Outsourcing at Will: The Contribution of Unjust Dismissal Doctrine to the Growth of Employment Outsourcing

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Over the past 3 decades, the U.S. Temporary Help Services (THS) industry grew five times more rapidly than overall employment. Contemporaneously, courts in 46 states adopted exceptions to the common law doctrine of employment at will that limited employers' discretion to terminate workers and opened them to litigation. This article assesses the contribution of "unjust dismissal" doctrine to THS employment specifically, and outsourcing more generally, finding that it is substantial—explaining 20% of the growth of THS between 1973 and 1995 and contributing 500,000 additional outsourced workers in 2000. States with smaller declines in unionization also saw substantially more THS growth.

Between 1979 and 1995, the Temporary Help Supply (THS) industry in the United States grew at 11% annually—over five times more rapidly

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Table 1
THS Employment by Geographic Region and Year, 1979–2000: Employed Workers (1,000s) and Percentage of Nonfarm Employment

	Northeast (9 States) (%)	Midwest (12 States) (%)	South (16 States) (%)	West (13 States) (%)	Total (50 States) (%)
1979	114.5	104.4	104.9	109.1	432.9
	.66	.51	.46	.78%	.58
1983	111.1	75.8	112.0	97.1	396.0
	.65	.42	.48	.69	.55
1987	198.9	188.5	234.2	172.4	794.1
	1.00	.90	.86	1.01	.93
1991	203.5	280.3	480.8	260.6	1,225.2
	1.02	1.22	1.61	1.36	1.33
1995	352.3	571.0	970.1	495.5	2,388.9
	1.73	2.12	2.87	2.42	2.39
2000					3,887.0
					2.95

SOURCES.—County Business Patterns, 1979–95; Bureau of Labor Statistics National Employment, Hours, and Earnings, available at http://www.bls.gov.
NOTE.—Percentage of nonfarm employment appears below employment count.

than U.S. nonfarm employment—and increased its daily head count from 435,000 to 2.4 million workers (table 1). During these same years, what many have termed a revolution in jurisprudence toward worker dismissal occurred as U.S. state courts recognized exceptions to the common law doctrine of employment at will. That doctrine, which had been recognized throughout the United States by 1953, held that employers and employees have unlimited discretion to terminate their employment relationships at any time for any reason unless explicitly contracted otherwise. The recognition of exceptions to employment at will by 46 state courts between 1973 and 1995 limited employers' discretion to terminate workers and opened them to potentially costly litigation.[1] This article assesses whether these contemporaneous phenomena—the erosion of employment at will and the rapid growth of THS—are causally related. More generally, the article answers the question of whether changes to the legal environment surrounding worker dismissal are in part responsible for the growth of "contingent" work arrangements in the U.S. economy, the most prominent example of which is temporary help employment. The answer appears to be yes.

The analysis proceeds as follows: Section I introduces the three classes of common law exception to the at-will doctrine, evaluates their impli-

[1] Of course, employers' power to terminate at will has not been absolute for some time. Major pieces of federal legislation that protect the employment rights of minorities, union members, persons over the age of 40, and persons with disabilities include Title VII of the Civil Rights Act of 1964, the Civil Rights Act of 1991, the National Labor Relations Act, the Age Discrimination in Employment Act of 1967, and the Americans with Disabilities Act of 1992.

cations for THS and other "outsourced" employment, and concludes that one exception in particular—the implied contractual right to continued employment ("implied contract")—provides a compelling incentive for firms to utilize temporary help workers. Section II considers a simple model of employment outsourcing in the presence of positive firing costs. The key implication of the model is that employers are likely to respond to mandated firing costs by outsourcing jobs that require limited firm-specific capital, an implication that aptly describes the occupations typically supplied by THS. Section III describes the data and empirical strategy, and Section IV provides empirical results. Section V concludes.

A key finding of the present analysis is that state courts' adoption of the implied contract doctrine has resulted in approximately 22% excess temporary help employment growth in adopting states. In addition, states experiencing smaller declines in unionization saw substantially greater THS growth. Unjust dismissal doctrines did not significantly contribute to employment growth in other business service industries, however. In net, the results indicate that changes to the employment-at-will doctrine explain as much as 20% of the growth of THS between 1973 and 1995 and account for 365,000–530,000 additional workers employed in THS on a daily basis as of 2000.

The present analysis is related to empirical analyses by Dertouzos and Karoly (1992), Morriss (1995), Kugler and Saint-Paul (2000), and Autor, Donohue, and Schwab (2001), who explore the impacts of unjust dismissal doctrine on overall employment levels and growth, job termination probabilities, and job-to-job flows; to recent work evaluating the impacts of civil rights legislation on the employment of the disabled (DeLeire 2000; Acemoglu and Angrist 2001) and minorities (Donohue and Heckman 1991; Oyer and Schaefer 2000, 2002); and to research on the impact of labor-market flexibility on labor force participation, employment, and unemployment in countries in the Organization for Economic Cooperation and Development (OECD; Lazear 1990; Di Tella and MacCulloch 1998; Blanchard and Portugal 2001). Morriss (1995) offers a thorough review of case law affecting employment at will, Epstein (1984) presents the major legal and economic arguments supporting the at-will doctrine, Segal and Sullivan (1997*a*) provide a comprehensive discussion of the growth of THS, and Abraham and Taylor (1996) and Houseman (2001) provide insightful analyses of the determinants of firms' use of flexible staffing arrangements.

The unique contribution of the current study is to explore theoretically and empirically the impact that unjust dismissal doctrine has had on employment outsourcing. Lee (1996) and Segal and Sullivan (1997*a*) suggest a possible causal connection between the growth of THS and the decline of employment at will but do not investigate the question empirically. In independent contemporaneous work, Miles (2000) explores the impact of

common law exceptions to employment at will on a variety of labor-market aggregates and reports results for temporary help employment that are largely consistent with those presented here.[2]

I. The Decline of Employment at Will

The employment-at-will doctrine was most famously articulated by the Tennessee Supreme Court in 1884, which wrote that "men must be left, without interference to buy and sell where they please, and to discharge or retain employees at will for good cause or for no cause, or even for bad cause without thereby being guilty of an unlawful act per se" (*Payne v. Western & Atlantic Railroad, Tennessee* 1884). Although largely uncontroversial at the turn of the century, the judicial consensus behind the at-will doctrine eroded rapidly beginning with the publication of an extraordinarily influential law review article by Blades (1967; see Morriss 1994). Prior this time, only one state (California in 1959) had recognized an exception to employment at will. But in the subsequent 2 decades, 44 additional states recognized exceptions, as is shown in figure 1. By 1992, 46 of 50 states had amended the at-will doctrine, in 45 of these cases judicially and in one case legislatively.[3] The tenor of these judicial decisions is exemplified in a court opinion from the 1985 Texas case of *Sabine Pilots, Inc. v. Hauck*: "Absolute employment at will is a relic of early industrial times, conjuring up visions of the sweat shops described by Charles Dickens and his contemporaries. The doctrine belongs in a museum, not in our law."

By the early 1990s, state courts had recognized three common law exceptions to the at-will relationship: breach of an implied contractual right to continued employment, terminations contrary to public policy, and violations of an implied covenant of good faith and fair dealing. For reasons discussed below, only the first of these exceptions is likely to be relevant to the outsourcing of employment.

[2] Miles (2000) reports a significant impact of both the "implied contract" and "good faith" doctrines on temporary help employment, although it is shown below that only the first of these correlations is likely to be causal. Beyond this area of overlap, the present article explores the economic incentives for firms to outsource employment to THS and considers why the implied contract doctrine apart from other common law exceptions appears relevant to this choice. Additionally, it assesses the contribution of unjust dismissal doctrines and unionization to THS employment and other business services outsourcing.

[3] Montana is the one state that adopted a statute specifically defining a default employment contract other than employment at will, the Montana Wrongful Discharge from Employment Act of 1987. Interestingly, this legislative action may have been a response to a particularly broad incursion into the at-will doctrine by the Montana courts (cf. Krueger 1991; Morriss 1995).

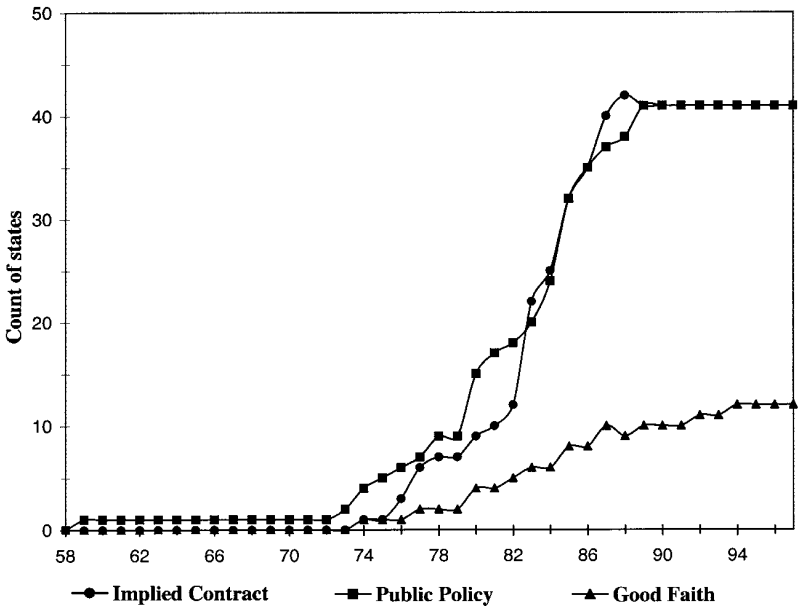

FIG. 1.—Count of states recognizing exceptions to the employment-at-will doctrine, 1958–97.

A. The Implied Contract Exception to Employment at Will

A landmark decision in the recent erosion of employment at will is the 1980 case of *Toussaint v. Blue Cross & Blue Shield*, in which the Michigan Supreme Court held that an employer's indirect statements about the manner in which termination decisions are made can imply legally binding employment contracts.[4] In *Toussaint,* the plaintiff successfully sued for breach of contract by citing an internal personnel policy handbook indicating that it was Blue Cross's policy to terminate employees only for just cause. Although Toussaint was unaware of the handbook when hired, the court held that the handbook implied a binding contract. Courts in 23 other states issued similar decisions over the next 5 years. An equally influential 1981 California case, *Pugh v. See's Candies,* further expanded the implied contract notion by finding that workers are entitled to ongoing employment even in the absence of written or indirect statements if contractual rights are implied via the context of the employment relationship. This context may include, for example, longevity of service, a history of promotion or salary increases, general company policies as exemplified

[4] Full citations for precedent setting cases cited in the text are given in table A1.

by treatment of other employees, or typical industry practices. Cumulatively, these court decisions generated substantial uncertainty surrounding termination, resulting in numerous cases where courts found that employees held implied contractual employment rights that employers had clearly not intended to offer.[5]

Systematic data on the costs of unjust dismissal suits are sparse because fewer than 3% of these suits reach a jury, and the vast majority settle (Jung 1997). Among California implied contract actions studied by Jung, plaintiffs prevailed in 52% of cases, with average and median compensatory damages of $586,000 and $268,000, respectively. In addition to jury awards, legal fees in the cases studied by Dertouzos, Holland, and Ebener (1988) averaged $98,000 in cases where the defense prevailed and $220,000 in cases where the plaintiff prevailed. Underscoring the fact that large transaction costs are the norm, the average net award received by plaintiffs was only 48% of the money changing hands.[6]

Indirect costs are likely to be substantial. The threat of litigation will prompt forward-looking employers to take avoidance actions such as revising employment manuals, limiting the discretion of managers to hire and fire, instigating bureaucratic procedures for documenting and terminating poorly performing employees, and potentially retaining unproductive workers who would otherwise be fired. These steps, while potentially costly, are difficult to quantify.[7] Additionally, since there are no representative data available on the share of terminations leading to unjust dismissal suits, it is not possible to compute a measure of expected direct employer cost.

