until now has been left largely unaddressed as a comprehensive issue: what exactly are all of the fifty states and the District of Columbia doing with regard to enforcing these agreements, under what circumstances will they enforce them, and, relative to other jurisdictions, how do these state-level policies compare to each other in terms of how various stakeholders are given preferential protections?


² The Massachusetts Employment Lawyers Association (MELA, an advocacy group, describes itself as:

[A] voluntary association of lawyers dedicated to advancing the rights of individual employees in the workplaces of Massachusetts. MELA is affiliated with the National Employment Lawyer’s Association. Like our national counterpart, our purpose and goal is to protect and promote the rights of working people through litigation and advocacy on behalf of our clients and through the important work done by our standing committees.

While the debate over employment contracts that restrict employee mobility in many jurisdictions continues to accelerate among policy makers, business leaders, and employee advocates, there is a growing body of legal research into the use and enforcement of the post-employment contractual restrictions known as covenants not to compete (“non-compete agreements,” or simply, “noncompetes”). This work recognizes that variant approaches to the enforcement of these agreements across jurisdictions holds implications for the free mobility of employees and for employer interests in restricting the unfettered flow of human capital. Similarly, empirical work from non-legal business and other academic disciplines such as finance, strategy, sociology, and business economics has also begun to use rudimentary measures of noncompete enforcement as an input in studies of how these agreements impact workers and businesses.

However, there has not been a systematic legal analysis-based approach to rating the states in terms of the relative strength of enforcement that takes into account the subtleties of a complete common law and legislative analysis. Without such an organized and detailed picture it is not possible to view the trends in enforcement across the states or have evidence to conclude if enforcement has been increasing or decreasing over the last decades. Despite this significant gap in the business law literature regarding noncompetes, scholars rooted in various business disciplines have argued that noncompetes are part of a market for law that is putting private interests ahead of state interests or allowing an employer’s anti-competitive interests in noncompetes to subvert the interests of individual employees.

3. These agreements come in a variety of forms, such as a clause in a longer employment contract or as separate contracts. For the purposes of this paper, these agreements concern post-employment activities of employees and the term does not by itself refer to restrictions on competition related to former owners or shareholders after the sale of a business.


7. See Timothy P. Glynn, Interjurisdictional Competition in Enforcing Non-Compete
There is, however, a gap in the basic assumptions undergirding this research. Essentially, researchers have been using a simplistic analysis of noncompete enforcement to cherry-pick certain states for analysis, without adequately appreciating the subtleties of how complex and varied legal decision-making can be and how enforcement policy evolves. Moreover, because there has not been a complete picture of the relative strength of enforcement across the states, there also has not been an adequate body of research with which to challenge arguments about the use of noncompetes in an interjurisdictional race to the bottom.

This article will build off of the existing research into the theory of balancing individual and firm interests in noncompete enforcement and pair it with a survey of the relative strength of enforcement across the United States. The methodology used in developing a more complete picture of noncompete enforcement trends over time incorporates the raw data available in a state-by-state treatise alongside an original evaluation rubric to evaluate and eventually rank state levels of enforcement. Notably, this analysis will be made freely available to other researchers in an electronic format. Thus, it has the potential to have an influence on future empirical work on the impact of noncompetes that is undertaken in other business disciplines in which evidence of noncompete enforcement is a factor in evaluating employee mobility and the related spillovers. Once this analysis is complete and presented, the article then evaluates previous assumptions of increased noncompete enforcement and claims that enforcement actions by firms in favorable jurisdictions are evidence of a so-called market for law.

As an initial premise, the article predicts that there is significant variation in strength of enforcement on the margins of the completed sample of jurisdictions, but that most states will moderately enforce noncompetes using the standard reasonableness test. This finding would thus weaken arguments that noncompetes are evidence of a vibrant and potentially harmful race to the bottom in states marketing their legal regimes, ostensibly at the behest of employers. A finding that various jurisdictions are nonetheless still evolving in their approach to noncompete agreements: Regulatory Risk Management and the Race to the Bottom, 65 Wash. & Lee L. Rev. 1381, 1422 (2008) (“As a whole, employers facing a substantial risk of employee competition have powerful incentives to choose the applicable law and find a hospitable judicial, rather than arbitral, forum when anticipating the need to enforce noncompetition agreements.”).

8. See Norman D. Bishara, Balancing Innovation from Employee Mobility with Legal Protection for Human Capital Investment: 50 States, Public Policy, and Covenants Not to Compete in an Information Economy, 27 Berkeley J. Emp. & Lab. L. 287 (2006) (arguing the benefits and costs of enforcement with regard to certain classes of workers can be moderated by policymakers to the greatest benefit of positive knowledge spillovers associated with employee mobility).
agreement enforcement would give some support to critics of standardizing the law at this stage and to the notion that the states are still acting as “policy laboratories” on this aspect of human capital management.

Ultimately, this research will present a subtle yet authoritative view of the development of noncompete enforcement and provide evidence of trends in enforcement, as well as give guidance for state policymakers, businesses, and employees when evaluating the pros and cons of negotiating and attempting to enforce a noncompete agreement. This normative discussion of how policymakers and businesses should apply the implications of this research will help inform actions that will potentially increase the benefits of enforcement and also decrease the uncertainty of a noncompete’s effect on securing human capital investments. To be clear, this article does not intend to finalize a full empirical model of noncompete enforcement at this stage. Rather, it presents a previously unavailable view of noncompete enforcement strength across all of the states and as a result provides evidence and a useful law-based descriptive analysis of this area of human capital law and policy. It also aims to provide a base set of data and legal analysis to guide further research, which can use this article as a tool to delve into the further effects of noncompetes on mobility, new venture creation, and information spillovers.

Part II presents a background description of covenant not to compete enforcement in the United States. Part III discusses the arguments about the market for law among the states and the importance of better understanding the relative strength of noncompete policy across the United States, particularly because researchers are currently using incomplete and unsophisticated data on noncompete enforcement. Part IV presents the research and implications of a state-by-state evaluation of seven detailed indicators of noncompete enforcement across the states in an initial descriptive format. Next, Part V discusses the findings on the relative strength of enforcement across the states within the context of arguments that noncompete policy is part of a market for law. Part VI then addresses the implications of this research for policymakers, firms, and individual employees. The article concludes by evaluating the cohesiveness of noncompete enforcement across the United States. That section also includes a call for additional research into the impact of noncompete enforcement on the employer-employee relationship, and the implications for employee mobility and associated knowledge spillovers.

II. BACKGROUND ON COVENANTS NOT TO COMPETE IN THE UNITED STATES

Covenants not to compete have been a controversial aspect of the common law throughout their history and remain an issue of great
contention in modern U.S. law. These agreements have long been viewed with suspicion in both English and American common law over the concern that noncompetes will impair personal freedom to earn a living and have a negative impact, by design, on unfettered competition. The controversy over the restrictive and anti-competitive contractual provisions found in covenants not to compete is at least several hundred years old, thus predating American common law.

The fact that these post-employment restraints have been litigated and the subject of legislative debate for so long might lead to a conclusion that the interpretation of the legitimate purpose and scope of these contracts would have by now reached a sort of thoughtful equilibrium of agreement across the fifty states (and the District of Columbia). Much to the contrary and to the consternation of employers and employees as business becomes increasingly stretched across state and national borders, the enforcement of noncompetes is an area of law that is still evolving and occasionally unpredictable, as is perhaps the wider area of employment law and contracts.

State-based law in the United States governs noncompetes, as is the case with most of the law governing the relationship between employers and their employees, employment contracts, and thus, contractual restrictions found in the “law of employee mobility.” This has led to a national status quo where, as the research in this article will detail, state law and human capital policy related to noncompetes varies such that the enforceability of a post-employment restriction on an employee’s mobility will be uncertain. Moreover, the increased importance of knowledge-based business activity to employment law and the economic well-being of

9. For the authoritative review of the extensive history of restrictive employment covenants, see Harlan M. Blake, Employee Agreements Not to Compete, 73 HARV. L. REV. 625 (1960).
10. Id. at 625-46.
12. For example, the American Law Institute’s new Restatement on Employment Law has been under development for several years; however, the mere notion of restating the best practices of employment law is somewhat controversial. For a brief discussion of the controversy and the implications of this research, see infra Part V.
states are complicated by the anti-competitive impact of noncompetes. This unpredictability can be frustrating for all the parties involved, particularly when departing employees relocate to other jurisdictions to work for out-of-state competitors or start a competing enterprise of their own. Some scholars have even concluded that overall, increased noncompete enforcement in the United States is leading to a situation where states are less permissive in allowing employee mobility.15

While the majority of states provide some enforcement of noncompete agreements,16 as discussed at length below, there are only two extreme outliers in terms of restrictions on any noncompete enforceability: California and North Dakota. Due to the size and commercial importance of the state, California’s legislation banning contractual restrictions on employee mobility is well known.17 However, even with its well-settled prohibition of noncompetes, California routinely encounters noncompete-based litigation, sometimes concerning requests to entertain post-employment restrictions originating in other states.18 As the recent California Supreme Court case of Edwards v. Arthur Andersen LLP reiterates, states have a strong public policy interest in upholding their law related to restrictive covenants when the courts within a state are asked to enforce restrictions contrary to that state’s well-settled policy.19

Despite some agreed-upon basic principles of how these restrictive covenants are reviewed by most state courts, there nonetheless exists no truly uniform approach across jurisdictions determining exactly what sorts of factors are sufficient to support an employer’s claims for injunctive relief. This variance among states in their enforcement of noncompete policies can prove frustrating for both employers and employees because it may make it difficult to predict the consequences for a departing employee


17. Other than an exception for restrictions on employment choice related to the sale of the goodwill of a business, the California legislation is unambiguous in its prohibition of restrictive employment covenants: “[E]very contract by which anyone is restrained from engaging in a lawful profession, trade, or business of any kind is to that extent void.” Cal. BUS. & PROF. CODE § 16600 (West 2009).


when he or she joins an out-of-state competitor or moves to a new jurisdiction to start a competing business venture. Whatever consensus exists among the enforcing states has coalesced around a reasonableness test that balances the rights of parties to the restrictive covenant while assessing the effect on the public interest.

