The Effect of Contract Regulation: The Case of Franchising

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Abstract: States and the federal government have enacted laws intended to police franchisors' use of termination provisions in franchise contracts to opportunistically take over profitable establishments. This regulation may, however, reduce the total number of chain outlets because franchising is a valuable form of contracting and termination rights allow franchisors to police franchisee free-riding on the franchised trademark. We exploit two new data sources to provide empirical evidence on the effects of franchise regulation. Panel data on fast food establishments extracted from uniform franchise offering circulars show that laws restricting franchisor termination rights lead to a reduction in franchising, and this reduction is not offset by the concomitant increase in franchisor-operated establishments. We also examine how Coasian bargaining between the franchisor and franchisee can mitigate the effect of regulation. In particular, regulation may be apparently important but actually inconsequential because affected parties can easily waive the regulation or avoid it through contractual choice-of-law and choice-of-forum clauses. To examine this, we use state level employment data to more broadly examine the effects of franchise regulation. We find that employment in franchise industries is significantly reduced when states enact restrictions on franchisor termination rights but the effect is significant only when states limit the ability to contract around these restrictions.

1. INTRODUCTION

Franchising is an important and frequently studied form of organization. Prior articles have used the franchising form to examine the general nature of intra versus interfirm contracting and to analyze how contracts and incentives are used to reduce transactions and agency costs.[1] In addition, studies of franchise regulation illustrate how the regulation of the contractual relationship between franchisors and franchisees affects contracting and the organization of firms.[2]

The franchisor's ability to terminate franchisees is a central focus of economic analyses of franchise contracts and their regulation. In the absence of effective monitoring and incentives, franchisees will attempt to free-ride on efforts by the franchisor and other franchisees to maintain the brand.[3] In order to economize on agency costs and monitoring costs, franchisors improve franchisees' incentives by giving them a positive rent (or quasi-rent) stream that will be taken away if the franchisee does not perform, which in turn requires that the franchisor be able to terminate shirking franchisees.

But broad termination powers also may allow franchisors to take over profitable franchises even where the franchisee is not shirking, thereby denying the franchisee expected benefits under the contract. Regulation of franchise contracts is intended to police this franchisor opportunism by limiting a franchisor's ability to terminate at will opportunistically. The net benefits of these regulations may be negative however. Such

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[1] Drawing on the agency cost insights of Alchian and Demsetz (1972) and Jensen and Meckling (1976), Rubin's (1978) model of franchising rests on the relative difficulty of monitoring when the franchised unit is not located near to the franchisor or when the entire firm is quite large.

[2] *See, e.g.,* Brickley, Dark & Weisbach (1991a), Beales & Muris (1995) (examining state regulation of termination); Marvel 1995 (examining FTC regulation of gasoline franchising); Smith (1982) examining state regulation of automobile dealers).

[3] *See* Rubin (1978); Klein (1995, 1980).

regulations may not be necessary given the existence of market forces that would police

franchisor opportunism in the absence of such laws. Moreover, these regulations can hurt

franchisors and non-shirking franchisees by preventing franchisors from efficiently

disciplining those franchisees that are shirking.

Earlier studies of the effect of regulations limiting termination rights were based

on systematic data collected by the U.S. Department of Commerce.[4] However, because

of data limitations, studies based on these data were limited to cross sectional

comparisons.[5] Moreover, collection of this data by the Federal government was

discontinued in 1986.

Analyzing the effects of franchise regulation is further complicated by the

availability of Coasian bargaining to mitigate the effect of regulation.[6] The relevant

statute may allow or fail to preclude contracts between the parties to waive the regulation.

Moreover, the statute may be facially mandatory but not prohibit contracts to apply a

more permissive law to the interpretation or enforcement of the contract. Also, whether

or not the parties can contract for the application of a different law, they may be able to

contract to have any cases arising out of the contract adjudicated in a jurisdiction other

than the one that imposes the regulation, and this court may apply its own or a third

jurisdiction's more permissive law.