B. Implications of the Implied Contract Exception for Temporary Help Employment

There is substantial evidence that employers were aware of the changing legal environment and responded to it by attempting to "contract around"

[5] A defendant's attorney interviewed for this research stated that the implied contract doctrine leaves open "the largest room for creativity" on the part of plaintiffs' attorneys because the definition of what constitutes an indirect or contextual statement of contractual rights is open to broad interpretation (personal communication with Barry Guryan, January 14, 2000).

[6] Figures from Dertouzos et al. (1988, table 16) and Jung (1997) are inflated to 1999 dollars using the Personal Consumption Expenditure deflator. Dertouzos et al. do not provide disaggregated data, and hence these figures apply to all unjust dismissal suits rather than just implied contract suits. Both studies use California data, which is most frequently studied because of the state's accessible electronic case reporting system.

[7] Lewin (1987) reports that managers implicated by employee complaints of wrongful treatment may also suffer diminished career advancement, even in instances where the complaint is ultimately unsuccessful. This finding suggests that unjust dismissal doctrines may induce agency problems in which risk-averse managers take unduly costly actions (from the firm's perspective) to avoid litigation.

the implied contract exception. Edelman, Abraham, and Erlanger (1992) document that throughout the 1980s, personnel and professional law journals published a flurry of articles warning employers—often in hyperbolic terms—of the liability risks imposed by unjust dismissal doctrines.[8] The Bureau of National Affairs (1985) found that 63% of employers surveyed in the early 1980s had recently "removed or changed wording in company publications to avoid any suggestion of an employment contract," and 53% of employers had "added wording to applications and handbooks specifying that employment may be terminated for any reason." Sutton and Dobbin (1996) also report that the percentage of firms using "at-will" clauses in employment contracts increased from 0% to 29% between 1955 and 1985.

In practice, however, the courts have made it difficult for employers to contract around the risk posed by implied contract suits. For example, courts have ruled that employers' progressive discipline policies—stipulating that workers will not be fired for poor performance without first receiving successive warnings—demonstrate the intent of an implied contract of ongoing employment. Similarly, courts have taken employers' 401K and other retirement programs as evidence of an expectation of long-term employment. And in 15 states that currently recognize the implied-contract exception, courts have held that signed disclaimers waiving implied contract rights do not, in fact, nullify these rights (Walsh and Schwarz 1996). Perhaps ironically, courts have also ruled that probationary hiring periods can themselves create an implied contract once the probationary period is complete.[9]

These court decisions have not extended to temporary help, however, which remains a relatively "safe" alternative for employers wishing to avoid termination risks associated with the implied-contract exception. Because THS employment is by nature temporary, there is little in the policies or business practices of THS employers that would likely be held by the courts to imply a contractual right to ongoing employment. Nor is there any precedent for finding client firms in violation of implied contracts for terminating workers on assignment through a THS firm (Lenz 1997). Hence, employers in states that have adopted the implied-

[8] The popular press also called attention to these legal developments. For example, a 1985 *Business Week* cover story entitled "Beyond Unions: A Revolution in Employee Rights Is in the Making" warned that "the time is coming when nonunion employees will no longer serve entirely at the employer's will—the so-called employment-at-will doctrine that has prevailed in the United States since the late 1800s. Slowly but inexorably, judicial and legislative law is recognizing that even nonunion employees have an implicit employment contract that is enforceable in the courts" (Hoerr et al. 1985, p. 73).

[9] *Walker v. Northern San Diego County Hospital District* (135 Cal. App. 3d 896, 1982).

contract exception might be expected to face greater incentive to "outsource" employment to THS firms.[10] I discuss this point in more detail below.

C. Other Exceptions to Employment at Will

In addition to the implied contract exception, many state courts have recognized two other exceptions to the at-will doctrine. The public policy exception, currently recognized by 41 states, bars employers from terminating employees for reasons that would contravene a statutory public policy. Essentially, this doctrine makes it illegal to retaliate against employees for upholding the law or exercising their statutory rights, for example, by attending jury duty, whistle-blowing, or refusing to commit a fraudulent act. A second less-widely recognized exception, the implied covenant of good faith and fair dealing, bars employers from terminating employees to deprive them of earned benefits, such as collecting an end-of-year sales bonus or a drawing a pension.[11]

While in theory the public policy and good faith doctrines may have consequences for employer conduct (cf. Dertouzos and Karoly 1992; Verkerke 1995; Morriss 1996; Olson 1997; Miles 2000; Autor et al. 2001), they are less likely to be relevant to outsourcing in general and THS employment in particular. The reason is that violations of these doctrines are actionable regardless of the identity of the employer (whether conventional firm or THS). Additionally, federal courts have ruled that staffing arrangements—which include temporary help—cannot be used to shield companies from civil-rights compliance. Hence, there is little reason to believe that the public policy and good faith exceptions confer a distinct legal advantage to THS firms.[12]

[10] Managers of manufacturing plants interviewed by Ballantine and Ferguson (1999, p. 5) explicitly mention using temporary workers to avoid legal risks. Quoting one interviewee, "We have temporaries here that have been here over a year. . . . We've also had people who have not worked out. We've had sexual harassment. We've had racial issues. We've had some drug issues and man, you get rid of those people fast. You don't have to worry about anything legal. You just end the assignment."

[11] In a handful of states, the public policy exception is construed more broadly to protect any action encouraged by public policy. The good faith exception is also read more broadly in several states to bar all terminations that are in "bad faith."

[12] The civil rights case of *Amarnare v. Merrill Lynch* (611 F. Supp. 344 S.D. N.Y. 1984, aff'd, 770 F.2d 157 2d Cir. 1985) established the "no shielding" precedent. While the common law exceptions to employment at will are distinct from civil rights laws, the Amarnare precedent is likely to apply. Accordingly, a client firm could be held liable for instigating the termination of a THS worker in violation of the public policy or good faith doctrines.

II. A Model of the Impact of Firing Costs on Employment Outsourcing

Why don't firms outsource all of their workers to circumvent firing costs? The hypothesis explored here is that by outsourcing employment, firms forgo productive specific human capital investments (in the sense of Becker 1964) that directly hired workers would otherwise undertake. Since specific capital is only valuable at the current job, workers facing briefer expected tenure make smaller specific capital investments. Recognizing this, firms may optimally precommit to longer tenure by hiring workers directly—particularly for occupations where specific capital is highly productive—even if THS arrangements offer lower firing costs.

Anecdotal evidence suggests that specific capital is indeed relevant to firms' outsourcing decisions. For example, in a study of the productivity consequences of temporary help outsourcing, Kahn (2000, pp. 242–43) writes, "In their decisions about the level of temp use, managers were extremely aware of the kinds of jobs where temps were useful and the kinds of jobs where this was not the case. For instance, one manager noted, 'Temps can describe the products we sell and take orders, but we would never hire a temp to handle customers unsatisfied with the service.' Managers also knew that when company-specific knowledge and experience were needed for the job, temps were inappropriate. . . . When only a modest amount of firm-specific experience was necessary, companies' policies made sure that the temps were well versed in the institutional knowledge and firms' computer systems by using the same temps repeatedly."

To study the impact of outsourcing on specific capital investment more formally, consider the following two-period model of employment where the first period consists of hiring and specific capital investment and the second period consists of production. There is a large number of identical, risk-neutral workers who live for two periods and a large number of firms. In period 1, workers and firms form matches and workers sink firm-specific skills investments $s \in [0, \bar{s}]$ at cost $c(s)$, where $c(\cdot)$ is a convex, strictly increasing, and continuously differentiable function with $c(0) = 0$ and $c'(0) = 0$. Production and wages during this period are normalized to zero. At the close of the first period, the worker-firm pair receives a mean zero match-specific productivity shock, η, which can be thought of as realized match quality. For simplicity, I assume η has a uniform distribution, $\eta \sim U[-z, z]$.

If the worker-firm pair remains intact during the second period, the worker produces output of $Y = \gamma \times s + \eta$, where $\gamma \geq 0$ is the productivity of specific capital investments at the job. If instead the pair splits, the worker receives an outside wage of zero. Additionally, if the worker was hired directly, the firm must pay a firing cost of $\phi > 0$ to terminate

the position. If the firm hired the worker through THS, however, it pays no firing cost ($\phi = 0$).

Since $\gamma \times s$ is the return to firm-specific capital and η is a match-specific shock, neither is competitively priced, and their division will be determined by bargaining. I assume that wages are determined at the start of the second period by a Nash bargain, where the worker's bargaining power is given by the parameter $\beta \in (0, 1)$. If the worker-firm pair is unable to reach a bargain, the worker receives his outside wage of zero and the firm receives $-\phi$. Nash bargaining and risk neutrality imply that, if agreed, the worker's second period wage is:

$$w = \beta(\gamma \times s + \eta + \phi). \tag{1}$$

Three things about this setup deserve comment. First, it is important to stress that ϕ represents a deadweight loss or a payment to an outside party such as a law firm and, hence, is not subject to Coasean compensation.[13] Second, the sole difference between direct hires and THS workers is that firms do not pay ϕ to terminate THS workers. While in reality THS arrangements entail other transaction costs, including a sizable wage markup of 40%–50% (Autor, Levy, and Murnane 1999), I abstract from these details to emphasize that THS does not dominate direct hiring even absent transactions costs. Third, I assume that specific capital investments require observable but nonverifiable worker effort and commitment and are therefore not (fully) contractible.[14] Hence, as in Hashimoto (1981), Hart and Moore (1990), and Prendergast (1992, 1993), firms foster skill investment by rewarding realized productivity rather than by sharing in up-front investment costs. As is well known, if workers and firms can costlessly contract to share the costs and returns to specific skill investments, these investments will be made optimally. In this case, the tradeoff exposited by the model would not be relevant. However, a growing theoretical and empirical literature demonstrates that because worker productivity is typically imperfectly observed by potential employers, human capital investments are likely to deviate significantly from the optimal case studied by Becker 1964 (cf. Acemoglu and Pischke 1999; Autor 2001). Hence, I consider the model germane to employer behavior.

A. The Impact of Firing Costs on Specific Skill Investments

Given the Nash bargain in equation (1), the worker-firm pair will only agree on a wage bargain if there is a positive surplus from continuing the relationship:

$$Y \geq -\phi. \tag{2}$$

[13] Any firing cost that is subject to Coasean compensation would also be present in the wage bargain but would not appear in ϕ.