The State of Massachusetts provides a typical example of how a noncompete-enforcing state will analyze these contracts. For instance, the Massachusetts Supreme Court in *Boulanger v. Dunkin’ Donuts, Inc.* stated a common, broad rule of review for a challenged noncompete. There, the court reiterated that “[a] covenant not to compete is enforceable only if it is necessary to protect a legitimate business interest, reasonably limited in time and space, and consonant with the public interest.” Moreover, the court emphasized the importance of a case-by-case assessment, stating that “[c]ovenants not to compete are valid if they are reasonable in light of the facts in each case.” Other enforcing states, such as New York, will more explicitly focus on balancing the rights of the stakeholders to the contract, in addition to the public interest.

Courts in enforcing states are nonetheless mindful of the anticompetitive nature of noncompetes and are careful to only allow enforcement to protect employers from *unfair* competition and not *all* legitimate competition. This sentiment recognizes the courts’ focus on

---

21. *Id.* The final element is also phrased in some jurisdictions as being “not injurious to the public.” See, e.g., *Ashland Management, Inc. v. Altair Investments N.A.*, 869 N.Y.S.2d 465, 472 (N.Y. App. Div. 2008) (articulating one of the factors for reasonableness of a covenant not to compete to be whether it “is not injurious to the public” (citing *BDO Seidman v. Hirshberg*, 712 N.E.2d 1220, 1223 (N.Y. 1999))).
23. See, e.g., *BDO Seidman*, 712 N.E.2d at 1223. In that case, the New York Court of Appeals stated the noncompete reasonableness test, and its application in New York, in this way:

> The modern, prevailing common-law standard of reasonableness for employee agreements not to compete applies a three-pronged test. A restraint is reasonable only if it: (1) *is no greater* than is required for the protection of the employer’s legitimate interest, (2) does not impose undue hardship on the employee, and (3) is not injurious to the public. A violation of any prong renders the covenant invalid.

New York has adopted this prevailing standard of reasonableness in determining the validity of employee agreements not to compete. “In this context a restrictive covenant will only be subject to specific enforcement to the extent that it is reasonable in time and area, necessary to protect the employer’s legitimate interests, not harmful to the general public and not unreasonably burdensome to the employee.”

*Id.* (citations omitted).
24. See, e.g., *Karpinski v. Ingrasci*, 268 N.E.2d 751 (N.Y. 1971) (concluding that an oral surgeon in a rural community possessed skills that justified the contractual protection of
what constitutes a legitimate protectable interest of a business in a given jurisdiction.

As detailed later in this article, eighteen states, or about 35%, have some sort of legislation discussing noncompetes. These states, such as Oregon, have taken the step to codify this reasonableness test, providing guidance to their courts as to how to implement the state’s noncompete policy.\(^\text{25}\) An interesting exception to the usual assumption of equal treatment for all categories of employees is the policy adopted by the State of Colorado. Specifically, Colorado allows employers to require, by contract, an employee to repay training costs for employment that lasts for less than two years, and recognizes noncompetes for “[e]xecutive and management personnel and officers and employees who constitute professional staff to executive and management personnel.”\(^\text{26}\)

III. THE ROLE OF NONCOMPETES IN CURRENT RESEARCH AND THE MARKET FOR LAW

In recent years there has been an increase in extensive, qualitative academic research conducted on noncompetes and their relation to employee mobility and knowledge transfer. It is generally and logically assumed that noncompete clauses in employment contracts are widely utilized. However, there is not much evidence available on this point. Despite the long-standing controversy over the proper level of noncompete enforcement (if any), there is a lack of formalized research into the actual enforcement trends across the jurisdictions. More research on this specific element of human capital policy is important because it will provide guidance to business and state policymakers who have an interest in understanding how various states are responding to pressure to disallow or

---

\(^{25}\) See, e.g., OR. REV. STAT. § 653.295(7)(a) (2007). Pursuant to this clause:
- (A) Competition by the employee with the employer is limited or restrained after termination of employment, but the restraint is limited to a period of time, a geographic area and specified activities, all of which are reasonable in relation to the services described in subparagraph (B) of this paragraph;
- (B) The services performed by the employee pursuant to the agreement include substantial involvement in management of the employer’s business, personal contact with customers, knowledge of customer requirements related to the employer’s business or knowledge of trade secrets or other proprietary information of the employer . . . .

\(^{26}\) COLO. REV. STAT. § 8-2-113(d) (2009).
permit noncompetes of all types. This is consistent with the fact that, despite the considerable ink spilled on the topic of noncompetes, few empirical studies of noncompetes by legal scholars exist. To the contrary, understandably most of the academic work in the developing area of noncompetes-based research has tended to reflect traditional legal analysis or, to a lesser extent, economically-informed theoretical analysis of the contracting aspects of noncompetes.

One exception is a study of the employment implications of a range of public company filings related to top executives, which included a section analyzing executive noncompetes. The study by Dean Stewart Schwab and Professor Randall Thomas concluded that, at least with regard to the top management contracts available in public filings, noncompetes are widely used. The study looked at Chief Executive Officer (“CEO”) employment contracts from several hundred SEC filings for large U.S. public companies and found that of 375 CEO contracts, 253 (67%) contained some sort of non-competition clause. Interestingly, many of the post-employment restrictions examined in the study could be triggered by any type of employment termination, regardless of whether or not the termination was initiated by the employer or employee.

A. Noncompetes, the Market for Law, and Assumptions about Noncompete Agreements

The potential use of noncompete contracts and the litigation surrounding them when disputes arise have been the subject of discussion

27. Perhaps the most high-profile state that is now in the midst of reevaluating the propriety of its current noncompete policy is Massachusetts. See Will Brownsberger–State Representative, Democrat, 24th Middlesex District, http://willbrownsberger.com/index.php/archives/tag/stag-non-competes (last visited August 18, 2010) (providing draft legislation, commentary, and discussions of the current debate in Massachusetts).

28. See, e.g., Garrison & Wendt, supra note 15 (utilizing traditional modes of legal analysis to propose a theory supporting an inevitable disclosure doctrine).


31. Id. at 254-57.

32. Id. at 255.
by legal academics for some time\textsuperscript{33} and these writers have also used
economic theory to predict the optimal use of these contracts.\textsuperscript{34} An
increase of academic discussion in the research from a variety of
perspectives in the last decade is due, at least in part, to the resurgence of
interest in agglomeration economies in the high-technology sector,
specifically Silicon Valley.\textsuperscript{35} The focus on the role of the absence of
noncompete enforcement in California and the so-called high-velocity
labor market in Silicon Valley can be traced to the well-known conclusion
from Professor Ronald Gilson’s 1999 article, \textit{The Legal Infrastructure of
High Technology Industrial Districts: Silicon Valley, Route 128, and
Covenants Not to Compete}.\textsuperscript{36} Gilson argues that part of Silicon Valley’s
ultra-successful agglomeration economy as compared to other similarly-
resourced areas, particularly Route 128 outside Boston, is attributable to
California’s longstanding ban on noncompetes.\textsuperscript{37}

The provocative conclusion that noncompetes have a significant role
in hampering employee mobility and attendant spillovers such as
innovation and new venture creation has sparked interest among a range of
non-legal scholars. Consequently, in the last few years there have been
several published and ongoing empirical attempts to analyze the role of
covenants not to compete in employee mobility, levels of human capital
investment, or as markers of innovation and knowledge transfer, like patent
citations\textsuperscript{38} and workers moving from being employees to entrepreneurs.\textsuperscript{39}

\textsuperscript{33} See, e.g., Blake, \textit{supra} note 9 (analyzing how employers might utilize noncompetes
as a tool to protect against former employees’ actions that may threaten the employer’s
legitimate business interests).

\textsuperscript{34} See, e.g., Rubin & Shedd, \textit{supra} note 29 (applying the general and specific human
capital dichotomy to noncompetes); see also \textsc{Gary S. Becker, \textit{Human Capital}} (3d ed.
1993) (establishing the theory behind general and specific human capital investments);
Norman \textsc{D. Bishara, \textit{Covenants Not to Compete in a Knowledge Economy: Balancing
Innovation from Employee Mobility Against Legal Protection for Human Capital
capital investment theory to advocate for selective enforcement of noncompetes based on
the type of work involved as a way to increase knowledge spillovers); \textsc{Posner & Triantis,
\textit{supra} note 29, at 2 (utilizing a more intermediate form of economic theory: “industry-
specific human capital”).

\textsuperscript{35} \textsc{Annalee Saxenian, \textit{Regional Advantage: Culture and Competition in
Silicon Valley and Route 128}} (1994) (employing an urban planning and sociological
approach to explain the Silicon Valley, California agglomeration economy’s growth and
development, and the related eclipse of the Route 128 technology cluster near Boston,
Massachusetts).

\textsuperscript{36} See, e.g., \textsc{Alan Hyde, \textit{The Wealth of Shared Information: Silicon Valley’s High-
1998), \textit{available at} http://andromeda.rutgers.edu/~hyde/WEALTH.htm \textit{(last visited Feb. 25,
2011)}.

\textsuperscript{37} \textsc{Ronald J. Gilson, \textit{The Legal Infrastructure of High Technology Industrial Districts:

\textsuperscript{38} While it does not focus on noncompetes, one influential article that uses patent
Some of the articles directly address covenants not to compete, while others use basic information about a jurisdiction’s “yes” or “no” (i.e., a “0” or “1” coding protocol) stance on enforcing the contracts at all.\(^{40}\) In essence, this stream of research is using various measurements to ask the basic question of whether or not noncompetes “matter” for business activity\(^ {41}\) and more public-oriented social goods, such as innovation.\(^ {42}\)

One of the propositions of this article is that the current empirical research in other, non-law disciplines does not utilize a full or nuanced legal evaluation of the entire noncompete picture across the United States. This oversight is addressed by the review of the states presented below in Part III. However, before the scope and intent of that research can be appreciated, it is first necessary to understand where current empirical noncompete-based research stands and the legal analysis shortcomings of those studies with regard to how noncompete policy across the states is construed, and to the extent it is utilized.