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[4] *See* Beales & Muris (1995); Brickley, Dark & Weisbach (1991a) (discussing U.S. Department of Commerce, *Franchising in the Economy* publication, which collected data on franchising between 1974 and 1986). Brickley et al (1991a) do also use some survey data they collected from 112 franchisors.
[5] Brickley et al (1991a) do perform some analyses using data from two time periods (1974 and 1985) but this approach limits the ability to identify the effects of the laws independently from period and state effects.
[6] Existing studies have explicitly analyzed how Coasian bargaining affects the terms of the franchise contract. *See, e.g.,* Norton (1987). However, these analyses generally have not considered Coasian bargaining over whether or not a given state's franchise regulations apply. For exceptions, *see* Kobayashi & Ribstein (1999) (discussing the effect of contractual choice of law and forum on the applicability of state franchise regulation); Drahozal & Hylton (2003).

This article makes two primary contributions to the literature on the regulation of franchise contracts by providing data and empirical evidence to address these issues. In our first set of empirical tests, we use newly collected firm-level UFOC data on franchising in the fast food industry to examine the effect of the most recently enacted franchise legislation in Iowa. The Iowa statute, enacted in 1992, is uniformly regarded as the most unfavorable to franchisors.[7] In addition to preventing termination at will, the Iowa regulations require that franchisors allow franchisees a right to cure defects. The Iowa statute also explicitly restricts waiver and enforcement of contractual choice of law and choice of forum clauses. Our results show that the passage of this statute led to a reduction in both the number of franchised units and the total number of chain outlets. That is, the observed increase in the number of franchisor operated establishments was not sufficient to offset the decrease in the number of franchised outlets caused by the franchise regulation.

These results illustrate how a measure of overall activity level (the number of total outlets in a given state) can be used to measure the effects of a franchise regulation. In order to exploit more state law changes, including the use of Coasian bargaining over whether the franchise regulations apply, we analyze a second dataset that uses state employment in industries characterized by a high degree of franchising as a proxy for the overall franchisor activity level. We find that employment in franchise industries, as a proportion of total employment, drops significantly when states enact restrictions on franchisor termination rights. The negative effect is larger in industries that typically do not enjoy repeat business, bolstering the inference that the statutes limit franchisors' ability to police franchisee opportunism.

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[7] *See* Kobayashi & Ribstein (1999) at 339.

With respect to the availability of Coasian bargaining, we find variations in the statutes as to whether the parties can directly waive their application or effectively contract over the applicable law or forum. The employment data is rich enough to take account of these variations. We find that termination restrictions, by themselves, do little to affect behavior. It is only when termination restrictions are coupled with restrictions on the franchisee's ability to waive its rights that termination laws have a significantly negative effect on franchising. Specifically, we find that the effect on employment is larger when states restrict the parties' ability to contract around these restrictions through waiver, choice-of-law, and choice-of-forum clauses.

Our analysis proceeds as follows. Part 2 discusses the economics of the franchise relationship, focusing on the role of termination provisions. Part 3 discusses the potential economic effects of permitting the parties to avoid regulation through waiver, choice-of-law, and choice-of-forum clauses. Part 4 presents our micro-level data on the effect of franchise regulation on the number of outlets in the regulating state. Part 5 presents our macro-level data on the effect of varying levels of restrictions on employment in the relevant jurisdictions and industries. Part 6 adds analysis of data on the effect of statutes permitting contractual mitigation of regulation through choice-of-law, choice-of-forum and waiver. Part 7 concludes.

2. THE ECONOMICS OF FRANCHISE TERMINATION

Any analysis of the effect of franchise termination laws has to proceed from an understanding of the role of termination provisions in franchise contracts. As with any incomplete contract, the franchise contract has the potential to generate *ex post*

opportunism. Most economic analyses of the franchise form suggest that opportunism arises as franchisees face a moral hazard because they do not bear most of the loss in the value of the franchise trademark when they fail to uphold the franchisor's quality standards.

Because it is generally impossible to specify in perfect detail what those quality standards are under all contingencies, franchisors attempt to limit this moral hazard by including broad termination rights to discipline the franchisee's opportunism. By contracting for at will termination, in which the franchisee loses its franchise-specific investment, this kind of opportunism will be disciplined. In theory, this allows for better quality control, making the franchisor and franchisees collectively better off than they would be if the moral hazard were left unchecked.[8]

However, these broad termination rights have the potential to generate a different kind of opportunism. It may be rational for franchisors to exercise their termination rights to expropriate the returns from a franchisee's investment in market discovery and development by terminating contracts in those markets that turn out to be unexpectedly profitable, allowing the franchisor to service the markets itself without having to split revenues with a franchisee or to resell the franchise at better terms. Another possibility is that franchisors threaten termination after franchisees make location specific investments in order to extract quasi-rents from the franchisees.