[14] In other words, the employer is able to observe the worker's specific capital investment, but a court would not.

Satisfaction of equation (2) further implies that $w \geq 0$ and $Y - w \geq -\phi$; a bargain is only feasible if the worker receives a nonnegative wage and the firm receives a continuation benefit at least equal to its firing cost.

Given equations (1) and (2), workers choose specific capital investment to maximize expected utility, which is the difference between expected earnings and the cost of specific capital investment:

$$\max_{s} E(U) = E(w|w \geq 0) \times P(w \geq 0) - c(s). \tag{3}$$

Using the uniform density to calculate expectations for η, the worker's first-order condition for specific capital investment is:

$$c'(s^*) = \frac{\beta\gamma(z + \gamma \times s^* + \phi)}{2z}. \tag{4}$$

This equation will have an interior solution at $0 < s^* < \bar{s}$ provided that $\gamma > 0$ and the training cost function is sufficiently convex.[15] As is visible from equation (4), the worker's skill investment is increasing in both the productivity of specific capital, γ, and in the worker's bargaining power. Critically, for purposes of the model, skill investment also depends positively on the firing cost. Because firing costs reduce the odds of termination in the second period, workers make larger specific skill investments when ϕ is greater.[16]

B. Optimal Firing Costs versus Mandated Firing Costs

Now, consider the firm's trade-off between minimizing firing costs and maximizing specific capital investment. Expected profitability as a function of ϕ is

$$E[\pi(\phi)] = \frac{(1 - \beta)[z + \gamma \times s(\phi) + \phi]^2}{4z} - \phi, \tag{5}$$

where I have written $s(\phi)$ as an explicit function of ϕ to underscore the dependence of specific skill investment on the firing cost. Observe that

[15] For simplicity, I also assume that $\gamma \times s + \phi \leq z$, which ensures that the probability bounds of the uniform distribution are not violated in eq. (4) and elsewhere. This assumption can be relaxed at no substantive cost by rewriting the expectation functions with minimums and maximums at $-z$ and $+z$, respectively.

[16] Note that with a sufficiently skewed density function for η, it is possible to obtain the opposite result—that greater ex ante odds of termination increase worker skill investments. For example, if the probability mass of η were primarily concentrated at a threshold value, workers might invest heavily in specific capital to overcome this threshold. Substantively, because retaining a job using specific capital has a rent attached, added uncertainty could induce workers to make larger precautionary specific skill investments. Because of the unusual assumptions required on η, I consider this case remote.

ϕ enters both the credit and debit side of equation (5). Although ϕ raises the cost of terminating workers, it also raises the expected profitability of those workers who are retained by increasing their incentives to make specific skill investments. This equation indicates that, independent of court mandates, firms may find it optimal to adopt positive firing costs $\phi^*(\gamma) > 0$, particularly for occupations where γ is large. Logically, the gain to firing costs is greater where specific capital investments are more productive (γ large):

$$\frac{\partial^2 \pi}{\partial \gamma \partial \phi} \geq 0. \tag{6}$$

How will firms respond when courts impose firing costs $\tilde{\phi}$? Clearly, if optimal firing costs exceed mandated firing costs ($\phi^*(\gamma) \geq \tilde{\phi}$), then $\tilde{\phi}$ is nonbinding. But if mandated firing costs exceed optimal firing costs ($\tilde{\phi} > \phi^*(\gamma)$), a subset of firms will find it more profitable to outsource despite the forgone specific capital investment. The likelihood that a firm will choose to outsource a given occupation depends directly on the magnitude of $\phi^*(\gamma)$. For occupations where specific capital is quite productive (γ large), the changing legal regime is unlikely to induce outsourcing because firms will have already written contracts more restrictive than $\tilde{\phi}$, and outsourcing these jobs may discourage substantial productive investment. Conversely, for occupations where specific capital is of minimal import, any increase in firing costs may be sufficient to yield employment outsourcing. Hence, the model suggests that firms will primarily respond to court-mandated firing costs by outsourcing those occupations that require the least specific capital.[17]

C. Which Occupations Do Firms Outsource?

Do firms outsource low specific capital occupations to temporary help firms? Workers supplied by THS firms work overwhelmingly in occupations that rely on general, interchangeable skills. For example, low-skilled blue collar and administrative support occupations make up 63% of temporary help employment versus 30% of overall employment.[18] And even among white-collar occupations, THS workers are predominantly found in technical, computer, and medical occupations (such as nursing),

[17] If firing costs are also increasing in γ, then the relative profitability of outsourcing high versus low γ workers will depend on whether the marginal profitability of specific capital investment rises more or less quickly than the marginal firing cost. Since in theory the implied contract exception allows plaintiffs to sue for contractual economic losses (which could include the lost value of specific capital investment), it is plausible that ϕ will depend positively on γ.

[18] Figures are from Cohany (1998), table 6, for operators, fabricators and laborers and administrative support, including clerical occupations.

where again skills are quite general (U.S. Department of Labor 1996, table 2).

To gauge the relevance of this relationship more rigorously, I combine data on the THS share of employment by detailed occupation during 1995–2001 with information on the prevalence of on-the-job training in each occupation (excluding THS).[19] Using these data, I explore whether THS penetration is greater in occupations that receive comparatively little workplace skills training. Specifically, I estimate the equation:

$$\text{THSshare}_j = \alpha + \beta_1 \times \text{Trained}_j + \beta_2 \text{Tenure}_j + \varepsilon_j, \quad (7)$$

where (j) indexes 485 detailed (three-digit) occupations, THSshare is the average share of employment in the occupation supplied by THS firms during 1995–2001, and Trained is the share of (non-THS) workers in the occupation who report receiving skills training at their current jobs. Additionally, I control for mean job tenure in each occupation since omission of this variable could plausibly induce a spurious negative correlation between the share of workers trained at their jobs and the share of workers supplied by THS.

Estimates of equation (7), found in table 2, demonstrate that occupational training levels are a statistically and economically significant determinant of occupational THS penetration. A one-standard-deviation (SD) increase in the share of workers in an occupation receiving training at their jobs is associated with a 25% reduction in the mean occupational THS share. As would be expected, THS employment is also substantially lower in occupations with high average tenure. However, inclusion of the tenure variable only moderately reduces the estimated negative relationship between occupational skills training and THS penetration.

Additional estimates in table 2 replace the aggregate skills training variable with its subcomponents: school-based, formal employer-based, informal on-the-job, and other training. The negative relationship between training and THS penetration is reasonably pervasive across training ven-

[19] The THS occupational penetration measure is calculated from the combined CPS Contingent Worker Supplements for February 1995, 1997, 1999, and 2001 as the fraction of all currently employed workers in an occupation who are paid by a THS agency. Estimates are weighted by the overall fraction of national employment in each occupation in each year averaged over the four CPS Contingent Worker Supplements. Average tenure and training in each occupation are calculated from the January 1991 CPS Job Training Supplement for currently employed workers and are averaged to the occupation level using supplementary survey weights provided by the Bureau of Labor Statistics. All training measures refer to training obtained to improve skills at present job. The 1991 survey provides the most recent year of job training data available from the CPS.

Table 2
The Relationships among Occupational THS Penetration, Job Skills Training, and Employee Tenure in Detailed (Three-Digit) Occupations, 1995–2001

	Means (SD)	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Share of workers trained at current job	.42	−1.21		−.93				
	(.21)	(.30)		(.32)				
Average worker tenure (years)	7.14		−.09	−.06	−.06	−.08	−.09	−.05
	(2.58)		(.02)	(.03)	(.03)	(.03)	(.02)	(.02)
Share receiving in-school training	.16				−1.46			
	(.12)				(.49)			
Share receiving formal company training	.14					−.70		
	(.14)					(.54)		
Share receiving on-the-job training	.16						.63	
	(.07)						(.91)	
Share receiving other training	.08							−4.88
	(.07)							(.88)
Intercept	.93	1.44	1.56	1.75	1.57	1.61	1.49	1.66
	(1.39)	(.14)	(.18)	(.19)	(.18)	(.19)	(.21)	(.18)
R^2		.034	.028	.045	.046	.031	.029	.086

NOTE.—THS = temporary help services. Dependent variable: 100 × share of occupational employment provided by THS; $n = 485$ detailed (three-digit) occupations. Ordinary least squares estimates given, and SEs are in parentheses. Tenure and training at current job are calculated from the January 1991 Current Population Survey Job Training Supplement for currently employed (non-THS) workers averaged to the occupation level using supplementary survey weights provided by the Bureau of Labor Statistics. All training measures refer to training obtained to improve skills at present job. The dependent variable is calculated from the combined CPS Contingent Worker Supplements for February 1995, 1997, 1999, and 2001. Estimates are weighted by the overall fraction of national employment in each occupation in each year averaged over the four CPS Contingent Worker Supplements.

ues. Apparently, firms do not typically outsource jobs in which skill investments are large.[20]

To summarize, in a labor market with imperfectly verifiable skills investments, firms may find it optimal to adopt positive firing costs to encourage workers to invest in specific human capital. Courts' imposition of mandated firing costs causes firms to outsource those jobs for which the mandated costs far exceed the firm's optimum. The jobs most likely

[20] Informal on-the-job training has no relationship with THS penetration. One reason may be that this variable measures a poorly defined construct. The strongest relationship found is for "other" types of training, which is unfortunately difficult to interpret. Recent work by Varejão and Portugal (2001) also confirms these relationships. Using data from Portugal, where firing costs are among the highest in the OECD (OECD 1999), Varejão and Portugal show that firms that invest relatively heavily in worker skill training are substantially less likely to hire workers on temporary contracts and yet are far more likely to convert workers hired on temporary contract to permanent status.

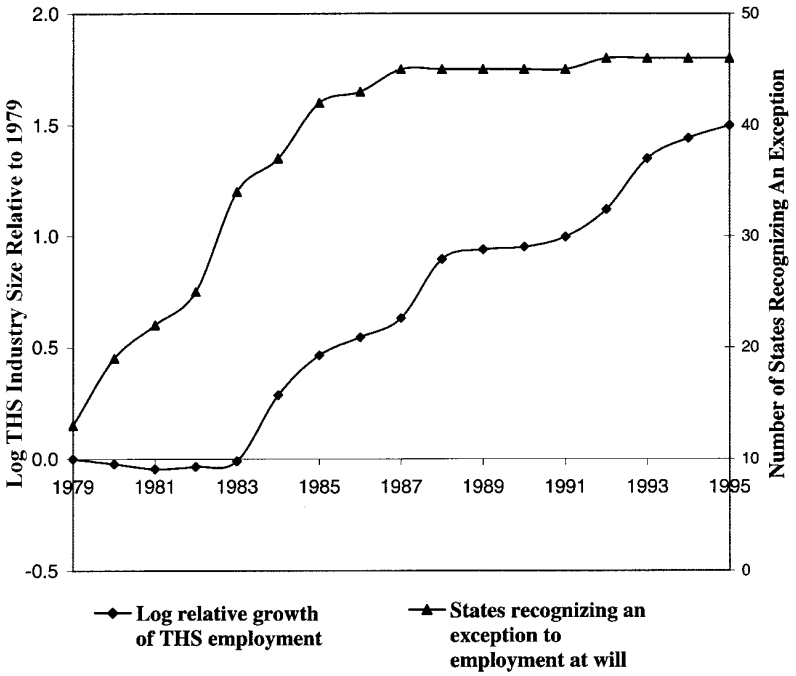

FIG. 2.—Log state temporary help supply industry growth, 1979–95, and number of states recognizing an exception to the employment-at-will doctrine.

to meet this criterion are those that rely heavily on general rather than firm-specific skills—which is a fair description of the occupations supplied by the THS industry. It therefore appears plausible that state courts' adoption of the implied contract exception may increase the demand for THS outsourcing.