For example, a 2003 study by Toby E. Stuart and Olav Sorenson, *Liquidity Events and the Geographic Distribution of Entrepreneurial Activity*, uses noncompete enforcement as a factor in determining the geographic placement of new business ventures after a corporate acquisition or initial public offering.\(^ {43}\) Citing the 1996 edition of *Covenants not to Compete, a State by State Survey*,\(^ {44}\) the study draws on the

citation data to study employee mobility is Rajshree Agarwal, Martin Ganco, & Rosemarie H. Ziedonis, *Reputations for Toughness in Patent Enforcement: Implications for Knowledge Spillovers via Inventor Mobility*, 30 STRATEGIC MGMT. J. 1349 (2009) (finding that in the semiconductor industry, a firm’s reputation for aggressive intellectual property rights reduces the otherwise expected knowledge spillovers).


40. The amount of attention focused on the normative arguments about the propriety of noncompetes when it comes to workers’ rights and issues such as bargaining power asymmetries has been much less visible. One example is Katherine V.W. Stone’s article, *Knowledge at Work: Disputes Over the Ownership of Human Capital in the Changing Workplace*, 34 CONN. L. REV. 721 (2002) (discussing the issue of employee or employer human capital ownership and arguing that noncompetes should be disallowed under a worker’s rights perspective). For a discussion of the worker’s rights perspective in the available literature, see Bishara, *supra* note 8, at 311-13.

41. This ongoing debate is perhaps summed up best by the title of a working paper written by Sampsa Samila & Olav Sorenson, *Non-Compete Covenants: Incentives to Innovate or Impediments to Growth?* (Working Paper, 2009), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1411172. As discussed in this section, this is the central unresolved issue and this paper aims to improve the research addressing this question by providing a comprehensive and nuanced legal analysis of where the evolution of noncompete policy across the United States can been seen in the aggregate.

42. *See*, e.g., Graves & DiBoise, *supra* note 13 (considering whether noncompete laws obstruct innovation).

43. Stuart & Sorenson, *supra* note 5.

noncompete enforcement policies of the fifty states. The authors appear to independently evaluate some of the statutes and case law covered in the treatise, but the level of analysis and legal expertise utilized in construing the states is unclear and their focus is on labeling some states as having “weak-legal-regimes” related to noncompete enforcement.

The Stuart and Sorenson study, as compared to others discussed below, seems to have a relatively thorough view of the balance of noncompetes, but is focused on measuring the founding of start-up companies in the biotechnology industry, and thus somewhat limited in its application. When the authors compared regions where noncompetes were enforced (to any degree) to jurisdictions where there was what was seen as weak noncompete enforcement, they found, “strong evidence that interstate variance in the enforceability of non-compete covenants in employment contracts underlies differences in the dynamics of organizational foundings,” thus supporting Gilson’s thesis with regard to certain high-tech fields such as biotechnology. However, the subtleties of the variances in enforcement across the majority of states that enforce noncompetes to some moderate extent are not captured by the focus on “weak-legal-regimes” being contrasted only with enforcement regimes. Thus, this evaluation does not fully cover the bulk of the enforcement situations or possible industries.

Another study focused on the lack of noncompete enforcement in California and how that impacted employee movement. That article, *Job Hopping in Silicon Valley: Some Evidence Concerning the Micro-Foundations of a High Technology Cluster*, by Bruce Fallick, Charles A. Fleischman & James B. Rebitzer, focuses on employee mobility comparisons in high-tech regions. In particular, the authors set out to test Gilson’s thesis about the role of noncompete disallowance in California’s high-tech Silicon Valley region. The authors conclude that their “finding of a California effect on mobility lends support to Gilson’s hypothesis that the unenforceability of noncompete agreements under California state law enhances mobility and agglomeration economies in [Information Technology] clusters,” but that the effect does not appear in other California industry clusters. Thus, there is less evidence of mobility across state lines, than within weak enforcement jurisdictions.

45. Stuart & Sorenson, *supra* note 5, at 190, Table 1.1.
46. *Id.* at 190-91.
47. *Id.* at 197.
49. *Id.* at 472.
50. *Id.* at 481.
51. *Id.*
A limitation of this study is that it is focused on Silicon Valley and computer industry mobility within California and comparisons with one other state, Massachusetts. Therefore, the study does not take a national view of noncompete enforcement or factor in the variance within the spectrum of enforcing states. From the article it is also not clear to what extent Massachusetts is considered a moderate or strong enforcement state. Rather, it appears that the enforcement element of the Massachusetts variable is coded merely as enforcing, without a deeper legally-based understanding of the application of Massachusetts’ noncompete policy or the implications of court rulings on the computer industry.

A third example of the recent important empirical work on noncompetes is Matt Marx, Deborah Strumsky, and Lee Fleming’s article entitled Mobility, Skills, and the Michigan Non-Compete Experiment. This study identifies a unique research opportunity, which occurred as a result of a legislative quirk when revisions to commercial laws in Michigan removed a long-standing prohibition on noncompetes. The article “explores the impact of non-competes on interorganizational mobility by exploiting Michigan’s apparently inadvertent 1985 reversal of its enforcement policy as a natural experiment.” This example utilizes patent data to measure inventor mobility among firms, thus limiting the scope of observable employees to highly-skilled workers with a patent portfolio. In addition, the variable of state enforcement is, as with the other studies, essentially coded as “enforce” or “not enforce,” without any subtle variation as to placing the state on the spectrum of enforcement ranging from weak to moderate to strong. In this case the authors are comparing

52. Id. at 479. The authors also discuss the limitation of the available data for extending the research to another high-tech agglomeration economy, Denver, in part due to the employee data and uncertainty about the effects of the application of Colorado’s exceptions to its noncompete statute. Id. at 479 n.22.


54. Id. (citing the revocation of the Michigan statute, MCL 445, and its replacement with the Michigan Antitrust Reform Act (MARA) (1985), which did not contain a ban on restrictive covenants in employment).

55. Id. at 875-76.

56. See id. at 876 (declaring that support for the article derives from patent data and “by employing a differences-in-differences method that ameliorates some of the challenges inherent in tracking mobility of individuals.”).

57. Only other nonenforcing states were used to contrast with Michigan, and Marx et al., included the following states. However, according to the research discussed below in Part III of this paper, not all of them did not enforce noncompetes for the entire period before the 1985 Michigan enforcement change: Alaska, California, Connecticut, Minnesota, Montana, North Dakota, Nevada, Oklahoma, Washington, and West Virginia. The time period covered and the definition of “nonenforcing” is not explicitly discussed in the paper. Notably, this paper and the research discussed here consider California and North Dakota as truly nonenforcing from a statutory, plain-language, definitional perspective, as well as settled case law, with the other states relied on by Marx et al., receiving at least some level
patent citations and mobility in Michigan to other “nonenforcing states” during a particular time of nonenforcement: the 1975-2000 period of observation. One advantage of this study over the others discussed here is that Marx et al. endeavor to measure interstate mobility on workers by tracking inventors and patent citation data across several states.

However, the article is focused on the impact of an interesting natural experiment related to noncompete enforcement, which occurred in Michigan only in the 1980s, and is based on patent citation data. Therefore, the conclusions are bounded by those constraints. The fact that states in this study are either “enforcing” or “nonenforcing” also highly simplifies the important factor of the strength of enforcement within the majority of states that do enforce to a lesser or greater extent. Nonetheless, the research is important because it supports Gilson’s thesis of a high-velocity labor market being tied to an absence of noncompete enforcement. This is based on observations that workers in Michigan—both in the automobile industry and elsewhere—were less likely to move between firms when the state’s prohibition of restrictive employment covenants abruptly ended for a period of time.

Another important contribution to the noncompete literature is Mark J. Garmaise’s recent article, Ties that Truly Bind: Non-competition Agreements, Executive Compensation, and Firm Investment. The article essentially takes a law and economics perspective on analyzing noncompete agreements and concludes that noncompete enforcement increases executive stability and holds down wages. However, while this environment encourages human capital investment by firms in their managers, it discourages self-investment in personal human capital by those same employees.

Compared to other empirical studies, Garmaise somewhat delves into the subtleties of noncompete enforcement, also by using the Covenants not to Compete, a State by State Survey treatise, in this case the 2004 edition. In order to develop a noncompete enforcement index, starting at a potential zero score, Garmaise looked at twelve questions applied to each state in the treatise, assigned each question a threshold and “granted 1 point for each question concerning which its laws lie above the threshold.” He asserts, without attribution, that “laws governing the enforcement of

58. Id. at 882.
59. See id. at 887 (suggesting that conclusions drawn from the model used in the paper support the Gilson theory).
60. Garmaise, supra note 5.
61. Id. at 4 (elaborating on the notion that noncompetes discourage employees from investing in human capital of their own).
62. Id. at 45, Table A1.
63. Id. at 46.
noncompetition agreements are largely static . . . “

Accordingly, except for the time-limited view of three states (Texas, Louisiana, and Florida), he relies on the 2004 edition of *Covenants not to Compete, a State by State Survey* and its limited summaries to make judgments on the strength of noncompete enforcement.

The benefit of this study is that, compared to the others that have been mentioned, there is a finer granularity to the way enforcement is construed along a spectrum of weak to strong enforcement. However, the noncompete data is limited by the lack of a comprehensive approach and a subtle legal analysis of the material, particularly an in-depth review of the case law. It also lacks a theoretical basis for the setting of thresholds and the omission of an associated weighting option for each factor.