Worries over opportunism of this kind led many states to limit franchisor termination rights by statute beginning in the early 1970s. Between 1971 and 1992, nineteen states enacted laws that regulate the franchisor's ability to terminate franchise contracts. Generally, these statutes require good cause for a franchisor to be able to

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[8] For an early exposition of this argument, see Epstein (1975).

terminate its contract, such as violation of specific contract terms or fraud on the part of the franchisee.[9] If expectations of this kind of opportunism outweigh expectations of the costs of moral hazard, laws restricting termination rights could make both franchisors and franchisees better off because they serve as a pre-commitment device for the franchisor. In the absence of fears of cream skimming and other franchisor opportunism, the joint surplus will be expanded as franchisees have more of an incentive to invest in market discovery and development, leading to an increase in franchising.

Brickley, Dark, & Weisbach (1991a) and Klein (1995) analyze termination clauses in franchise contracts as commitment devices in cases where contracts are incomplete. That is, if it is costly (or impossible) to spell out a franchisee's duties in complete specificity, franchisors will attempt to design self-enforcement mechanisms that give the franchisee an incentive not to cheat. In both models, if the capitalized value of the possible rents available when the franchisee runs the unit is W, then the franchisee will not cheat if its share of W is greater than the one-shot gain available to it from cheating (F), assuming that the franchisor can terminate the franchise arrangement in the event the franchisee does cheat. The franchisor will franchise the individual establishment whenever the capitalized value of future rents from the establishment as a franchisor-run unit (X) is less than $W-F$.[10]

If the franchisor's ability to terminate a franchise contract is limited, F is effectively increased, either because the franchisor will have to pay some severance

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[9] The vast majority of these statutes (i.e., all states with termination statutes except IL, MI, VA, and WA) apply to a franchisor's decision not to renew a franchisee's contract as well. Additionally, many of the statutes give a franchisee the right to cure any cause for termination raised by the franchisor, and they all require that notice be given to the franchisee up to 180 days before the relationship is terminated. Further, most states have indicated by statute that franchisees can not waive these protections.

[10] Both models suggest that X will be lower than W (i.e., the rents available to the franchisee exceed the rents available to the franchisor) because the franchisee will be better able to control agency costs among his employees. This is consistent with Rubin's original insight regarding why franchising exists at all.

penalty to the franchisee in order to terminate, increasing the one-shot gain from cheating, or because termination itself will not be possible, turning the cheating gain into a multi-period gain. Thus, as spelled out by Brickley, Dark, & Weisbach (1991a), laws restricting franchisor termination rights will lead to less franchising, as fewer units meet the $X < W - F$ condition.

Interestingly, because franchisees are assumed to be able to generate higher rents in the operation of units than are franchisors, the reduction of franchised units also leads to an aggregate reduction of units. That is, while the franchisor will find it profitable to run some of the units it would have franchised were it able to commit the franchisee not to cheat, there will be some marginal units where both $X < 0$ *and W - F < 0.* Under these conditions, these units are no longer profitable to run or to franchise. As a result, the regulation induced switch to increased outright ownership will not be sufficient to offset the decrease in the number of franchised outlets. The overall magnitude of this effect depends on the extent to which the franchising form of contract is fungible with other ways to control outlets, including outright ownership.

However, Brickley, Dark, & Weisbach (1991a) also consider the possibility that laws limiting termination police opportunism on the part of franchisors. That is, if franchisors use their termination rights to take over units that turn out to be more profitable than expected, and franchisees do not correctly estimate the expected cost of this, there will be too much franchising as some franchisees pay above their true reservation prices for their units.[11]

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[11] Brickley, Dark, and Weisbach (1991a) point out that miscalculation on the part of franchisees is a necessary condition for this possibility to occur. Otherwise, the effect will be priced in the revenue sharing terms of the contract. As noted above, curing such systematic errors is the function of disclosure regulations, which exist at both the state and federal levels.