III. Empirical Framework and Data

A. Empirical Framework

Figure 2 presents the time series of U.S. states recognizing common law exceptions to employment at will between 1979 and 1995 alongside a plot of the unweighted average log size of THS employment in each state relative to 1979 after adjusting for state employment growth. The figure reveals a striking similarity in the movements of the two series, particularly after 1983. Of course, this relationship may not be causal. By exploiting the fact that the common law exceptions are adopted in different states and years, I assess their causal impact by contrasting THS employment growth in adopting and nonadopting states. Specifically, I es-

timate differences-in-difference (or, more generally, fixed-effects) models of the form:

$$\begin{aligned}\ln(\mathrm{THS}_{jt}) = {} & \alpha + \delta(\text{Common Law Exceptions}_{jt}) \\ & + \lambda(\ln \text{Nonfarm Emp}_{jt}) \\ & + \zeta(\text{Lab Force Demographics}_{jt}) \\ & + \mu_j + \tau_t + \varepsilon_{jt},\end{aligned} \tag{8}$$

where the dependent variable is log temporary help employment in state (j) and year (t). In addition to dummies for adoption of common law exceptions, all estimates include a vector of state dummies, μ_j, that control for mean differences in THS employment across states, and year dummies τ_t, that control for THS growth common to all states. Some models also control for state nonfarm employment, labor force demographics, linear and quadratic state time trends, and region-by-year dummy variables. Because recent analyses demonstrate that pervasive serial correlation in state level difference-in-difference models may produce severely downward-biased standard errors (SE; Bertrand, Duflo, and Mullainathan 2001; Donald and Lang 2001), I use Huber-White SEs clustered at the state level throughout. These SEs are robust to arbitrary forms of error correlation within a state.

In applying the difference-in-difference framework to the data, it is important to consider carefully the "experiment" created by these court decisions. In the ideal case, the court decisions would be independent, random events that varied in timing and had no spillover effects to nonadopting states. If so, equation (8), if correctly specified, will provide an unbiased estimate of the average "treatment" effect, δ.

The present analysis differs from this ideal case. The court rulings should not be viewed as independent events since 79 exceptions were recognized in 1979–95 as opposed to 20 in the preceding 2 decades. Because a movement to revise the at-will doctrine was visibly under way, firms may have responded preemptively, potentially by increasing demand for temporary help. Additionally, if the common law exceptions led to rapid growth of THS in affected states, this is likely to have contributed to the maturation and diffusion of an industry that, historically, was small and unsophisticated (Moore 1965). The differences-in-differences framework will fail to capture these effects if present, thereby potentially understating the total contribution of common law exceptions to the growth of THS.

Alongside these shortcomings, the common law exceptions have two virtues. First, the law changes are discrete. Second, because a court's issuance of a new precedent is an idiosyncratic function of its docket and the disposition of its justices, the timing of a change to the common law

is likely to be in part unanticipated. Hence, even partly unanticipated law changes may generate discontinuous impacts on THS employment. The empirical approach will identify the extent of these discontinuous impacts.[21]

B. Data Sources

To create a time series of state level THS and other business services industry employment, I use data from the Census Bureau's County Business Patterns (CBP) files for the years 1979–95. These data, collected annually from a theoretically complete universe of U.S. employers, provide a count of the total number of workers on THS payrolls during the month of March in each state and year. The CBP data do not distinguish between temporary and permanent employees of THS establishments, and hence line staff are included in these counts, although their employment share is likely to be small. The 1987 revision to the Standard Industrial Classification System (SIC) expanded the Temporary Help Supply Services industry (7362) to a slightly broader aggregate, Personnel Supply Services (7363). To the degree that this expansion is proportional across states, it will be absorbed by year effects.

As control variables for the THS employment equations, I use state-level nonfarm employment counts drawn from the Bureau of Labor Statistics State and Area Employment Statistics. I use the Outgoing Rotation Group (ORG) files of the Current Population Survey (CPS) for 1979–95 to create demographic controls for summary characteristics of the labor force in each state and year, including education, gender, age, marital status, and industry employment composition in one-digit CIC industries. For estimates of state-level union penetration, I use data from Hirsch, Macpherson, and Vroman (2001).

To characterize the state-by-year time series of exceptions to employment at will, I rely on Morriss (1995), who characterizes the relevant case law to 1989. For subsequent years, I combine information from Postic (1994) and the Bureau of National Affairs (1997). The cases cited for each exception are found in appendix A, table A1. The reader should be aware that characterizing the status of the common law is an inexact science, so in order to mitigate concerns about subjectivity, all of the results presented below were also estimated using the characterization developed by Dertouzos and Karoly (1992). The findings are neither qualitatively nor (sub-

[21] In their study of the impact of the decline of employment at will on state (non-THS) employment levels, Dertouzos and Karoly (1992) use a number of measures of states' legal and political climates as instrumental variables for the adoption of common law exceptions. While these factors may influence the probability of an adoption, the assumption that they are otherwise orthogonal to labor market conditions is suspect. Autor et al. (2001) demonstrate the substantial biases introduced by this instrumental variables approach.

Table 3
The Estimated Impact of Common Law Exceptions to Employment at Will on THS Employment, 1979–95

Exceptions Recognized	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Implied contract	.112	.136					.096	.137
	(.099)	(.063)					(.099)	(.062)
Public policy			.135	−.026			.126	−.023
			(.092)	(.060)			(.094)	(.058)
Good faith					.106	−.071	.100	−.079
					(.113)	(.095)	(.113)	(.093)
State and year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State × time trends	No	Yes	No	Yes	No	Yes	No	Yes
R^2	.969	.988	.969	.988	.968	.988	.969	.988

SOURCE.—For dependent variable, see County Business Patterns, various years.
NOTE.—THS = temporary help services. Dependent variable: log state THS employment; $n = 850$. Ordinary least squares estimates given. Huber-White robust SEs in parentheses allow for arbitrary correlation of residuals within each state. For state common law information, see table A1.

stantially) quantitatively affected by the use of this alternative characterization.

Because the THS employment data are assembled from complete establishment counts and, hence, do not contain systematically heteroskedastic measurement error, estimates found in the body of the article are unweighted. Estimates that use state mean employment as weights, found in table B1, are closely comparable to unweighted estimates and are discussed briefly in the text.[22]

IV. Empirical Results

A. Initial Estimates

Summary data on THS employment by region and year are found in table 1, and initial estimates of equation (8) are found in table 3. Each column presents a regression of the log of state THS employment on state and time dummies, state linear time trends (in even-numbered columns), and indicator variables for the three common law exceptions, which are equal to one if an exception is present in a given state and year and zero otherwise. The first two columns contain the estimated impact of the implied contract exception on THS employment. The coefficient of 0.112 in column 1 indicates that after removing mean state THS levels and common year effects, THS employment grew by approximately 11.2 log points more in states adopting the implied contract exception than in nonadopting states. This impact is estimated imprecisely, however. The second column adds 50 state-specific time trends to the model, increasing the point estimate slightly to 13.6 log points and reducing the SE con-

[22] Since the empirical objective is to estimate the average "treatment" effect of common law exceptions on THS in percentage terms, there is also no a priori reason to place more weight on larger states.

siderably. An *F*-test of the hypothesis that the state trends are jointly zero is strongly rejected by the data, and hence I employ these linear trends in most specifications.

Comparable models estimated with the public policy and good faith exceptions are found in columns 3–6. Although both common law exceptions appear initially to contribute to the growth of THS, each point estimate becomes insignificantly negative once state trends are included. It appears that both the public policy and good faith exceptions were adopted in states where THS was already growing rapidly.

The last two columns of table 3 estimate the impact of the three exceptions simultaneously. The point estimate for each common law exception is only minimally affected by the inclusion of the others. The implied contract exception remains robust with a coefficient of 13.7 log points. The public policy and good faith exceptions are again insignificant once state trends are accounted for. Because these doctrines remain insignificant in the remainder of the analysis, they are not reported in subsequent tables, although they are always included in regression models.

B. Does the Specific Doctrine Matter?

The results in table 3 suggest that the implied contract doctrine is the only one of the three exceptions to employment at will to affect THS employment. It is possible, though, that it is not the implied contract doctrine in itself that matters but simply the fact that any exception to employment at will has been adopted (or the accumulation of multiple exceptions). To examine this issue, I begin with the specification from column 8 of table 3 (containing state time trends) and introduce in table 4 a variety of explanatory variables designed to control for the number or existence of legal exceptions in a state. The second column of table 4 shows that merely having any of the three legal exceptions to employment at will does not have an impact on state THS employment. The third column of table 4 reveals that the count of the number of legal exceptions does not correlate with a statistically significant increase in THS employment, nor do dummies indicating the individual presence of one, two, or three exceptions. Indeed, whether one controls for the existence of any legal exception (col. 5) or the count of the number of exceptions (col. 6), the implied contract dummy consistently has a positive and significant coefficient. It appears that the individual legal doctrine—as opposed to the existence of a single or number of exceptions—matters.

C. Controlling for Other Covariates

I next test the robustness of the results by controlling for a richer set of covariates, including state employment, quadratic state time trends, region-by-year effects, and labor-force demographics. Estimates are found

Table 4
The Estimated Impact of Common Law Exceptions to Employment at Will on THS Employment, 1979–95: Testing the Impact of the Number of Doctrines versus the Specific Doctrines

Exceptions Recognized	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Implied contract doctrine	.137				.126	.216	.151
	(.062)				(.067)	(.116)	(.085)
Public policy doctrine	−.023				−.031	.056	.007
	(.058)				(.082)	(.109)	(.057)
Good faith doctrine	−.079				−.084		−.088
	(.093)				(.090)		(.145)
Any doctrine		.071			.022		
		(.065)			(.091)		
Count of doctrines			.034			−.079	
			(.032)			(.093)	
One doctrine				.075			
				(.068)			
Two doctrines				.057			−.055
				(.072)			(.092)
Three doctrines				.153			.029
				(.126)			(.212)
R^2	.99	.99	.99	.99	.99	.99	.99

SOURCE.—For dependent variable, see County Business Patterns, various years.
NOTE.—THS = temporary help services. Dependent variable: log state THS employment; $n = 850$. Ordinary least squares estimates given. Huber-White robust SEs in parentheses allow for arbitrary correlation of residuals within each state. All models include state and year main effects and state specific linear time trends. For state common law information, see table A1.

in table 5. A first specification check addresses the concern that the states that adopted the implied contract were simply those undergoing faster employment growth. This would be true if courts in states with robust economies were particularly inclined to "liberalize" the employment regime. Column 1 of table 5 adds a control for the log of state nonfarm employment to the baseline specification, which obtains a coefficient of 1.5 conditional on trend. Consistent with Segal and Sullivan (1995), who report that THS employment is highly procyclical, the point estimate indicates that THS employment grew or contracted about 50% faster than overall employment within states on a year-to-year basis.[23] In columns 4–6, I add controls for quadratic state time trends and interactions between year dummies and indicators for each of the nine census regions that allow state THS employment to trend nonlinearly and also absorb region-specific shocks. The implied contract coefficient is largely insensitive to these additional controls.