The five papers discussed here are known, or are becoming well known, among academics concerned with issues of worker mobility and the competitive advantage of firms. Yet, these articles are a representative sample of how non-legal researchers are using noncompetes as a variable in understanding the movement of labor and knowledge spillovers. Along these lines, other investigations are well underway and concern finite issues related to employee mobility, knowledge transfer, innovation, and abuse of noncompetes to hold up employers or competitors. These include topics such as the impact of noncompetes as a factor in the movement of high-value employees, noncompetes as a factor in jurisdictionally-based incentives or for impediments to investment, and the economics perspective of the competitive or predatory nature of “poaching” in a noncompete context. On the whole, the doctrine of noncompete enforcement is in a state of flux within a changing business and work

---

64. *Id.* at 15. This conclusion seems hasty in light of efforts by state policymakers to revise noncompete laws, such as in Massachusetts. Even the observations of Marx et al. related to the tide change in Michigan. Marx et al., *supra* note 5. The results of this article, as presented *infra* in Part IV, show that while major changes at the state level are relatively rare between the snapshots of the policy status quo in 1991 and 2009, there is a trend toward greater enforcement overall among the states.


66. See Samila & Sorenson, *supra* note 41, at 16 (following Stuart and Sorensen for a marker of “absence of non-compete enforcement” and Garmaise for “weakness of non-compete enforcement,” thus suffering from the same blunt noncompete evaluation issues inherent in those previous studies).

environment and the fractious nature of the available research is consistent with this evolution.

Each of these papers provides insights into the role and use of noncompetes and thus each provides a glimpse into the policy and legal implications for noncompetes in those limited circumstances. However, most of these papers are primarily concerned with one subset of states, a single state, or a single type of worker (e.g., inventors) and therefore do not take a national view of the issue of noncompete enforcement policy. The study that looks at all fifty states in a broad way on multiple parameters is the one by Garmaise. However, that study, like the others, does not provide a comprehensive, long-view picture of all the states’ policies regarding enforcement. Accordingly, these studies are concerned with using an overly-focused snapshot of noncompetes as a variable for specific purpose and therefore fail to provide a U.S.-wide view of the policy.

These existing studies often rely on the use of noncompete enforcement as a “yes” or “no” variable found in other studies, which in turn have made somewhat dated assumptions about noncompete enforcement. However, the authors of these studies have not necessarily conducted their own research into the strength of enforcement and tend to rely on the limited summaries provided in the leading aggregate treatise, which was intended for a legal practitioner audience. As confirmed by the discussion of the findings and implications below in Part IV.C., there are only two states—California and North Dakota—that have virtual bans on noncompetes. The other 49 jurisdictions allow some sort of enforcement, but those states by no means have uniform approaches to the extent or type of enforcement and under what circumstances it is allowed. Therefore, the relatively simplistic and limited views represented in the small sample of states and the “all or nothing” coding for states to enforce or not enforce noncompetes misses a great deal of the influential differences among the vast majority of states that do allow noncompetes.

In addition, the issue of the relative strength of enforcement across a significant time period and for all of the states has not appeared in the legal literature to date. Stepping back and examining these studies as a group from a legal scholarship perspective reveals some inconsistencies and shortcomings of the basis for these empirical studies, as discussed

68. See Richard L. Hannah, Post-Employment Covenants in the United States: Legal Framework and Market Behaviours, 149 INT’L LAB. REV. 107, 116 (2010) (reviewing the use of noncompetes and the legal rules surrounding their use and concluding that “[p]ost-employment covenants are indicative of the institutional forces that are emerging in the twenty-first century labour market . . . [and] the behaviour of firms and workers in regard to the post-employment constraints remains highly uncertain because it is dynamic and evolving.”).

69. Garmaise, supra note 5.
previously. Moreover, the verdict on the importance of noncompete law and mobility policy—in terms of helping or harming business activity or workers’ rights—and the role of noncompetes in key issues such as mobility of all types of workers and knowledge transfer is not yet clear.

B. Arguments for a Market for Law and Covenants not to Compete

For nearly four decades, legal scholars have discussed the notion that there is a market for corporate law in which states, under pressure from elites, will craft their laws to accommodate business interests in what becomes the proverbial race to the bottom, often at the expense of other stakeholders. The prime example of a jurisdiction engaging and excelling in the market for law is the State of Delaware, where the majority of U.S. public companies choose to incorporate and pay corporate charter taxes. Beyond the legal scholarship, implications of a market for law have been recognized by non-legal business scholars who have found, for instance, evidence of such elite lobbying with regard to state laws favoring antitakeover provisions to protect corporate management.

One main reason a state like Delaware can influence corporate choices through marketing its laws is the long-standing “internal affairs doctrine” (“IAD”), which allows for the relationships between corporations, their managers, and the shareholders to be determined by the law of the state of incorporation. This doctrine is in contrast to the law governing contracts, which in the case of the choice-of-law doctrine with regard to a noncompete, still requires the state of choice to have a significant connection to the agreement. However, legal scholar Robert Daines found that, in part because 97% of public firms incorporate in either their home states or in Delaware, bimodal incorporation choices belie the metaphors of a race between the states or a unified market for the law


71. Faith Stevelman, Regulatory Competition, Choice of Forum, and Delaware’s Stake in Corporate Law, 34 DEL. J. CORP. L. 57, 59 (2009) (stating that, “[i]n matters of state corporate law, Delaware has won—that is the consensus among scholars, commentators, and practicing corporate lawyers”). For a recent summary and presentation of arguments related to the debate over the reasons for Delaware’s prominence in the market for law, see Larry E. Ribstein, The Uncorporation and Corporate Indeterminacy, 2009 U. ILL. L. REV. 131 (2009).


73. Ribstein & O’Hara, supra note 70, at 662-63.

74. Id. at 662.
offered by these fifty jurisdictions.\(^{75}\)

In addition, as has been observed in various contexts, employees tend to have less bargaining power than employers during contract negotiations,\(^{76}\) including when arbitration and noncompetes are concerned.\(^{77}\) The employer and its agents in management are repeat players in negotiating employment and tend to have superior bargaining power.\(^{78}\) Noncompetes, where they are allowed, are reviewed by courts under an examination of the reasonableness of their terms and whether the restrictions address the employer’s protectable interest.\(^{79}\) Accordingly, these concerns of protecting employee interests have led legal scholars to propose new approaches for the noncompete enforcement. These include proposals for courts to take into account the employee’s diminished bargaining power in noncompete negotiations,\(^{80}\) for a “de-coupling” of noncompete and trade secret law and a newly robust doctrine of inevitable disclosure,\(^{81}\) and the application of the resource-based theory of the firm to adjudicating noncompetes related to knowledge ownership disputes.\(^{82}\)

Legal scholars have also recently addressed the possible role of

75. Robert Daines, *The Incorporation Choices of IPO Firms*, 77 N.Y.U. L. REV. 1559, 1562 (2002) (“The nationwide race or market may be a heuristic for potential competition, but it does not describe firm choices during the period studied. Thus, the dominant metaphor of a national race between fifty states or a single market with fifty producers is incorrect and potentially misleading.”).


80. Kate O’Neill, *Should I Stay or Should I Go?–Covenants Not to Compete in a Down Economy–A proposal for Better Advocacy and Better Judicial Opinions*, 6 HASTINGS BUS. L.J. 83, 84 (2010) (proposing that appellate courts “minimiz[e] the enforcement of covenants not to compete where the assenting employee lacks significant bargaining power while preserving employers’ abilities to enforce these covenants against employees who enjoy such power”).


employment laws as a commodity in the market for law. 83 Other work addresses the issue of whether or not noncompete enforcement policy can be evidence for this market. Specifically, Timothy P. Glynn has argued the broad theme that noncompete-related state policy is also part of the market for law in which jurisdictions race to the bottom to attract business. 84

Professor Glynn perceives that states are beginning to enter a market for employment contracts, including noncompetes and analyses the development from both the supply (state) and demand (employer) side of the market for noncompete policy. In his model he explains that previous barriers to “law-as-commodity competition . . . are neither fundamental nor permanent, and there are signs of a changing dynamic.” 85 He reasons further that:

Enhanced employer demand for state employment law is likely to arise where (1) there are substantial differences between state legal regimes, (2) these differences are significant enough to trump employers’ other employment law concerns, and (3) employers have some confidence that they can control forum selection. A state that establishes an employer-friendly regime may choose to compete for interstate and out-of-state employment contracts when it perceives the benefits of competition—pleasing home-state employers and enhanced counseling and enforcement business—and has a judiciary both able and willing to further its competitive aims. And, importantly, a state serious about engaging in such competition need not rely entirely on other states’ accepting the extraterritorial application of its law. The state can attempt to force acceptance of its law through aggressive judicial tactics, for example, by racing to judgment. 86

Thus, Glynn proceeds on the assumption that there is, indeed, “a substantial difference between state legal regimes” that allows for choice of law arbitrage of a sort. The place of litigation and, more importantly, the particular state law that is applied to a noncompete dispute is an important factor in this market and the attendant race to the bottom. 87 To best

---

83. See, e.g., Richard A. Bales, Explaining the Spread of At-Will Employment Doctrine as an Inter-Jurisdictional Race-to-the-Bottom of Employment Standards, 75 TENN. L. REV. 453, 464-65 (2008) (cataloging the various other areas of law in which inter-state competition has been observed).
84. Glynn, supra note 7, at 1434-36 (discussing why employment law has largely been absent from the market for law until recently).
85. Id. at 1385.
86. Id. (emphasis added).
87. Id. at 1421. As Glynn explains, this distinction is significant for firms:

From the perspective of an employer seeking to manage risk, which state’s noncompetition law governs the enforcement of NCAs [non-competition agreements] also matters—a lot. Individual employers have a strong incentive
evaluate if there is, indeed, the requisite variation in state-level noncompete enforcement policy it is crucial to have a full, nationwide understanding of the status quo and trends related to what the fifty states are actually doing with regard to their noncompete laws. That indispensable and complete evaluation of the state’s relative level of enforcement is the subject of the next section.