Brickley, Dark, & Weisbach (1991a) rule out the possibility of franchisor opportunism by focusing their empirical analysis on differences across industries. Specifically, they argue that if termination clauses primarily discipline franchisee cheating, then the effect of termination limit laws on the rate of franchising will be most pronounced in industries with mostly non-locally repeat business. In industries with significant locally repeat business, policing the franchisee will be less important since the revenue-sharing mechanism will already induce the franchisee not to cheat. Otherwise, it will lose its repeat business and suffer a large revenue loss. In industries without much locally repeat business, the revenue-sharing mechanism will not provide as much discipline, making the potential for termination more important. On the other hand, if termination clauses primarily allow the franchisor to exploit the franchisee, no such cross-industry condition exists. There should be no systematic difference in the change in franchising across industries.

Brickley, Dark, & Weisbach (1991a) show that the effect of termination restrictions is greater in the industries they classify as particularly subject to non-locally repeat customers (restaurants, hotels, and auto rental agencies) as compared to the effect in other industries. A significant limitation of the Brickley, Dark, & Weisbach (1991a) empirical analysis, however, is their reliance on cross-sectional data from just two periods (1974 and 1986) which precludes them from isolating the shock of legal changes independently from period and idiosyncratic state effects.

3. THE EFFECT OF CONTRACTUAL AVOIDANCE OF REGULATION

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Even if state regulation of franchise termination can harm the joint surplus of franchisors and franchisees, there is still a question as to the form this regulation must take. The uncertainty is due to the fact that contracting parties can utilize several alternatives to minimize or even completely negate the effect of the regulation (Kobayashi & Ribstein (1999), Ribstein (2003)).

Most obviously, the parties may be able to enter into an enforceable agreement waiving the statute. This is unlikely, however, for franchise regulation. Since the whole purpose of the regulation is to protect franchisees from contract provisions ostensibly favorable to franchisors, it would make little sense for the legislature to permit enforcement of waiver. Indeed, many of the state statutes contain explicit antiwaiver provisions. It is not clear, however, whether such antiwaiver provisions are effective because of alternative contractual clauses that result in *de facto* waiver but are not rendered unenforceable by the antiwaiver provision.

One alternative avoidance mechanism is contract clauses providing that the contract is to be interpreted and enforced under the law of a state that does not regulate franchise termination. It may not be clear whether these provisions are prohibited by statutory anti-waiver provisions even if they have a similar effect. On the other hand, the effectiveness of these provisions depends on whether the court adjudicating the contract will apply forum state law, the chosen law, or the law of some other state.[12]

4. MICRO ANALYSIS OF TERMINATION RESTRICTIONS

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[12] For a detailed discussion of how states interpret these clauses, see Kobayashi and Ribstein (1999) and Klick, Kobayashi, and Ribstein (2008).

We attempt to extend the empirical analysis of the effects of termination rights by avoiding the limitation inherent in Brickley, Dark, & Weisbach (1991a) use of two cross sections in their analysis. We use panel data to analyze the effects of laws restricting franchisor termination rights in the hope of ruling out the possibility that unobservable heterogeneity generate an omitted variables bias in the Brickley, Dark, & Weisbach (1991a) analysis.

We collected information on the number of franchised and franchisor operated restaurants in each state for the following firms: Burger King; Dunkin Donuts; Domino's Pizza; and KFC. Our data come from the Uniform Franchise Offering Contracts (UFOC) filed with the Attorney General's Office in the state of Maryland. Item number 20 on the UFOC requires the disclosure of this information for all firms offering franchises in the state. We focused on these firms in particular because we need data surrounding the year 1992 to exploit the most recently passed termination law which was passed in Iowa. Because of this constraint, we did not examine some obvious candidate firms (e.g., McDonald's which only started disclosing this information in 1992).[13] We chose those fast food firms that ranked most highly on *Entrepreneur Magazine's* Franchise 500[14] which satisfied the data availability constraint.[15]

For our micro analysis, we are only able to exploit the most recent adoption (Iowa 1992) in a panel data framework, which requires both pre and post law change data to estimate the effect of the law independent of state fixed effects. Descriptive statistics for

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[13] McDonald's responded to inquiries for this information by indicating (through its corporate counsel) that it does not have figures for the period before 1992.