To explore whether the estimates are driven by demographic changes

[23] One cannot, however, reject that the THS employment–overall employment elasticity is equal to 1.0 at the 5% level. Although the nonfarm employment measure also includes THS employment, THS is a small component (0.2%–2%) of the total, and subtracting it from the nonfarm employment measure has no discernable impact on the point estimates.

Table 5
The Estimated Impact of the Implied Contract Exception to Employment at Will on THS Employment, 1979–95, Controlling for State Demographics

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Implied contract exception	.148	.132	.174	.141	.134	.145	.141
	(.057)	(.063)	(.056)	(.068)	(.077)	(.056)	(.068)
Log of state nonfarm employment	1.55	1.59	1.44	1.66	2.01	1.67	1.77
	(.43)	(.64)	(.58)	(.91)	(.43)	(.42)	(.84)
Labor force demographics:							
High school graduates					5.60	.08	.12
					(2.16)	(1.23)	(1.24)
Some college					6.38	.94	1.02
					(2.31)	(1.44)	(1.26)
College +					.04	−1.46	−1.42
					(1.88)	(1.57)	(1.65)
Female					3.09	2.01	1.98
					(2.08)	(1.35)	(1.36)
Married					1.33	1.57	2.60
					(3.34)	(1.80)	(1.99)
Married and female					−2.44	−3.31	−2.83
					(6.07)	(2.64)	(3.15)
Black					−3.19	−2.01	−1.56
					(1.39)	(1.19)	(1.09)
Other nonwhite					−.52	−.14	.29
					(3.69)	(1.74)	(2.65)
Ages 16–24					1.86	−.89	−.29
					(1.79)	(1.06)	(1.39)
Age > 54					.66	.70	−2.73
					(2.31)	(1.31)	(1.66)
Other covariates:							
State × time trends	Yes	Yes	Yes	Yes	No	Yes	Yes
Quadratic state × time^2 trends	No	Yes	No	Yes	No	No	Yes
Region by year dummies	No	No	Yes	Yes	No	No	Yes
R^2	.989	.990	.991	.993	.976	.989	.993

NOTE.—THS = temporary help services. Dependent variable: log state THS employment; $n = 850$. Ordinary least squares estimates given. Huber-White robust SEs in parentheses allow for arbitrary correlation of residuals within each state. All models include state and year dummies and dummy variables for public policy and good faith exceptions. Labor force demographics are calculated for state labor force (employed and unemployed) from Current Population Survey merged outgoing rotation groups (MORG) for 1979–95. Omitted reference group is unmarried white, male, high school dropouts ages 25–54.

in the labor force, I include in columns 5–7 detailed state demographic variables that measure the fraction of the labor force in the following groups: high school graduate, some college, and greater than college; female, married, and married and female; black and other race; and age 16–24 and 55 plus.[24] Consistent with the demographics composition of temporary help employment (Cohany 1998), there is a substantial correlation between the growth of THS and increases in the labor-force shares of high school graduates, some-college attendees, and women.[25] Subsequent columns add quadratic time trends and region-by-year dummies. In column 5, the base specification augmented with demographic controls, the estimated impact of the implied contract exception on THS employment is 13.3 log points. The final column yields a point estimate of 14.1 log points, which is stubbornly significant despite the inclusion of approximately 300 covariates.

Estimates of these models that use average state employment as weights are found in appendix table B1. These estimates confirm a significant effect of the implied contract exception on THS growth. In the base specification, column 2, the point estimate is 7.1 log points as compared with 14.8 log points for the unweighted estimate. When labor-force demographics, region-by-year dummies, and quadratic state time trends are included, the point estimate increases to 9.3 log points as compared with 14.1 log points for the unweighted estimate.

D. Estimates by Region and Time Period

Because the many court decisions altering the common law provide multiple "experiments," one can usefully subdivide the data to provide a consistency check on the estimates. Two such tests are discussed here. The top panel of table 6 presents estimates of the baseline model using state-level data subdivided into three 4-year intervals over 1979–91.[26] To alleviate concern about the nonindependence of the outcome variable over short time spans, I estimate the models using observations at 1-, 2-, and 4-year frequencies. The point estimates present a highly consistent picture: the implied contract coefficient is positive in each case and generally in the range of 7–20 log points. Interestingly, the estimated impact of the implied contract exception does not appear smaller for later adopters, suggesting that anticipatory effects are not particularly important. The public policy and good faith exceptions (not tabulated) again present no

[24] The omitted group is white, male, high school dropouts ages 25–54. The labor force sample includes both employed and unemployed workers.

[25] Given the substantial overrepresentation of blacks in temporary help employment (22% of THS vs. 11% of non-THS employment in 1995 [Cohany 1998]), one surprising finding is the negative relationship between the share of a state's labor force that is black and the level of state THS employment.

[26] No implied contract exceptions were adopted after 1989.

Table 6
The Estimated Impact of the Implied Contract Exception to Employment at Will on THS Employment by Time Period and Region

	A. 4-Year Subperiods of 1979–91		
	1-Year Intervals (n = 250)	2-Year Intervals (n = 150)	4-Year Intervals (n = 100)
1979–83	.122	.073	.034
	(.088)	(.092)	(.152)
1983–87	.071	.199	.259
	(.121)	(.099)	(.141)
1987–91	.145	.089	.187
	(.110)	(.047)	(.106)
	B. Nine Geographic Divisions, 1979–95		
	New England (n = 102)	West North Central (n = 119)	West South Central (n = 68)
1979–95	.146	.116	.077
	(.102)	(.122)	(.137)
	Middle Atlantic (n = 51)	South Atlantic (n = 136)	Mountain Division (n = 136)
1979–95	.000	.154	.478
	(.064)	(.071)	(.187)
	East North Central (n = 85)	East South Central (n = 68)	Pacific Division (n = 85)
1979–95	.166	.009	.057
	(.110)	(.089)	(.157)

NOTE.—THS = temporary help services. Dependent variable: log state THS employment. Ordinary least squares estimates given. Huber-White robust SEs in parentheses allow for arbitrary correlation of residuals within each state. Each coefficient is from a separate regression of log state THS employment on a dummy variable equal to one after adoption of an implied contract exception. All models include state and year dummies, a control for the log of state nonfarm unemployment, and dummy variables for public policy and good faith exceptions. The first column of panel A and all models in panel B also include controls for state linear time trends. Note that no implied contract exceptions were adopted after 1991.

clear pattern. In the lower panel of table 6, I provide estimates of the base specification for each of the nine geographic census regions. These estimates are reasonably stable across census regions: positive in eight of nine regions, and in the range of 6–17 log points in six of these.[27]

E. Inferring Causality via the Timing of Common Law Changes

The discrete specification above provides no sense of the dynamics of common law adoption and THS employment: how quickly employment

[27] In regressions not tabulated here, I find that there is never a significant cross-sectional relationship between either the log level or the share of employment in a state supplied by THS and the presence of an implied contract exception. Apparently, there are important unmeasured determinants of cross-state THS penetration, which are effectively purged by the fixed-effects model used for the primary analysis.

Table 7
The Estimated Impact of the Implied Contract Exception to Employment at Will on THS Employment, 1979–95, Controlling for State Demographics

	(1)	(2)	(3)	(4)
Implied contract leads and lags:				
Law change$_{t+2}$	.030	−.017	−.015	.039
	(.066)	(.052)	(.053)	(.048)
Law change$_{t+1}$	.025	−.001	.000	.054
	(.065)	(.058)	(.080)	(.080)
Law change$_{t0}$	.120	.108	.108	.158
	(.091)	(.080)	(.096)	(.092)
Law change$_{t-1}$	.121	.147	.146	.204
	(.109)	(.085)	(.115)	(.117)
Law change$_{t-2}$	.168	.228	.224	.296
	(.130)	(.104)	(.134)	(.134)
Law change$_{t-3}$	.084	.144	.144	.192
	(.139)	(.107)	(.135)	(.137)
Implied contract law$_{t-4\text{ forward}}$	.100	.196	.222	.255
	(.175)	(.125)	(.153)	(.162)
Other covariates:				
State × time trends	No	Yes	Yes	Yes
State × time^2 trends	No	No	Yes	Yes
Region × year dummies	No	No	No	Yes
H_0: adoption$_{(t0-t4)} = 0$	.46	.27	.35	.23
R^2	.973	.989	.991	.993

NOTE.—THS = temporary help services. Dependent variable: log state THS employment; $n = 850$. Ordinary least squares estimates given. Huber-White robust SEs in parentheses allow for arbitrary correlation of residuals within each state. All models include state and year dummies, a control for log state nonfarm employment, and leads and lags of adoption of the public policy and good faith exceptions. Law change dummies $t_{+2} - t_{-3}$ are equal to one in only 1 year each per adopting state. Implied Contract$_{t-4\text{forward}}$ dummy is equal to one in every year beginning with the fourth year after adoption.

grows after an exception is adopted and whether this impact accelerates, stabilizes, or mean reverts. If temporary help employment growth leads to the adoption of exceptions rather than vice versa, the previous estimates would obscure this reverse causality. To explore these dynamics, table 7 provides estimates of a subset of the models in table 5, augmented with leads and lags of the implied contract exception. Specifically, I add indicator variables for 1 and 2 years before adoption, years 0–3 after adoption, and year 4 forward. Of these seven indicator variables, note that the first six are equal to one only in the relevant year, while the final variable is equal to one in each year, starting with the fourth year of adoption.

The first column of table 7 presents the base specification augmented with the leads and lags. The coefficients on the adoption leads are close to zero, showing little evidence of an anticipatory response within states about to adopt an exception.[28] In the year of adoption, temporary help employment increases substantially by 12 log points, after which this

[28] This finding should be distinguished from the hypothesis that employers in all states increased their demand for THS as an anticipatory response to common law changes. This latter phenomenon would not be detected by preadoption dummies unless employers foresaw individual court decisions in their own states.

increment fluctuates at between 8 and 17 log points over the subsequent 3 years; then it averages 10 log points in year 4 forward. Subsequent columns repeat these estimates, adding linear and quadratic time trends and region-by-year effects. The pattern of coefficients is comparable in each case, providing robust evidence that adoption of the implied contract exception led the growth of THS rather than vice versa. In the preferred specification that includes linear state trends (col. 2), the estimated impact is 19.6 log points at year 4. This pattern is depicted by figure 3.