IV. Evidence of Trends in State Law of Relative Enforcement of Noncompetes

Systematically evaluating the covenant not to compete enforcement policies of the fifty states, and the District of Columbia, is obviously a labor-intense endeavor. This is a particularly onerous task since noncompete policy is an evolving area of law that is comprised of some instances of legislation, but the implementation of enforcement primarily falls to the state courts, with much of the common law being tied to the facts of individual cases. This challenge was made manageable by a long-standing treatise series, *Covenants not to Compete, A State-By-State Survey*, which serves as a central repository for periodic updates from all fifty-one jurisdictions. The series is published approximately every two to four years, and is updated with comprehensive supplements in the intervening years. The treatise is organized at the level of each jurisdiction with a portfolio of questions, which are then answered briefly and followed with citations to relevant authority, including state statutory law, leading cases, and secondary sources drawn, for instance, from law review and bar journals.

For the evaluation described below, the focus was on the seven questions from the *Covenants not to Compete* treatise as a way to organize the information gathering and evaluation. In order to establish some context with which to get a broad view of state policies and their evolution and trends over time, a two period view of each jurisdiction was taken by gathering data from the 1991 treatise and from the recent 2009 version. The consistency of the data collected in the Malsberger treatise allows for there to be an adequate level of confidence that the same factors are

---

Id. (citations omitted).

recognized over different observation periods. The gap between 1991 and 2009 also provides enough time for the law to change, if at all. One potential issue with the space between periods is that there could be fluctuations in a state’s policy within the period, which would not be captured. However, ultimately the data does likely show some balance across the time periods and evidence of trends, even if these two periods represent snapshots of noncompete policy at those years.

In general, this data collection, as described below in detail, was intended to capture any national trends in enforcement, such as the states moving toward or away from the margins of stronger enforcement, over a period of nearly two decades. It will also provide a picture of the relative enforcement across jurisdictions and do so in a detailed way that provides more subtle shadings than are available from other sources. The data pinpoints the positioning of individual states and be able to show not only if those states have adopted stronger or weaker noncompete enforcement policies, but it will be able to show how those changes impact their ranking among peer jurisdictions and show any geographic concentrations of enforcement patterns. Finally, the goal of this evaluation is also to develop more evidence than is currently available to understand the contours of noncompete enforcement. As an additional note, all of this scoring and summary ranking data will be made available by the author to other interested researchers.89

A. The Approach to Evaluating each State’s Enforcement Policy

Overall, the goal of rating the states and assigning a raw score based on multiple common parameters was to collect evidence of the relative enforcement across the entire United States. To accomplish this, seven indicators that tend to indicate strong, moderate, or weak levels of noncompete enforcement were examined. The construct of placing states on an enforcement spectrum ranging from weak to moderate to strong levels of enforcement was first developed in an earlier article on the role of noncompetes in employee mobility in a knowledge economy.90 The typology is used again here as a way to show variance and potential trends as state-level policies evolve over time.

The advantage to this study over the ones discussed above in Part III is that this data collection was conducted from a legal researcher’s perspective with the intent to provide a subtle, yet deep, analysis of the

89. Because this data includes an element of assigning weights to influence the ranking based on the importance of the question to the dependent variable of strength of enforcement, the data can easily be utilized to highlight other outcomes by adjusting the emphasis and rationale for the weight factors.
90. See Bishara, supra note 8.
legal importance of various litigation outcomes as provided by a variety of statutory and case law. Part of the premise of this approach is that a business lawyer’s view of the importance of how courts apply rules and the nuances of how they enforce a stated policy from the legislature—or, alternatively, how in the aggregate a state’s courts will develop its own policy—can add value that is not available in the extant noncompete literature. For instance, even though most states employ a reasonableness test to evaluate the contract, the approach, tools, and principles used by each court varies materially within the reasonableness structure. In other words, what one set of state courts deem a reasonable restriction on the employee’s activities may indeed vary significantly from a court’s application of the same standard in another jurisdiction. States also vary in what they consider a protectable interest, thereby having a more or less expansive view of what is reasonable for employer’s to restrict. Moreover, the extent to which a court tries to accommodate a request to enforce a noncompete through mechanisms such as modifying the terms of the contract or otherwise granting partial enforcement is indicative of the strength of enforcement.

Within these nuances and constraints, a researcher trained in the law can better gauge the importance and tone of the numerous opinions generated by the courts of a given state. To that end, the seven questions listed and discussed below were chosen because they directly address the legal issues relevant to measuring a given jurisdiction’s intensity of noncompete enforcement. These questions are the ones applied in the Covenants not to Compete treatise, and thus are applied consistently to each of the fifty states and the District of Columbia. While these questions are not necessarily geared toward the extent of enforceability within each jurisdiction, these questions, in the aggregate, can flesh out a full picture of a state’s policy on noncompetes, including if the state has contemplated its policy to the extent that it has enacted legislation on the topic. Thus, the questions listed below are categories drawn from the Covenants not to Compete treatise and are useful benchmarks for a state’s policy during the 1991 and 2009 time periods.

“Question 1: Is there a state statute of general application that governs the enforceability of covenants not to compete?”

For this question, a score of 10 was awarded to a state that has a statute that favors strong enforcement, a 5 was awarded to a state that either did not have a statute or had a statute that was neutral in its approach to enforcement and a 0 was given to a state that has a statute that disfavors enforcement. This question was given an overall weight of ten. It is important to note that the available statutes addressing noncompetes vary
widely and range from encouraging enforcement or segmenting applicable categories of workers to banning enforcement of post-employment restrictions.

In this instance, the availability of a statute was considered a strong indication the state had considered and weighed the policy options and effects related to crafting a noncompete policy. The content of the statute was the most important factor in determining the state’s score. For instance, statutes that merely restated the common law reasonableness standard received a score of 5. If a state did not have a noncompete–specific statute passed into law, then it was considered a neutral indicator. Two states, California and North Dakota, have consistently had what can be described as “anti-noncompete” statutes, which is consistent with their public policy stance of not restricting worker mobility. Several states have statutes related to disallowing contracts in restraint of trade. However, reasonable noncompete agreements, sometimes with specific carve outs detailed, are a common exception to such legislation.

“Question 2: What is an employer’s protectable interest and how is that defined?”

When evaluating the important issue of a state’s recognition of what employer interests are “protectable” with a noncompete, a score of 10 was awarded to a state that has a broadly defined protectable interest. A score of 5 was awarded to a state that has a balanced approach to defining a protectable interest and a 0 was awarded to a state that has a strictly defined limited protectable interest for the employer.

This question was given an overall weight of 10 in recognition that the element of protectable interest is a key factor in noncompete-based litigation. This issue gets to the heart of a state’s policy choices in that states, normally through the common law decisions, essentially sketch the parameters of the employer’s rights. In that sense, the tradeoff between the rights of the employee to evade the contract and a court opinion allowing enforcement on the grounds of protecting an employer’s knowledge-based property rights is a zero-sum game. Put another way, this question also helps establish what a state’s policymakers see as the permissible boundaries of employer protections and where the line is crossed into employer overreaching at the expense of the employee. In practical terms, states with enforcement policies that mimic existing trade secret and duty of loyalty protections for employers received lower ratings, while, cumulatively, protections for confidential information, developed customer lists, firm good will, nonsolicitation of fellow employees (known as poaching or raiding), customer contacts, customer goodwill, and for a firm’s investment in training the employee, would increase a state’s
“Question 3: What must plaintiff be able to show to prove the existence of an enforceable covenant not to compete?”

Regarding this question, a score of 10 was awarded to a state that places a weak burden of proof on the plaintiff employer, a 5 was awarded to a state that has a balanced approach to the burden placed on the employer and a 0 was awarded to a state that places a strong burden of proof on the employer. This question was given an overall weight of 5.

The assumption related to strength of enforcement with this question was that the state’s noncompete-specific contract law decisions would reflect a state’s interest in protecting an employer over employees (or vice versa), based on the ease with which either party can make a showing to carry their burden of proof. In application at the state level, this question tended to concern broader issues of a state’s common law on contract litigation and not strictly noncompete disputes and thus was weighted by a factor of 5 and not 10.

“Question 3a: Does the signing of a covenant not to compete at the inception of the employment relationship provide sufficient consideration to support the covenant?”

When evaluating this question as an independent data point, the highest score of 10 was awarded to a state where the start of employment is always sufficient to support a covenant not to compete, a score of around 5 was awarded to a state where the start of employment is sometimes sufficient to support a covenant not to compete and a 0 would be awarded to a state where the start of employment is never sufficient consideration to support a covenant not to compete. This question was given an overall weight of 10.

With the issue covered by this question, the basis for the rating and ranking scheme is related to an assumption that a state that requires independent consideration to support the non-compete agreement is expressing a pro-employee sentiment, which tends away from strong enforcement. On the other end of the rating spectrum, if an employer need not provide any independent consideration other than the other terms of employment (or even the promise to employ, even at-will employment), then the state is expressing an employer-friendly, pro-noncompete enforcement stance.

91. These protectable interests tend to indicate that a state has a stronger level of enforcement and, consequently, is inclined to protect an employer’s interests over those of the departing employee. See Bishara, supra note 8, at 315, Figure 1A.
“Question 3b & 3c: Will a change in the terms and conditions of employment provide sufficient consideration to support a covenant not to compete entered into after the employment relationship has begun? Will continued employment provide sufficient consideration to support a covenant not to compete entered into after the employment relationship has begun?”