[14] http://www.entrepreneur.com/franzone/rank/0,6584,12-12-F5-2006-0,00.html

[15] The fact that all of our franchisors are well established might make the results somewhat inapplicable to the question of what is the average effect of a termination law since franchisors with established reputations might be affected differently from those without reputations. To some extent, this is remedied in our macro test since those results do not suffer from this sample selection problem.

the firms are available in Table 1. As noted above, the Iowa statute represents the most restrictive statute, as it gives franchisees a right to cure in addition to requiring cause for termination. In addition, the Iowa statute explicitly restricts use of waiver, as well as contractual choice of law and forum clauses.[16]

For our analysis, we examine the natural log[17] of the per capita[18] number of franchised units, franchisor operated units, and total units, including firm-specific state dummies, firm-specific year dummies, and a host of covariates, including the natural log of state per capita income, the percent of state population between the ages of 15 and 19, percent of state population with a high school education, and the labor force participation rate of women in the state.[19] Given that our dependent variable is a per capita measure, we use weighted least squares where we weight by state population.[20] We examine the period 1989 (the first year these data are available on most firms' UFOC's) to 1995, to provide equal sized pre-law and post-law periods.[21]

We present results from these models in Table 2. We find that when Iowa enacts its restriction on franchise termination, the per capita number of franchised fast food restaurants in the state declines by about 44 percent relative to Iowa's pre-law baseline

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[16] Because of this strictness, it is likely that the effect we estimate for the Iowa law will not be representative of the average effect of all termination laws. This is borne out in the macro tests.

[17] Using the natural log form is attractive for a variety of reasons. First, it avoids the scaling issues that occur due to differences across firms (e.g., Burger King has more than twice as many units as Dunkin Donuts, on average). Second, it allows us to interpret our coefficients as percentage changes by scaling them according to $e^{\beta} - 1$. However, our results are substantively equivalent if we examine levels instead of natural logs. For the few instances in which a firm had no franchisor operated units in a state-year cell, we used ln(0.0001) to avoid losing those observations. Alternatively, if we simply throw out these observations, our results do not change appreciably.

[18] Our results are substantially similar if we examine the number of units (in either OLS regressions or count data models) and simply control for population as a covariate.

[19] We include this covariate because of the suggestion in Chou, Grossman, and Saffer (2004) that one of the main economic forces that led to the growth of the fast food industry has been the increasing labor market opportunities for women. Their argument suggests that as more women work outside of the home, there is an increased demand for fast food.

[20] Our results are substantially unchanged if we do not weight the observations by state population.

[21] The results are not changed if we expand the post-law window.

and relative to contemporaneous changes in franchising in other states. The effect is statistically significant at the 0.5 percent level (p = 0.003), using heteroskedasticity-corrected (White 1980) robust standard errors. If we allow the standard errors to be clustered by state to address the concerns about serial correlation in difference-in-difference studies raised by Bertrand, Duflo, and Mullainathan (2004), our standard errors drop by about one third (p = 0.000).

In the second column of Table 2, we present results for the per capita number of franchisor run units. We find that passage of Iowa's termination restriction is associated with a 398 percent increase in franchisor operated units. This effect is statistically significant (p = 0.000), regardless of how we calculate the standard errors.

Lastly, we examine the effect of the termination restriction law on the total number of fast food restaurants per capita. If franchisees can generally better control agency costs, as is assumed in the economic literature on franchising, we should find that the increase in franchisor operated units is not large enough to offset the decrease in franchised units when termination restrictions go into effect. We do find such an effect. Total restaurants in Iowa decrease by 27 percent when the Iowa law goes into effect. This coefficient is statistically significant at the 0.5 percent level.

One concern about our analysis arises from the fact that our identification strategy relies on a single law change which increases the potential for time-varying unobservable effects to drive our result. To mitigate this possibility, we re-estimate our models using only data from Midwestern states. Thus, if our original results are driven by regional shocks that are coincidentally related to the Iowa law, we should not find the same treatment effects when we examine regional data only.

We present the Midwest only results in the last three columns of Table 2. We find substantially the same results when we restrict the data in this way. Franchised restaurants decrease by 58 percent (p = 0.025). Franchisor-operated units increase by 416 percent (p = 0.029), and total units decline by 41 percent (p = 0.038). Again, in all cases, the standard errors are lower if we cluster them by state, suggesting negative dependence exists within states.

Our data allows us to exploit one other change in termination restriction laws. In 1998, Washington, D.C.'s franchise termination law was repealed by the U.S. Congress. If we expand our analysis to cover the period 1989-2001, allowing for pre and post windows for both the Iowa law's passage and the D.C. law's repeal, we again find the same results in terms of sign and statistical significance. However, as seen in Table 3, the magnitude of the effects on franchised and total units is smaller when we include the D.C. law change. As suggested below, this is likely due to the fact that the D.C. law is substantially weaker than the Iowa law in that it only provides a termination restriction without restricting the franchisee's right to waive this protection or the parties' ability to include choice of law and choice of forum provisions in their contracts.