In results not tabulated here, I have explored more complex dynamics by allowing the common law exceptions to take a linear or quadratic time slope and including additional years of indicator variables. The data reject these more complex specifications in favor of those found in table 7. I find no evidence of an accumulating impact on THS employment beyond 4 years, nor is there evidence of mean revision in the longer term. It thus appears that the extent of the dynamics of the THS demand response to adoption of the implied contract exception is resolved within 4 years. Note, however, that since THS expanded rapidly throughout this time, a constant impact of 13–20 log points (~ 14–22 percentage points) implies a growing absolute effect on THS employment.[29]

Two further observations on this pattern of results deserve mention. First, the quite rapid growth of THS employment after the adoption of an implied contract exception—on the order of 10% in the year of a ruling—may appear implausibly large. Note, however, that THS is an industry characterized by extremely high flows. For example, Segal and Sullivan (1997*b*) estimate that 60% of THS workers leave the industry within 1 calendar quarter. A substantial change in the scale of the industry therefore requires only that the exit rate decreases slightly (e.g., assignments lengthen) or that intake accelerates.

A second issue is whether, contrary to the estimates above, one should expect the "steady state" impact of a common law change on THS to be more substantial than the near-term impact. The stylized model in Section II suggests that the degree to which firms outsource employment in response to the legal environment is circumscribed by the "technology" of jobs (γ specifically), in particular how much outsourcing reduces productivity relative to termination costs. More generally, it seems likely that firms facing added legal risks will alter their occupational technology to make outsourcing less costly, perhaps by shifting the mix of human capital from specific toward general skills (e.g., using off-the-shelf instead of custom software) or learning to manage outsourced workers more effectively. Logically, the temporary help industry has striven to assist this

[29] Models that control for the fraction of neighboring states and the fraction of states in the same census region recognizing an implied contract exception show no evidence of geographically localized spillovers from the common law changes.

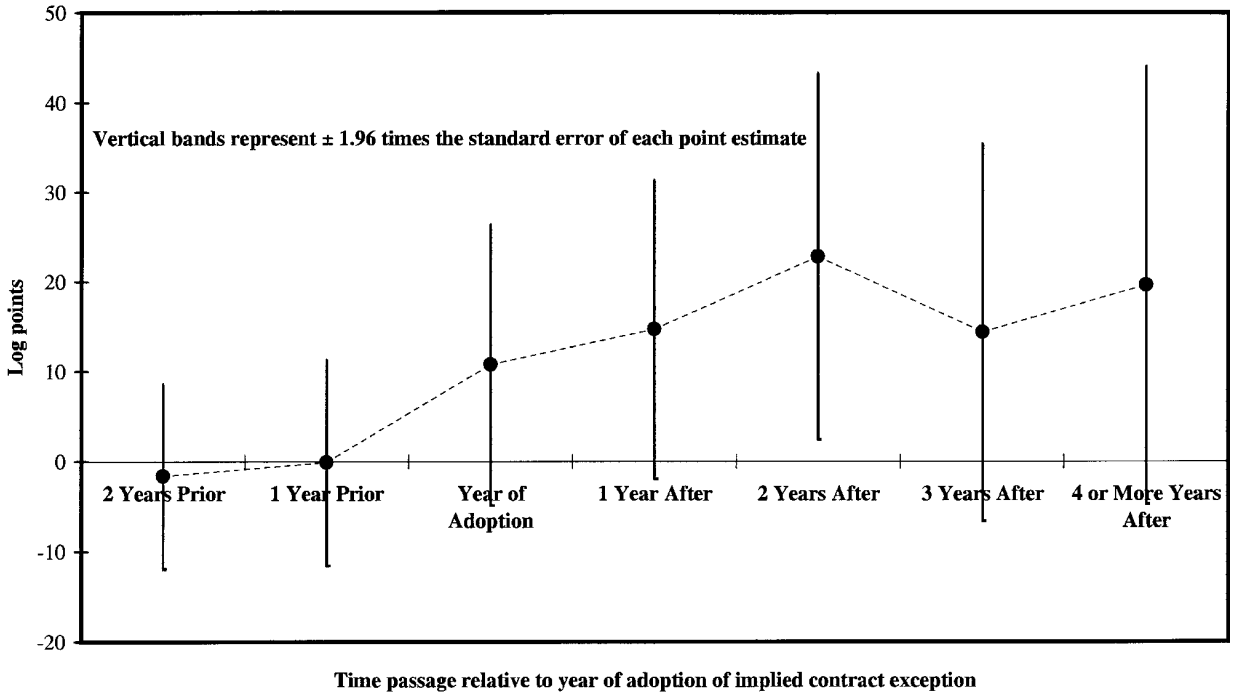

FIG. 3.—Estimated impact of implied contract exception on log state temporary help supply industry employment for years before, during, and after adoption, 1979–95.

effort by developing a sophisticated capacity for training and screening workers (Autor 2001). Unfortunately, the present empirical framework is unable to detect any richer interplay between the legal environment and the growth of outsourcing since these practices will diffuse slowly and potentially affect all states simultaneously.

F. Unionization and the Growth of Temporary Help Employment

A potentially complementary explanation for the recent growth of outsourcing in the United States is the changing role of labor unions. Unionized workers have traditionally received greater employment protections than those provided by the at-will doctrine, and it is therefore sensible to ask whether the recent decline of unionization has played a role in the erosion of employment at will and the growth of temporary help. Unions might affect the development of temporary help either indirectly, by influencing the adoption of unjust dismissal doctrines, or directly, by either retarding or contributing to employers' demand for THS workers.

To explore these possibilities, I first estimated probability models in a state-by-time panel to explore whether states where union penetration was growing or declining relatively faster were more likely to adopt common law exceptions. I found no evidence to support this notion, and these results are not tabulated.[30] I next estimated models of log THS employment comparable with those in table 5, which control for the percentage of the state workforce that is unionized. These estimates, found in table 8, provide surprisingly robust evidence that union penetration affects temporary help employment.

The initial column of table 8 presents a model of log state THS employment controlling only for state union penetration and state and year dummies. The union coefficient of 0.026 implies that for every percentage-point increase in unionization, THS employment grows by 2.6 log points. Inclusion of state linear time trends reduces this coefficient to 0.016, which remains highly significant. Subsequent columns add controls for the adoption of the implied contract exception, the log of state nonfarm employment, and a full set of trends, region-by-year effects, and labor-force demographics. Additionally, because of the concern that state unionization level might proxy for the presence of manufacturing, which is a substantial user of temporary help workers (Estavao and Lach 1999), column 2 adds controls for employment composition in 12 major industries. The union

[30] Miles (2000) also reports that state unionization levels have no impact on the expected time duration until a state adopts a common law exception.

Table 8
Union Penetration, the Implied Contract Exception to Employment at Will and State THS Employment, 1979–95

	(1)	(2)	(3)	(4)	(5)	(6)
State workforce unionized (%)	.026	.016	.016	.013	.014	.014
	(.011)	(.007)	(.007)	(.007)	(.007)	(.007)
Implied contract exception			.132	.143	.142	.129
			(.062)	(.057)	(.056)	(.064)
Log of state nonfarm employment				1.52	1.06	1.36
				(.42)	(.61)	(.90)
State × time trends	No	Yes	Yes	Yes	Yes	Yes
Industry composition controls	No	Yes	No	No	Yes	Yes
State × time^2 trends	No	No	No	No	No	Yes
Region by year dummies	No	No	No	No	No	Yes
Labor force demographics	No	No	No	No	No	Yes
R^2	.969	.988	.987	.989	.989	.993

NOTE.—THS = temporary help services; $n = 850$. Ordinary least squares estimates given. Huber-White robust SEs in parentheses allow for arbitrary correlation of residuals within each state. State fraction unionized measures are from Hirsch et al. (2001). All models also include state and year dummies and dummies for public policy and good faith exceptions. Labor force demographics (col. 6) are as in table 5. Models in cols. 2, 5, and 6 include controls for the fraction of the state labor force in each of 12 major industries estimated from the Current Population Survey Merged Outgoing Rotation Groups (MORG) files.

impact on THS employment remains significantly positive and in the range of 1.5 log points.[31]

In interpreting the THS-unionization relationship, two points should be kept in mind. First, union penetration fell substantially over this time period, from 22% to 14% in the data, and hence unionization does not contribute to an explanation for the recent growth of THS. Instead, the estimates are best read as indicating that temporary help grew relatively faster in states where unions declined more slowly. Second, unlike the case of the implied contract doctrine, the unionization estimates do not have a clear causal interpretation since union penetration cannot be viewed as exogenous. The relationship is nevertheless suggestive and provides an empirical underpinning for the visible enmity between THS employers and U.S. labor unions (cf. Carré, duRivage, and Tilly 1994; Lips 1998). One interpretation of this finding is that employers in highly unionized states use temporary help to avoid union constraints on wages or man-

[31] An interaction between the level of unionization and a dummy for the implied contract exception was small and insignificant.

agement practices. An alternative and probably less viable reading is that high levels of THS employment contribute to workers' demands for union representation.

G. Impact of the Decline of Employment at Will on Other Business Services Employment

Although temporary help grew substantially faster than other forms of outsourced employment, non-THS business service employment (such as janitorial services and computer and data processing) also experienced rapid growth between 1979 and 1995, rising from 2.1% to 3.6% of employment (excluding THS). It is natural to ask whether the erosion of employment at will contributed to this phenomenon as well. To explore this question, I estimate log employment models as in table 8 for each of the business service industries. Before proceeding to these estimates, I note that the legal analysis above indicates that the adoption of unjust dismissal doctrines would not directly contribute to the growth of other business services since, unlike THS, these industries are not directly advantaged by these doctrines. Hence, these results may be viewed as a falsification test of the earlier findings.

Estimates in table 9 give little indication that the adoption of the implied contract doctrine contributed to the growth of other business service employment. Except for those subcomponents of business services that contain temporary help (table 9, rows 1 and 10), the estimates are primarily insignificant and do not have consistent signs. Results for the impacts of the public policy and good faith doctrines (not tabulated) and the unionization variable also present no consistent pattern.

V. Conclusions

To summarize the primary findings, figure 4 depicts the time series of states adopting the implied contract exception alongside estimates of temporary help employment for 1979–95, both before and after conditioning on the adoption of the implied contract exception. A fourth line on this plot indicates the share of the growth of temporary help since 1973 explained by changes to the at-will doctrine. The estimates indicate that as of 1995, 306,000 additional workers were employed in temporary help on a daily basis as a result of the implied contract exception.