For this combined question with subparts, a score of 10 or near ten was awarded to a state where continued employment is always sufficient to support a covenant not to compete, a median score of around 5 was awarded to a state where only a beneficial change in terms was sufficient to support a covenant not to compete, and a 0 was awarded to a state where neither continued employment nor a beneficial change in terms would be sufficient consideration. These questions were combined and together given an overall weight of 5 to reflect the modest impact this issue would likely have in policymakers’ views of the strength of enforcement of noncompetes in a given jurisdiction.

These complementary questions get at the state’s enforcement policy, like question 3a, because they evidence state’s willingness to favor employers or employees in formality with which the requirement consideration is treated. Where an employer is required to present additional consideration to support a noncompete, the policy is more employee-friendly and represents weaker enforcement sensibilities. If the employee can be made to sign a noncompete agreement after employment has commenced and no new consideration is provided, then the policy trends toward strong enforcement would be reflected in the state’s rating.

“Question 4: If the restrictions in the covenant not to compete are unenforceable because they are overbroad, are the courts permitted to modify the covenant to make the restrictions more narrow and to make the covenant enforceable? If so, under what circumstances will the courts allow reduction and what form of reduction will the courts permit?”

Here a possible high score of 10 was awarded to a state where judicial modification is allowed and there are broad circumstances where revisions can be made and limited restrictions on maximum enforcement. A mid-range score of 5 was awarded to a state where so-called “blue pencil” modifications were allowed as a way to reform the contract instead of disallowing it outright. This indicates that there was a balanced approach to the allowable scope of restrictions and to accommodating the plaintiff’s enforcement request. A low score, possibly as low as a 0, was awarded to a state where neither “blue pencil” nor judicial modification was allowed. This question was given an overall weight of 10 to reflect the fact that
answers to this question are reflective of a state’s overall commitment to affirmatively pursuing the intent of the parties in reaching the original agreement underlying the restrictive covenant.

Like some previous questions, Question 4 is related to a jurisdiction’s general law of contract interpretation. However, the nature of the geographic and time restrictions inherent in non-compete clauses makes this a particularly salient issue for gauging the strength of a state’s policy toward enforcement. Depending on the broadness of the scope, if courts will rewrite the contract to make the terms reasonable, then the rating would be higher and with a score at or near 10. This is based on an assumption that a policy of amending contract terms on these parameters is evidence of strong enforcement because this act preserves the employer’s protectable interests. Moreover, a policy allowing the court to “blue pencil” noncompete terms gives employers more latitude to push boundaries or overreach with less fear that the entire agreement will be unenforceable.

“Question 8: If the employer terminates the employment relationship, is the covenant enforceable?”

When evaluating this question, a high score of 10 was awarded to a state where a covenant is always enforceable if the employer terminates, a score of 5 was given to a state where a covenant is enforceable only in some circumstances, and a score of 0 was given to state where a covenant is not enforceable if the employer terminates. This question was given an overall weight of 10.

Like Question 4 above, an affirmative answer to this question indicates a strong policy in favor of enforcement in that the employer is given more deference than the employee, perhaps at great disadvantage to the individual’s mobility and ability to engage in their chosen livelihood. For example, a state that allows an employer to fire or lay off an employee and still enforce the post-employment restrictions receives a high score indicating a policy of strong enforcement. Other jurisdictions which essentially disallow enforcement if the employer initiates the discharge would be taking an employee-friendly position and, in effect, displaying a policy of weak-enforcement.  

92. Also of note is the fact that, as compared to the other questions, Question 8 and the issue it covers was the question that was most often not previously addressed by a state and its policymakers. This fact is interesting because it would seem to indicate that this is an area where states can both decisively demonstrate a strong or weak approach to enforcement, and because it represents one of the few areas that has not been touched by what is normally an extensive body of common law.
B. Descriptive Analysis and Implications

After all of the states were rated on each of the seven questions for what the status quo was of noncompete enforcement at the 1991 and 2009 time periods, the data was weighted, and a ranking for each state during the relevant time period was calculated. States with a low numerical ranking are considered to have the strongest noncompete policy regime. In both cases, Florida ranked as the jurisdiction with the strongest enforcement laws and attendant policy. On the other end of the enforcement spectrum, in both 1991 and 2009 North Dakota and California—the states with the anti-noncompete enforcement statutes without exceptions for any post-employment restrictions—ranked fifty-one and fifty, respectively. A table summarizing these rankings and a calculation of each state’s net positive or negative change in ranking is provided in Figure 1, *Strength of Enforcement Ranking Change (1991-2009).*

A review of the rankings and the overall data for the most recent 2009 observation reveals that eighteen states (approximately 35%) have noncompete legislation of some sort. To get a sense of the distribution of the raw scores in relation to the rank of each state Figure 2, *Strength of Enforcement Ranking (2009) with Relative Distribution Highlighted,* visually shows the distribution using a color scheme (green for a fully strong noncompete enforcement policy, shades of yellow for moderate enforcement, and red for little or no enforcement).

From the 2009 ranking data, forty-nine states (96%) and the District of Columbia allow some sort of noncompete enforcement. Within that broad range of enforcing states, twelve states (20%) strongly enforce noncompetes (based on a range of “strong” raw scores from 410 to 470, with New Mexico at a raw score of 410 through Florida at a raw score of 470). At the bottom of the rankings, North Dakota received a raw score of zero and California received a raw score of thirty-one.

If the nine states (18%) at the bottom of the rankings that are generally weak enforcing states are excluded, the remaining thirty middle-ranked states (60%) are moderately enforcing jurisdictions. This indicates that despite some clustering on the margins, most jurisdictions fall into the moderate enforcing category. Nonetheless, even the majority of the nine bottom-ranked states still have some level of enforcement in certain situations, which reinforces the fact that the vast majority of states allow post-employment noncompetes of some kind. In other words, the majority of states have a noncompete enforcement policy that places at a relatively

---

93. The raw ratings data will be made freely available electronically. Thus, the weights assigned to the various categories of enforcement indicators, while chosen carefully for this paper, can easily be modified by other researchers to hone in on specific research questions and variables.
moderate level among the other jurisdictions.

Another graph, Figure 3, *Strength of Enforcement Ranking, Comparison of Change (1991-2009)*, provides a side-by-side view of the changes in state rankings from 1991 to 2009. Many of the states, as shown in other figures, retained the same basic range of rank at both time periods. However, there are a few notable outliers that have indicated significant changes in their level of noncompete enforcement policy. For instance, Georgia moved thirty spots toward California (i.e., less enforcement) while Louisiana saw a near opposite change in rank of twenty-nine spots toward more enforcement.

Other notable changes in state’s rankings between 1991 and 2009 are found in the states of Idaho (moved to five from twenty-eight), Vermont (moved to fifteen from thirty-five), Iowa (moved to seven from twenty-two), and Massachusetts (moved to eighteen from seven). These outliers and their direction of change can also be seen in the scatter plot graphs of Figure 4, *1991 rank score against 2009 rank score*, and Figure 5, *1991 raw scores against 2009 raw scores*. Both Figure 4 and Figure 5 also show that overall the scores are generally higher in 2009 than 1991, providing evidence of a general drift toward more enforcement in the United States in the aggregate. This is, perhaps, due to the greater formalization of noncompete policy in the states and a growing collection of observable cases of noncompete litigation.

Figures 6 through 12 show the frequency of scores across each of the seven individual noncompete-related questions that were drawn during data collection. Noteworthy is that while some of the graphs show high instances of median-level scores, Question 4 (see Figure 11) (allowing the “blue pencil” modification of terms) and, in particular, Question 8 (see Figure 12) (if the circumstances of the employee’s departures impacts enforcement) show that there are important indicators of a state’s enforcement policy that are not yet even addressed by many states.

To get another view of the ranking and strength of enforcement data that provides a spatial, geography-based view of the distribution of enforcement, the enforcement “heat” mapping of weak-to-moderate-to-strong levels of enforcement was added to a map of the United States. The maps in Figure 13 (1991) and Figure 14 (2009) provide a visual sense of where states rank with regard to their geographic neighbors. Interestingly, based on a plain review of the maps there appears to be no dramatic geographic groupings of states with similar levels of enforcement. The maps also provide a view of the snapshot of each period that, when compared, does not provide evidence of dramatic change over the eighteen-year period. Also noteworthy is that the maps do not provide support for any anecdotal sense from legal practitioners that noncompete enforcement necessarily weakens west of the Mississippi River.
V. APPLYING THE IMPLICATIONS TO ASSUMPTIONS ABOUT NONCOMPETES AND A MARKET FOR LAW

Based on the findings and implications presented in the previous section, what insight does this research provide into assumptions about noncompetes and about arguments about the growing role of noncompetes in a market for law? Initially, there are some interesting outlier states that experience drastic changes in one direction (particularly Louisiana and Georgia), but most states remain generally in the same range of enforcement (i.e., a moderate range) after the eighteen-year period.

However, there is a measurable drift of the aggregate policies in the United States toward greater enforcement. This trend gives some support to Professor Glynn’s thesis that states will enter a market for law that will have participating jurisdictions rendering employer-favorable rulings for the cases they do choose to adjudicate. This is also consistent with conclusions reached by Professors Garrison and Wendt about the general increase in enforcement across the United States.