5. EFFECT OF TERMINATION RESTRICTIONS ON EMPLOYMENT

The foregoing analysis is consistent with the hypothesis that termination restrictions constrain a franchisor's ability to control opportunism, leading it to reduce the number of outlets it opens in a given state. However, it is not clear if this result is peculiar to Iowa or whether it is likely to occur whenever states restrict termination rights. For example, the Iowa Statute is one of two statutes that restricts waiver, and

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enforcement of contractual choice of law and choice of forum clauses. Iowa also allows

the franchisee the right to cure in addition to requiring cause. One question is whether

the same effects would be observed in states that have enacted franchise protection

statutes that lack some of the restrictions contained in the Iowa statute.

In the prior section, we are limited to examining Iowa's law change due to the

non-existence of franchise unit data surrounding the enactment of similar laws in other

states. However, between 1971 and 1992, 16 states and the District of Columbia passed

such laws as described in Klick, Kobayashi, and Ribstein (2008), Stover (2004),

Kobayashi & Ribstein (1999), and Brickley, Dark, & Weisbach (1991).[22] Further, the

federal government created restrictions on franchising contracts for gas stations through

the Petroleum Marketing Practices Act (PMPA)[23] in 1978. Summary information on

these state laws is provided in Table 4. To exploit this variation, we investigate

employment rates in industries that are heavily franchised.[24] If our results for franchise

units are externally valid, we should find that employment in these industries declines as

a percent of total state employment since franchisors restrict their growth when

termination rights are limited.

We collected data on the proportion of employees in a state employed in four SIC

codes that historically have a relatively high rate of franchising: Automotive dealers and

service stations (624)[25]; eating and drinking places (627); hotels and other lodging places

(805); and automotive repair, services, and parking (825). These data come from the

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[22] None of the sources notes that D.C. had a franchise termination restriction in effect from 1989-1998.
[23] 15 U.S.C. §2801-2806
[24] While employment may be a fairly crude measure of franchisor activity, it is the only consistent series that is available back through the late 1960s which is a necessary condition to exploit all of the termination laws. This is especially important when we attempt to examine the heterogeneity across the laws.
[25] Choosing this as one of our franchising industries allows us to exploit the national restrictions imposed by the PMPA.

Bureau of Economic Analysis and are available from 1969 to 2000.[26] Descriptive

statistics are presented in Table 5.

Exploiting all of the existing termination restriction laws, we perform a

difference-in-difference analysis including industry-specific state fixed effects (λ) and

industry-specific year dummies (τ). Our dependent variable is the number of workers in

each of the industries listed above, divided by the total number of workers in the state.[27]

Thus, we have four observations for each state in each year. By looking at the labor force

share in each of these industries, instead of the number of workers, we can more precisely

control for generic changes in a state's overall labor force. We perform weighted least

squares where each observation is weighted by the total labor force in the state, and we

use robust standard errors to allow for heteroskedasticity across states. We also provide

standard errors that are clustered by state to mitigate concerns about serial correlation.

Formally, we estimate the following regression:

$$\left(\frac{workers_{ist}}{workers_{st}}\right) = \alpha \cdot law_{ist} + \beta \cdot income_{st} + \lambda_{is} + \tau_{it}$$

where i represents the industry, s stands for the state, and t is the year.

We present the results from this difference-in-difference analysis in the first

column of Table 6. We find that enactment of a law restricting a franchisor's termination

rights leads to a decrease in the proportion of the state workforce that is employed in each

of the franchise-heavy industries we examine of about 1 percent in relative terms and the

effect is statistically significant at the 6 percent level, using robust standard errors

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[26] Starting in 2001, BEA uses NAICS industry designations instead of SIC codes.
[27] The results that follow are virtually unchanged if we use state population as the denominator of the dependent variable and as the weighting factor.

(though the effect is not statistically significant if the standard errors are clustered by state).