Extending this estimate forward and using the weighted and unweighted point estimates to form bounds, I find that 361,000–530,000 additional workers were employed in temporary help as of the year 2000 because of the implied contract exception.[32] As the lower line of figure 4 indicates,

[32] As of 1995, the most recent year for which state level estimates are available, 75.6% of THS employment was in states that had adopted an implied contract exception. Assuming this ratio continued to hold as of 2000, when national THS

Table 9
The Implied Contract Exception to Employment at Will, Union Penetration, and Employment in the Business Services Sector, 1980–95

	Implied Contract Exception	State % Unionized	Log of State Nonfarm Employment	R^2	Mean (SD) % of State Employment
1. All business services (SIC 7300)	.012	−.0054	1.35	.996	4.20
	(.014)	(.0054)	(.12)		(1.23)
2. Business services except personnel supply	−.015	−.010	1.19	.993	3.02
	(.017)	(.009)	(.18)		(.90)
3. Advertising (SIC 7310)	.059	.0090	.98	.991	.16
	(.042)	(.0051)	(.36)		(.09)
4. Credit reporting and collecting (SIC 7320)	−.025	−.0005	.60	.986	.10
	(.033)	(.0043)	(.29)		(.03)
5. Mailing, reproduction, and stenographic (SIC 7330)	−.011	.0014	.96	.990	.18
	(.047)	(.0075)	(.27)		(.09)
6. Services to buildings (SIC 7340)	−.030	.0023	1.07	.995	.74
	(.027)	(.0036)	(.25)		(.23)
7. Equipment rental and leasing (SIC 7350)	.019	.0014	2.30	.987	.21
	(.038)	(.0050)	(.31)		(.09)
8. Computer and data processing services (SIC 7370)	.023	−.0107	1.46	.992	.59
	(.039)	(.0047)	(.42)		(.40)
9. Miscellaneous business services (SIC 7380)	−.005	−.0018	1.41	.993	.99
	(.023)	(.0048)	(.20)		(.31)
10. Personnel supply services (SIC 7360, includes THS)	.105	.0072	1.87	.989	1.18
	(.047)	(.0063)	(.35)		(.45)

SOURCE.—For business services employment, see County Business Patterns (various years).

NOTE.—SIC = standard industrial classification; THS = temporary help services. Dependent variable is log state employment in business services and its subsectors; $n = 850$. Ordinary least squares estimates given. Huber-White robust SEs in parentheses allow for arbitrary correlation of residuals within each state. Estimates include state and year dummies, state linear time trends, and dummies for public policy and good faith exceptions. State fraction unionized are from Hirsch et al. (2001). Business services employment counts are adjusted for compatibility between the 1977 and 1987 SIC standards.

the estimates explain as much 20% of the growth of temporary help services employment over the 23-year period from 1973 to 1995. Observe, however, that the explanatory power of the model actually falls in the recent period since temporary help has continued to expand rapidly since 1992, several years after the most recent implied contract exception was adopted. Hence, the present analysis provides a starting point for understanding the recent dramatic growth of THS specifically and outsourcing more generally but is not a complete account.

employment was equal to 3,887 thousand, the total employment estimated impact is $3{,}887 \times 0.756/[i/(1 + i)]$, where i is equal to either 0.14 (weighted estimate) or 0.22 (unweighted estimate).

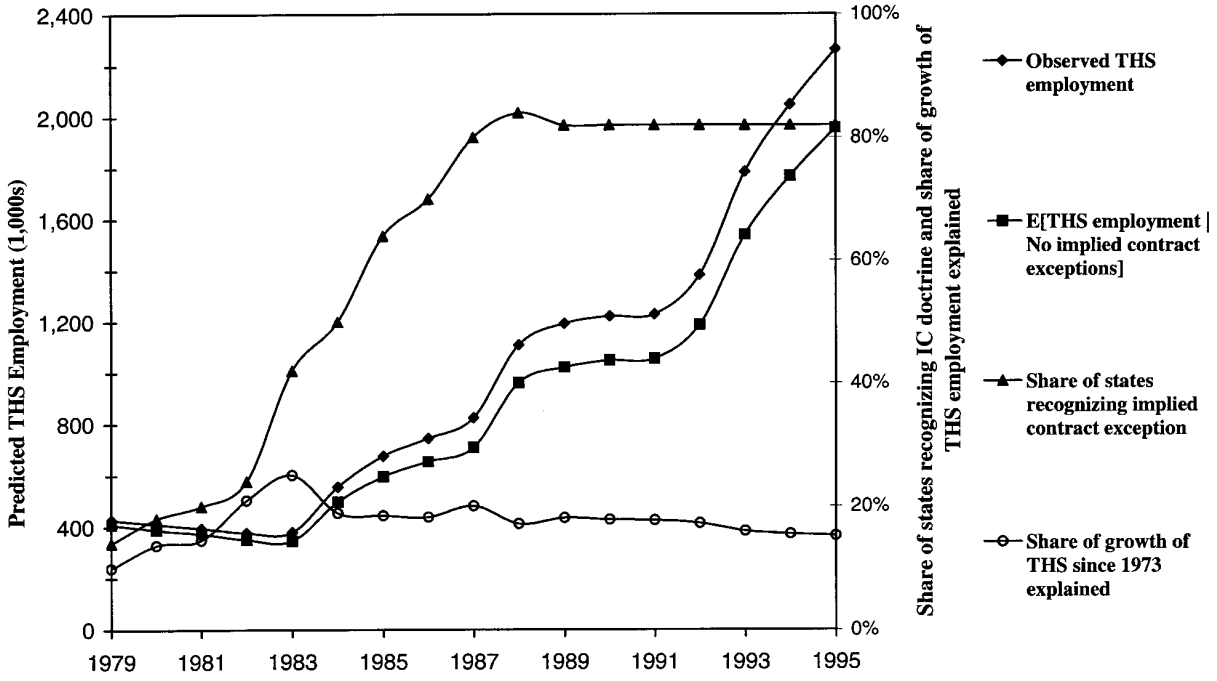

FIG. 4.—Predicted state temporary help supply industry employment, 1979–95, conditioning on adoption of implied contract exceptions

There is an irony to the findings of this research—namely, that labor-market interventions intended to protect or expand workers' employment "rights" appear to have had unintended and potentially perverse consequences. Acemoglu and Angrist (2001) and DeLeire (2000) conclude that the Americans with Disabilities Act reduced the employment of the disabled, while Oyer and Schaefer (2000, 2002) present evidence that the Civil Rights Act of 1991 increased firms' use of mass layoffs as a shield for the firing of black men and raised the earnings of experienced workers relative to the young. In a similar vein, the current research suggests that courts' efforts to protect workers against unjust dismissal have fostered the growth of temporary help employment—nonpreferred jobs that offer less job security and lower pay than standard positions. Moreover, there is some evidence that labor unions, which have historically provided employment protection to their members, also induce employment outsourcing to temporary help.

It should be stressed, however, that the welfare impacts of the decline of employment at will are indeterminate based on the present evidence. While the current analysis explores one margin of response to the changing legal doctrines, it offers no evidence on the compensatory benefits that workers may have received by dint of these laws. Theory also suggests that some legal restrictions on private contracting can enhance efficiency (Aghion and Hermalin 1990; Levine 1991). Whether workers were in net harmed by these well-meaning judicial efforts—and if so, which groups of workers have borne the greatest burden—is a question open to research.

Appendix A
Legal Appendix

Table A1
Cases and Statutes Used for the Analysis

State	Public Policy	Implied Contract	Implied Covenant
Alabama		*Hoffman-La Roche, Inc. v. Campbell* (7/10/87) 512 So. 2d 725, 728–29 (Ala. 1987)	*Hoffman-La Roche, Inc. v. Campbell* (7/10/87) 512 So. 2d 725, 728–29 (Ala. 1987)
Alaska	*Knight v. American Guard & Alert, Inc.* (2/21/86) 714 P.2d 788 (Alaska 1986)	*Eales v. Tanana Valley Medical-Surgical Group* (5/27/83) 663 P.2d 958 (Alaska 1983)	*Mitford v. de Lasala* (5/20/83) 666 P.2d 1000 (Alaska 1983).
Arizona	*Wagenseller v. Scottsdale Memorial Hospital* (6/17/85) 710 P.2d 1025 (Ariz. 1985)	*Leikvold v. Valley View Community Hospital* (6/14/83) 688 P.2d 201 (Ariz. App. 1983), vacated (4/25/84) 688 P.2d 170 (Ariz. 1984).	*Wagenseller v. Scottsdale Memorial Hospital* (6/17/85) 710 P.2d 1025 (Ariz. 1985)
Arkansas	*M.B.M Co. v. Counce* (3/24/80) 596 S.W.2d 681 (Ark. 1980)	*Jackson v. Kinark Corp.* (6/4/84) 669 S.W.2d 898 (Ark. 1984)	
California	*Petermann v. International Brotherhood of Teamsters, Chaeuffeurs, Warehouseman & Helpers of America, Local 396* (9/30/59) 344 P.2d 25 (Cal. Ct. App. 1959)	*Rabago-Alvarez v. Dart Industries* (2/6/76) 127 Cal. Rptr. 222 (Cal. Ct. App. 1976)	*Cleary v. American Airlines, Inc.* (10/29/80) *168 Cal. Rptr. 722* (*Cal. Ct. App. 1980*); modified to remove tort damages by *Foley v. Interactive Data Corp.* (12/29/88) 765 P.2d 373 (Cal 1988)
Colorado	*Winther v. DEC International, Inc.* (9/18/65) 625 F. Supp. 100 (D. Colo. 1985)	*Brooks v. Trans World Airlines* (10/18/83) 574 F. Supp. 805 (D. Colo. 1983)	
Connecticut	*Sheets v. Teddy's Frosted Foods, Inc.* (1/22/80) 427 A.2d 385 (Conn. 1980)	*Finley v. Aetna Life & Casualty Co.* (10/1/85) 499 A.2d 64 (Conn. App. Ct. 1985) reversed 1/27/87 520 A.2d 208 (Conn. 1987). (But note that implied contract exception was upheld despite reversal of verdict.)	*Magnan v. Anaconda Industries* (6/10/80) 429 A.2d 492 (Conn. Super. Ct. 1980) reversed and remanded on other grounds (7/38/84) 479 A.2d 781 (Conn. 1984). (But note that implied covenant exception was upheld.)