Nonetheless, the states that do not enforce or have rather weak enforcement are very much in the minority. The states that have aggressive pro-enforcement policies and laws favoring noncompetes are also on the margins. Thus, the majority of states have followed a moderate course that seems to comport with traditional noncompete aesthetics of moderation through narrowly tailored and balanced—and reasonable—protectable interests that foster business investments in workers’ human capital. In this sense, Professor Glynn’s assertion that a prerequisite to “[e]nhanced employer demand for state employment law” will arise when “there are substantial differences in state legal regimes” may still be accurate, if not occurring at this time.94 However, while there is some variance among states on the margins, this research does not provide support for an assertion that there is currently a movement toward significant differences among many jurisdictions. In support of this conclusion is an observation that while a small handful of states have adopted industry-specific noncompete policies to address noncompetes for on-air broadcasters, these have not proliferated, nor have other industries successfully lobbied for noncompete law exceptions to benefit their narrow interests.95

Yet Glynn’s insights about the place of noncompetes in a market for law are not without merit in the sense that he predicts this shift will continue and that some states, like Delaware, may have the leverage to

94. Glynn, supra note 7, at 1385.
exploit a market for noncompetes if they chose to do so.\textsuperscript{96} The results of the study described herein do not support the sort of polarization or drastic changes that might mark a race to the bottom toward either end of the enforcement spectrum. In any event, the trend for some states to adopt brand new or revised statutes addressing subtleties of enforcement, such as limiting the permissible scope of covered employees based on salary floors, is evidence that the law of noncompete enforcement is very much being debated and refined by the states. The point is that at this moment and since the early 1990s, there is not convincing evidence in this research of a sea change in the manner in which states interact with business interests in a race to the bottom. Evidence for that dramatic trend would be present if, for instance, this research revealed that many states were noticeably increasing the strength of their enforcement or if numerous legislative changes were made to reflect industry lobbying efforts.

VI. IMPLICATIONS FOR POLICYMAKERS, BUSINESS, AND INDIVIDUAL EMPLOYEES

Despite repeated calls for the abandonment of any sort of noncompete enforcement from some quarters, the data shows that most states enforce noncompetes and that they are not becoming more California-like in their approach. In fact, the opposite is somewhat true because in the aggregate enforcement is increasing across the country. In light of the research presented above and conclusions about the state of noncompete enforcement across the United States, the next issue to address is what policymakers, the courts, businesses, and employees should do with these conclusions. Also, what other research is needed on this topic?

A. Recommendations for Policymakers

For the state legislatures and the courts it seems that there is indeed room to both develop more thoughtful, modern policies and to differentiate their states from other peer jurisdictions. If, indeed, a state chooses to consciously modify its current approach to enforcement and enter a race to attract business based on its noncompete policy, this research provides a new dimension of information to show a state where it stands in relation to states it wants to emulate or to avoid. In other words, these findings will assist a state by letting it know where it ranks, thereby giving it some needed context to determine where it stands in relation to other states, based on industry, geography, or a business development ambition, instead

\textsuperscript{96} See Glynn, supra note 7, at 1432 (arguing that Delaware is “well positioned” to engage in competition for “NCA business,” as are potentially other states such as New York).
of having a haphazard approach to a potential race to the bottom.

In that sense, the fact that this research fills a void in the literature by providing a comprehensive comparison across states is crucial to jurisdictions that are examining their policies on knowledge spillovers and employee mobility—and potential alternatives to noncompetes. Even where noncompetes are not an issue because they are disallowed, as in Silicon Valley, firms come up with workaround solutions to address fears that their competitors will learn by hiring away their top talent\textsuperscript{97} or other ways to mimic noncompetes.\textsuperscript{98} Accordingly, a state legislature is wise to proactively address these alternatives head on.

Another group of important and influential employment law policymakers that will find this research useful is the drafters and opponents of the Restatement of Employment Law (3rd), which is currently under revision and discussion by members of the American Law Institute (“ALI”). For several years, legal scholars in employment law have critiqued the approach and even the mere idea of a new Restatement of Employment Law.\textsuperscript{99} Perhaps the apogee of this criticism arrived with a motion at the ALI’s 2008 national meeting on behalf of the Labor Law Trust Group to stop the Restatement development process. That motion was made alongside an open letter signed by 66 leading employment and labor law professors indicating that they do not support the endeavor and to “strongly urge” the ALI “to terminate this project.”\textsuperscript{100} In sum, the

\textsuperscript{97} See, e.g., Miguel Helft, Unwritten Code Rules Silicon Valley Hiring, N.Y. TIMES, July 3, 2009, at B11 (reporting on a U.S. Department of Justice antitrust investigation into Silicon Valley firms such as Apple, Microsoft, Google, Genentech, Intel, and Yahoo related to evidence that firms have unwritten agreements not to pursue employees at other firms, particularly partner firms).

\textsuperscript{98} Commentators are also arguing for alternatives to covenants not to compete, such as Garden Leave and training cost repayment from the new employer, as a way of addressing the employer, employee, and innovation concerns over labor mobility and human capital investment. See, e.g., Brandon S. Long, Note, Protecting Employer Investment in Training: Noncompetes vs. Repayment Agreements, 54 DUKE L. J. 1295 (2005) (arguing that repayment agreements are sensible alternatives to traditional noncompetes because such agreements offer employers protection in lockstep with the cost of the actual training).

\textsuperscript{99} See, e.g., Rachel Arnow-Richman, Response to Working Group on Chapter 2 of the Proposed Restatement of Employment Law: Putting the Restatement in its Place, 13 EMP. RTS. & EMP. POL’Y J. 143, 146 (2009) (citations omitted) (“What we have seen is a widely documented trend toward short term employment, the rise of contingent labor, the rollback of employer sponsored health plans and benefits, a reversion to external labor market practices, and, more recently, the most significant economic downturn since the Great Depression”). See also Matthew W. Finkin, Second Thoughts on a Restatement of Employment Law, 7 U. PA. J. LAB. & EMP. L. 279, 280 (2005) (doubting that a Restatement of Employment Law would have the ability to clarify existing employment nor successfully push for genuine law reform).

opposition stems from a belief, “that the velocity and direction of legal change in the employment relationship is incapable of being addressed by a Restatement, that the Restatement method, if it proves influential (as the Institute would surely wish it to be), will stultify legal experimentation and growth.”

The research in this article presents a new and detailed picture of noncompete enforcement across the states, which is an issue that is of key importance to the employment relationship at the heart of the Restatement controversy. Accordingly, the study’s conclusion that states are still exploring and honing their approach to the nationally important issue of noncompete enforcement gives credence to the opposition’s criticism that experimentation in at least this area of employment law is alive and well at the state level.

B. Recommendations for Future Research

While the implications herein are useful to help dispel certain assumptions about modern noncompete policy across the United States in terms of trends and where states rank, the conclusions also raise other questions worthy of further investigation. For instance, follow-on empirical work based on these initial descriptive statistics is welcome and could feature the inclusion of several other variables related to issues of industry, worker education, salary, and access to knowledge that, combined with information about enforcement distribution, will develop a picture of mobility among certain types of workers. A missing component of the existing noncompete research is statistical information on the actual number of these agreements in place at various times within defined industries and jurisdictions. Unfortunately, this is not easily obtainable because most noncompetes are not publicly reported or catalogued. This information would be a useful way to see trends and concretely gauge the use of noncompetes. Along those lines, once the depth of the use of noncompetes is clearer, then it is possible to make a more comprehensive evaluation about the propriety of these contracts when used for certain types of workers or specific industries.

This understanding would be ultimately useful in that it will better inform policymakers who, like those in states which are proposing graduated enforcement of noncompetes based on an employee’s wages, are still experimenting with new policies. More research is also needed to determine the extent of how the strength of enforcement impedes otherwise socially beneficial knowledge spillovers. A related issue that warrants exploration is the extent to which variances in noncompete enforcement

101. Id. at 2.
among the states drives labor flows related to a market for law and if those differences actually foster employer abuse and overreaching at the expense of employees.

C. Recommendations for Business and Employees

The issue of the strength of noncompete enforcement of a specific jurisdiction implicates both employees and employers, but tends to do so in opposite ways. In the case of these implications concerning noncompete enforcement, it will impact the ability of employees and employers to predict the likelihood that mobility will be hindered in a certain state. It will also provide both constituencies with more information about the value of bargaining for choice of law and forum provisions during contract negotiations.

The national picture of noncompete enforcement also allows these groups to better recognize the limitations of non-compete contracts, particularly in light of the strength of various jurisdictions when one party has the initial opportunity to trigger the legal coverage of a state favorable to their litigation goals. For business, the implications of this study will clearly illustrate the state of play of noncompete enforcement and thus increase the likelihood that a firm will effectively consider noncompete policy implications in making strategic human capital-related decisions. For example, this research can better inform a firm about where and when to use covenants not to compete and where and when to use other legal and business mechanisms to accomplish similar business goals.

VII. CONCLUSION

Beyond the legal research on noncompetes and the market for law phenomenon, there is an intuitively derived understanding of a market for noncompete policies, albeit one not clearly based on documented

102. This increased awareness that legal strategy matters for strategic management and for sustaining competitive advantage is consistent with trends in the management and legal studies literature. See, e.g., Constance E. Bagley, Winning Legally: The Value of Legal Astuteness, 33 ACAD. MGMT. REV. 378 (2008) (detailing managers’ abilities to use business laws to craft efficient market strategies); David Orozco, Legal Knowledge as an Intellectual Property Management Resource, 47 AM. BUS. L.J. 687 (discussing the value of legal knowledge as a foundation for strategic behavior).

103. For the legal practitioner’s perspective and related advice on the proper use of noncompetes by employers, see Robert B. Gordon, Analysis and Perspective: Advice for Employers in Using Noncompete Agreements to Retain Employees, 78 U.S. L. Wk. 2231 (Oct. 27, 2009). “In short, the best noncompete is the one that can be successfully enforced; and that means drafting them to close the most commonly claimed loopholes. . . . [and] [t]he best strategy for talent retention is the one that motivates an employee with rewards if he stays, not the one that threatens him with legal risks if he leaves.” Id. at 2231-32.
However, based on the evidence discussed above, it is not at all clear that states have yet to fully appreciate the potential gains from marketing their noncompete laws or to engage in the feared race to the bottom that would be a feature of a true market for law.

The implications for law and business discussed in this article will help address gaps in the literature about the relative enforcement of noncompete agreements and provide much needed additional context to policymakers, as well as employers and employees, about the trends in the market for employment law and the status of noncompete policy. Moreover, future researchers will now have a more well-crafted and detailed tool with which to evaluate the role of noncompetes in crucial and evolving areas of law and policy such as trade secret protection, the preservation of goodwill, and the impact of employee mobility across state boundaries.