Table A1 (*Continued*)

State	Public Policy	Implied Contract	Implied Covenant
Delaware			*Merrill v. Crothall-American, Inc.* (4/21/92) 606 A.2d 96, 7 IER Cases 781 (Del SupCt 1992)
Florida			
Georgia			
Hawaii	*Parna v. Americana Hotels, Inc.* (10/28/82) 652 P.2d 625 (Haw. 1982)	*Kinoshita v. Canadian Pacific Airlines* (8/26/86) 724 P.2d 100 (Haw. 1986)	
Idaho	*Jackson v. Minidoka Irrigation District* (4/21/77) 563 P.2d 54 (Idaho 1977)	*Jackson v. Minidoka Irrigation District* (4/21/77) 563 P.2d 54 (Idaho 1977)	*Metcalf v. Intermountain Gas Co.* (8/8/89) 778 P.2d 744 (Idaho 1989).
Illinois	*Kelsay v. Motorola, Inc.* (12/4/78) 384 N.E.2d 353 (Ill. 1978)	*Carter v. Kaskaskia Community Action Agency* (12/20/74) 322 N.E.2d 574 (Ill. App. Ct. 1974)	
Indiana	*Frampton v. Central Indiana Gas* (5/1/73) 297 N.E.2d 425 (Ind. 1973)	*Romack v. Public Service Co. of Indiana* (8/20/87) 511 N.E.2d 1024 (Ind. 1987).	
Iowa	*Northrup v. Farmland Industries, Inc.* (7/31/85) 372 N.W.2d 193 (Iowa 1985)	*Young v. Cedar County Work Activity Ctr., Inc.* (11/5/87) 418 N.W.2d 844 (Iowa 1987)	
Kansas	*Murphy v. City of Topeka-Shawnee County Department of Labor Services* (6/19/81) 630 P.2d 186 (Kan. Ct. App. 1981)	*Allegri v. Providence-St. Margaret Health Center* (8/2/84) 684 P.2d 1031 (Kan. Ct. App. 1984)	
Kentucky	*Firestone Textile Co. v. Meadows* (11/23/83) 666 S.W.2d 730 (Ky. 1983).	*Shah v. American Synthetic Rubber Co.* (8/31/83) 655 S.W.2d 489 (Ky. 1983)	
Louisiana			
Maine		*Terrio v. Millinocket Community Hospital* (11/2/77) 379 A.2d 135 (Me. 1977)	
Maryland	*Adler v. American Standard Corp.* (7/16/81) 432 A.2d 464 (Md. 1981)	*Staggs v. Blue Cross of Maryland, Inc.* (1/14/85) 486 A.2d 798 (Md. Ct. Spec. App. 1985) *cert. denied,* 493 A.2d 349 (Md. 1985)	
Massachusetts	*McKinney v. National Dairy Council* (5/28/80) 491 F. Supp. 1108 (D. Mass. 1980)	*Hobson v. McLean Hospital Corp.* (5/16/88) 522 N.E.2d 975 (Mass. 1988)	*Fortune v. National Cash Register Co.* (7/20/77) 364 N.E.2d 1251 (Mass. 1977)

Michigan	*Sventko v. Kroger Co.* (6/24/76) 245 N.W.2d 151 (Mich. 1976)	*Toussaint v. Blue Cross and Blue Shield of Michigan* (6/10/80) 292 N.W.2d. 880 (Mich. 1980)	
Minnesota	*Phipps v. Clark Oil & Refining Co.* (11/18/86) 396 N.W.2d 588 (Minn. Ct. App. 1986), *aff'd* 408. N.W.2d 569 (Minn. 1987)	*Pine River State Bank v. Mettille* (4/29/83) 333 N.W.2d 622 (Minn. 1983)	
Mississippi	*Laws v. Aetna Finance Co.* (7/17/87) 667 F. Supp. 342 (N.D. Miss. 1987)		
Missouri	*Boyle v. Vista Eyewear, Inc.* (11/5/85) 700 S.W.2d 859 (Mo. Ct. App. 1985)	*Arie v. Intertherm, Inc.* (1/18/83) 648 S.W.2d 142 (Mo. Ct. App. 1983); this precedent was overturned by *Johnson v. McDonnell Douglas Corporation* (2/17/88) 745 S.W.2d 661 (Mo. Sup. Ct. 1988)	
Montana	*Keneally v. Orgain* (1/30/80) 606 P.2d 127 (Mont. 1980)	*Montana Wrongful Discharge from Employment Act* (1/1/87) Mont. Code Ann. 39-2-901 to §§ 39-2-914 (1987)	*Gates v. Life of Montana Insurance Co.* (1/5/82) 638 P.2d 1063 (Mont. 1982).
Nebraska	*Ambroz v. Cornhusker Square Ltd.* (11/25/87) 416 N.W.2d 510 (Neb. 1987)	*Morris v. Lutheran Medical Center* (11/18/83) 340 N.W.2d 388 (Neb. 1983)	
Nevada	*Hansen v. Harrah's* (1/25/84) 675 P.2d 394 (Nev. 1984)	*Southwest Gas Corp. v. Ahmad* (831/83) 668 P.2d 261 (Nev. 1983)	*K-Mart Corp. v. Ponsock* (2/24/87) 732 P.2d 1364 (Nev. 1987)
New Hampshire	*Monge v. Beebe Rubber Co.* (2/28/74) 316 A.2d 549 (N.H. 1974)	*Panto v. Moore Business Forms, Inc.* (8/5/88) 547 A.2d 260 (N.H. 1988)	*Monge v. Beebe Rubber Co.* (2/28/74) 316 A.2d 549 (N.H. 1974)
New Jersey	*Pierce v. Ortho Pharmaceutical Corp.* (7/28/80) 417 A.2d 505 (N.J. 1980)	*Woolley v. Hoffman-La Roche Inc.* (5/9/85) 491 A.2d 1257 (N.J. 1985) *modified*, 499 A.2d 515 (N.J. 1985)	
New Mexico	*Vigil v. Arzola* (7/5/83) 699 P.2d 613 (N.M. Ct. App. 1983) *rev'd*, 687 P.2d 1038 (N.M. 1984)	*Forrester v. Parker* (2/1/80) 606 P.2d 191 (N.M. 1980)	
New York		*Weiner v. McGraw-Hill, Inc.* (11/18/82) 443 N.E.2d 441 (N.Y. 1982)	
North Carolina	*Sides v. Duke Hospital* (5/7/85) 328 S.E.2d 818 (N.C. Ct. App. 1985)		

Table A1 (*Continued*)

State	Public Policy	Implied Contract	Implied Covenant
North Dakota	*Krein v. Marian Manor Nursing Home* (11/19/87) 415 N.W.2d 793 (N.D. 1987)	*Hammond v. North Dakota State Personnel Board* (2/23/84) 345 N.W.2d 359 (N.D. 1984)	
Ohio	*Goodspeed v. Airborne Express, Inc.* (2/11/85) 121 L.R.R.M. (BNA) 3216 (Ohio Ct. App. 1985); precedent reversed by *Phung v. Waste Management, Inc.* (4/16/86) N.E.2d 1114 (Ohio 1986)	*West v. Roadway Express* (3/21/82) 115 L.R.R.M. (BNA) 4553 (Ohio Ct. App. 1982), *cert. denied*, 459 U.S. 1205 (1983)	
Oklahoma	*Burke v. K-Mark Corp* (2/7/89) 770 P.2d 24 (Okla. 1989)	*Langdon v. Saga Corp.* (12/28/76) 569 P.2d. 524 (Okla. Ct. App. 1976)	*Hall v. Farmers Insurance Exchange* (5/21/85) 713 P.2d 1027 (Okla. 1985); precedent reversed by *Hinson v. Cameron* (6/9/87) 742 P.2d 549 (Okla. 1987)
Oregon	*Nees v. Hocks* (6/12/75) 536 P.2d 512 (Or. 1975)	*Yartzoff v. Democrat-Herald Publishing Co.* (3/28/78) 576 P.2d 356 (Or. 1978)	
Pennsylvania	*Geary v. United States Steel Corp.* (3/25/74) 319 A.2d 174 (Pa. 1974)		
Rhode Island			
South Carolina	*Ludwick v. This Minute of Carolina, Inc.* (11/18/85) 337 S.E.2d 213 (S.C. 1985)	*Small v. Springs Industries, Inc.* (6/8/87) 357 S.E.2d 452 (S.C. 1987)	
South Dakota	*Johnson v. Kreiser's Inc.* (12/7/88) 433 N.W.2d 225 (S.D. 1988)	*Osterkamp v. Alkota Manufacturing, Inc.* (4/13/83) 332 N.W.2d 275 (S.D. 1983)	
Tennessee	*Clanton v. Cain-Sloan Co.* (8/20/84) 677 S.W.2d 441 (Tenn. 1984)	*Hamby v. Genesco, Inc.* (11/5/81) 627 S.W.2d 373 (Tenn. Ct. App. 1981)	
Texas	*Hauck v. Sabine Pilots, Inc.* (6/7/84) 672 S.W.2d (Tex. Civ. App.-Beaumont 1984), *aff'd sub nom. Sabine Pilot Serv., Inc. v. Hauck*, 687 S.W.2d 733 (Tex. 1985)	*Johnson v. Ford Motor Co.* (4/11/85) 690 S.W.2d 90 (Tex. Civ. App.-Eastland 1985, writ ref'd n.r.e.)	
Utah	*Berube v. Fashion Centre, Ltd.* (3/20/89) 771 P.2d 1033 (Utah 1989)	*Rose v. Allied Development Co.* (5/13/86) 719 P.2d 83 (Utah 1986)	
Vermont	*Payne v. Rozendaal* (9/26/86) 520 A.2d 586 (Vt. 1986)	*Sherman v. Rutland Hospital, Inc.* (8/9/85) 500 A.2d 230 (Vt. 1985)	

Virginia	*Bowman v. State Bank of Keysville* (6/14/85) 331 S.E.2d 797 (Va. 1985)	*Frazier v. Colonial Williamsburg Foundation* (9/9/83) 574 F. Supp. 318 (E.D. Va. 1983)	
Washington	*Thomspson v. St. Regis Paper Co.* (7/5/84) 685 P.2d 1081 (Wash. 1984)	*Roberts v. Atlantic Richfield Co.* (8/18/77) 568 P.2d 764 (Wash. 1977)	
West Virginia	*Harless v. First National Bank* (7/14/78) 246 S.E.2d 270 (W. Va. 1978)	*Cook v. Heck's Inc.* (4/4/86) 342 S.E.2d 453 (W. Va. 1986)	
Wisconsin	*Ward v. Frito-Lay, Inc.* (1/28/80) 290 N.W.2d 536 (Wis. Ct. App. 1980)	*Ferraro v. Koelsch* (6/5/85) 368 N.W.2d 666 (Wis. 1985)	
Wyoming	*Griess v. Consolidated Freightways* (7/5/89) 776 P.2d 752 (Wyo. 1989)	*Mobil Coal Producing Inc. v. Parks* (8/13/85) 704. P.2d 702 (Wyo. 1985)	*Wilder v. Cody City Chamber of Commerce* (01/25/94) 868 P.2d 211 (Wyo. 1994)

NOTE.—Blank entries in the table indicate that no exception was recognized in the relevant state and category.

Appendix B

Table B1
The Estimated Impact of the Implied Contract Exception to Employment at Will on THS Employment, 1979–95, Weighted by State Employment Shares

	(1)	(2)	(3)	(4)	(5)
Implied contract exception	.071	.069	.099	.085	.093
	(.038)	(.040)	(.034)	(.039)	(.039)
Other covariates:					
State × time trends	Yes	Yes	Yes	Yes	Yes
State × time^2 trends	No	Yes	No	Yes	Yes
Region by year dummies	No	No	Yes	Yes	Yes
Labor force demographics	No	No	No	No	Yes
R^2	.991	.993	.994	.995	.995

NOTE.—THS = temporary help services. Dependent variable: log state THS employment; $n = 850$. Ordinary least squares estimates given. Huber-White robust SEs in parentheses allow for arbitrary correlation of residuals within each state. Estimates weighted by mean state share of national employment over 1979–95. All models include dummy variables for public policy and good faith common law exceptions, state and year dummies, and state linear time trends. Labor force demographics in col. 5 are as in table 5.

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