104. For example, see the passionately argued concerns about job loss to non-enforcing states as voiced by state-level employee advocates such as Mantell, supra note 1, and accompanying text.
APPENDIX OF TABLES AND FIGURES

Fig. 1. Strength of Enforcement Ranking Change (1991-2009)
(1=strongest; 51=weakest)

<table>
<thead>
<tr>
<th>State Name</th>
<th>1991 Rank</th>
<th>2009 Rank</th>
<th>Change in Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alabama</td>
<td>12</td>
<td>19</td>
<td>7</td>
</tr>
<tr>
<td>Alaska</td>
<td>48</td>
<td>48</td>
<td>0</td>
</tr>
<tr>
<td>Arizona</td>
<td>40</td>
<td>36</td>
<td>-4</td>
</tr>
<tr>
<td>Arkansas</td>
<td>49</td>
<td>49</td>
<td>0</td>
</tr>
<tr>
<td>California</td>
<td>50</td>
<td>50</td>
<td>0</td>
</tr>
<tr>
<td>Colorado</td>
<td>20</td>
<td>26</td>
<td>6</td>
</tr>
<tr>
<td>Connecticut</td>
<td>4</td>
<td>3</td>
<td>-1</td>
</tr>
<tr>
<td>Delaware</td>
<td>34</td>
<td>26</td>
<td>-8</td>
</tr>
<tr>
<td>Dist. of Colum.</td>
<td>35</td>
<td>38</td>
<td>3</td>
</tr>
<tr>
<td>Florida</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Georgia</td>
<td>13</td>
<td>43</td>
<td>30</td>
</tr>
<tr>
<td>Hawaii</td>
<td>41</td>
<td>30</td>
<td>-11</td>
</tr>
<tr>
<td>Idaho</td>
<td>28</td>
<td>5</td>
<td>-23</td>
</tr>
<tr>
<td>Illinois</td>
<td>5</td>
<td>4</td>
<td>-1</td>
</tr>
<tr>
<td>Indiana</td>
<td>13</td>
<td>21</td>
<td>8</td>
</tr>
<tr>
<td>Iowa</td>
<td>22</td>
<td>7</td>
<td>-15</td>
</tr>
<tr>
<td>Kansas</td>
<td>9</td>
<td>2</td>
<td>-7</td>
</tr>
<tr>
<td>Kentucky</td>
<td>10</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>Louisiana</td>
<td>42</td>
<td>13</td>
<td>-29</td>
</tr>
<tr>
<td>Maine</td>
<td>24</td>
<td>21</td>
<td>-3</td>
</tr>
<tr>
<td>Maryland</td>
<td>23</td>
<td>15</td>
<td>-8</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>7</td>
<td>18</td>
<td>11</td>
</tr>
<tr>
<td>Michigan</td>
<td>15</td>
<td>15</td>
<td>0</td>
</tr>
<tr>
<td>Minnesota</td>
<td>25</td>
<td>34</td>
<td>9</td>
</tr>
<tr>
<td>Mississippi</td>
<td>25</td>
<td>26</td>
<td>1</td>
</tr>
<tr>
<td>Missouri</td>
<td>3</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>Montana</td>
<td>47</td>
<td>46</td>
<td>-1</td>
</tr>
<tr>
<td>Nebraska</td>
<td>44</td>
<td>44</td>
<td>0</td>
</tr>
<tr>
<td>Nevada</td>
<td>38</td>
<td>33</td>
<td>-5</td>
</tr>
<tr>
<td>N. Hampshire</td>
<td>17</td>
<td>24</td>
<td>7</td>
</tr>
<tr>
<td>New Jersey</td>
<td>11</td>
<td>7</td>
<td>-4</td>
</tr>
<tr>
<td>New Mexico</td>
<td>6</td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td>New York</td>
<td>35</td>
<td>42</td>
<td>7</td>
</tr>
<tr>
<td>North Carolina</td>
<td>29</td>
<td>35</td>
<td>6</td>
</tr>
<tr>
<td>North Dakota</td>
<td>51</td>
<td>51</td>
<td>0</td>
</tr>
</tbody>
</table>
## Fig. 2. Strength of Enforcement Ranking (2009) with Relative Distribution Highlighted (1 = strongest; 51 = weakest)

<table>
<thead>
<tr>
<th>State Name</th>
<th>1991 Rank</th>
<th>2009 Rank</th>
<th>Change in Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ohio</td>
<td>25</td>
<td>31</td>
<td>6</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>46</td>
<td>47</td>
<td>1</td>
</tr>
<tr>
<td>Oregon</td>
<td>17</td>
<td>24</td>
<td>7</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>29</td>
<td>23</td>
<td>-6</td>
</tr>
<tr>
<td>Rhode Island</td>
<td>39</td>
<td>37</td>
<td>-2</td>
</tr>
<tr>
<td>South Carolina</td>
<td>42</td>
<td>38</td>
<td>-4</td>
</tr>
<tr>
<td>South Dakota</td>
<td>15</td>
<td>11</td>
<td>-4</td>
</tr>
<tr>
<td>Tennessee</td>
<td>17</td>
<td>19</td>
<td>2</td>
</tr>
<tr>
<td>Texas</td>
<td>21</td>
<td>32</td>
<td>11</td>
</tr>
<tr>
<td>Utah</td>
<td>2</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Vermont</td>
<td>35</td>
<td>15</td>
<td>-20</td>
</tr>
<tr>
<td>Virginia</td>
<td>29</td>
<td>38</td>
<td>9</td>
</tr>
<tr>
<td>Washington</td>
<td>8</td>
<td>13</td>
<td>5</td>
</tr>
<tr>
<td>West Virginia</td>
<td>44</td>
<td>44</td>
<td>0</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>33</td>
<td>41</td>
<td>8</td>
</tr>
<tr>
<td>Wyoming</td>
<td>32</td>
<td>26</td>
<td>-6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>State Name</th>
<th>Rank</th>
<th>State Name</th>
<th>Rank</th>
<th>State Name</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Florida</td>
<td>1</td>
<td>Massachusetts</td>
<td>18</td>
<td>North Carolina</td>
<td>35</td>
</tr>
<tr>
<td>Kansas</td>
<td>2</td>
<td>Alabama</td>
<td>19</td>
<td>Arizona</td>
<td>36</td>
</tr>
<tr>
<td>Connecticut</td>
<td>3</td>
<td>Tennessee</td>
<td>19</td>
<td>Rhode Island</td>
<td>37</td>
</tr>
<tr>
<td>Illinois</td>
<td>4</td>
<td>Indiana</td>
<td>21</td>
<td>District of Columbia</td>
<td>38</td>
</tr>
<tr>
<td>Idaho</td>
<td>5</td>
<td>Maine</td>
<td>21</td>
<td>South Carolina</td>
<td>38</td>
</tr>
<tr>
<td>Utah</td>
<td>6</td>
<td>Pennsylvania</td>
<td>23</td>
<td>Virginia</td>
<td>38</td>
</tr>
<tr>
<td>Iowa</td>
<td>7</td>
<td>New Hampshire</td>
<td>24</td>
<td>Wisconsin</td>
<td>41</td>
</tr>
<tr>
<td>Missouri</td>
<td>7</td>
<td>Oregon</td>
<td>24</td>
<td>New York</td>
<td>42</td>
</tr>
<tr>
<td>New Jersey</td>
<td>7</td>
<td>Colorado</td>
<td>26</td>
<td>Georgia</td>
<td>43</td>
</tr>
<tr>
<td>Kentucky</td>
<td>10</td>
<td>Delaware</td>
<td>26</td>
<td>Nebraska</td>
<td>44</td>
</tr>
<tr>
<td>South Dakota</td>
<td>11</td>
<td>Mississippi</td>
<td>26</td>
<td>West Virginia</td>
<td>44</td>
</tr>
<tr>
<td>New Mexico</td>
<td>12</td>
<td>Wyoming</td>
<td>26</td>
<td>Montana</td>
<td>46</td>
</tr>
<tr>
<td>Louisiana</td>
<td>13</td>
<td>Hawaii</td>
<td>30</td>
<td>Oklahoma</td>
<td>47</td>
</tr>
<tr>
<td>Washington</td>
<td>13</td>
<td>Ohio</td>
<td>31</td>
<td>Alaska</td>
<td>48</td>
</tr>
<tr>
<td>Maryland</td>
<td>15</td>
<td>Texas</td>
<td>32</td>
<td>Arkansas</td>
<td>49</td>
</tr>
<tr>
<td>Michigan</td>
<td>15</td>
<td>Nevada</td>
<td>33</td>
<td>California</td>
<td>50</td>
</tr>
<tr>
<td>Vermont</td>
<td>15</td>
<td>Minnesota</td>
<td>34</td>
<td>North Dakota</td>
<td>51</td>
</tr>
</tbody>
</table>
Fig. 3. Strength of Enforcement Ranking, Comparison of Change (1991-2009) (1=strongest; 51=weakest)
Fig. 4. 1991 rank score plotted against 2009 rank.

Fig. 5. 1991 raw score plotted against 2009 raw score.
Fig. 6. Question 1 Frequency Distribution of the Number of States with Each Ratings

Fig. 7. Question 2 Frequency Distribution of the Number of States with Each Ratings
Fig. 8. Question 3 Frequency Distribution of the Number of States with Each Ratings

Fig. 9. Question 3(a) Frequency Distribution of the Number of States with Each Ratings
Fig. 10. Question 3(b)/3(c) Frequency Distribution of the Number of States with Each Ratings

Fig. 11. Question 4 Frequency Distribution of the Number of States with Each Ratings
Fig. 12. Question 8 Frequency Distribution of the Number of States with Each Rating.
Fig. 13. 1991 Geographic Distribution of the Strength of Enforcement Ranking (with raw scores per state)
Fig. 14. 2009 Geographic Distribution of the Strength of Enforcement Ranking (with raw scores per state)