The differences-in-differences analysis, however, does not provide the most powerful available test of the effect of termination laws on employment in franchising industries. Specifically, there may be other variables that are coincidentally correlated with the enactment of franchise termination laws that affect employment in the industries we examine. To control for this possibility, we also collected data on the proportion of the state workforce that is employed in four other industries that have similar wage profiles to the ones identified above, while also exhibiting relatively low levels of franchising. For these within-state control groups, we chose: General building contractors (310); lumber and wood products (413); apparel and other textile products (462); and depository and non-depository institutions (710). Data on these industries allow us to perform a difference-in-difference-in-difference (DDD) analysis in which we independently control for state-specific year dummies (υ) to net out any unobservable variables that affect this segment of the workforce. Additionally, we control for industry-specific state fixed effects (λ) and industry-specific year dummies (τ) generating the following regression:

$$\left(\frac{\text{workers}_{ist}}{\text{workers}_{st}} \right) = \alpha \cdot law_{ist} + \lambda_{is} + \tau_{it} + \upsilon_{st}$$

In this regression, the law variable only takes the value of one in states with termination laws for those industries assumed to have a high degree of franchising to avoid collinearity with the state year dummies. Our identification strategy then is to examine changes in the portion of the state's workforce in franchising industries when termination laws are adopted relative to non-franchising industries in the same state during the same

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year, net of any existing baseline within the state and net of any contemporaneous changes in franchising industries in states without termination laws. Again we allow for both robust standard errors and standard errors clustered by state and we weight each observation by the size of the state's workforce.

We present results from this regression in the second column of Table 6. In this specification, we find that adoption of a termination law leads to a decrease in the proportion of the state's workforce in franchising industries of about 6 percent ($p = 0.000$ with robust standard errors; $p = 0.088$ if standard errors are clustered by state). These employment results largely support the conclusions we draw from our firm-level analysis above. Namely, the passage of restrictions on a franchisor's termination rights increase the costs of using the franchise form and imperfect substitution leads franchisors to reduce their net presence in the states that pass such laws.

Borrowing from Brickley, Dark, & Weisbach (1991a), we examine whether there is a differential employment effect across franchising industries. Specifically, if broad termination rights mostly serve to police franchisee opportunism, any estimated treatment effect should be bigger for those industries that do not generally enjoy locally repeat business. Since the revenue sharing incentive will limit opportunism on the part of franchisees that experience a large amount of repeat business, the importance of the termination option is diminished. Of our four franchising industries, Brickley, Dark, & Weisbach (1991a) suggest that hotels and restaurants fall into the category of non-locally repeat business, while auto dealers and auto service stations are more likely to rely on locally repeat business.

We examine this differential treatment effect in two different ways. First, we re-estimate our DDD analysis using only the observations from the franchising industries and coding our law_norepeat variable as taking the value of one for only the two industries that do not exhibit repeat business:

$$\left(\frac{workers_{ist}}{workers_{st}} \right) = \alpha \cdot law\_norepeat_{ist} + \lambda_{is} + \tau_{it} + \upsilon_{st}$$

In this specification, the treatment effect is identified by how employment changes in the franchise industries without repeat business relative to simultaneous changes in the repeat business franchise industries within the state, pre-law baselines for the franchises in each state, and contemporaneous changes in the industries in states without termination laws.

We present these results in the first column of Table 7. We find that passage of termination restrictions lowers the fraction of state employment in non-repeat business franchise industries by almost 2 percent relative to repeat business franchise industries, and the effect is statistically significant at the 4 percent level if we use robust standard errors, but it is not statistically significant if we cluster standard errors by state.

In the second column of Table 7, we present our DDD regression using all industries, franchising and non-franchising, and we include both the law and the law_norepeat variables. This specification will also tell us whether or not the franchising industries without repeat business suffer a larger decline than franchising industries with repeat business when termination restrictions go into effect. We estimate the following regression:

$$\left(\frac{workers_{ist}}{workers_{st}} \right) = \alpha \cdot law_{ist} + \beta \cdot law\_norepeat_{ist} + \lambda_{is} + \tau_{it} + \upsilon_{st}$$

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Once again, we find that termination restriction laws lead to a decline in the proportion of the state workforce employed in franchise industries. The decline is about 4 percent. This effect is statistically significant regardless of the standard errors used. Further, the industries without repeat business experience an additional decline of about 2 percent.[28] This additional effect on franchising industries with little repeat business is statistically significant if we use robust standard errors but it is not if we cluster standard errors by state. These results support the conclusion that no-fault termination clauses in franchise contracts at least partially serve to police franchisee opportunism.[29]

6. EFFECT OF PERMITTING CONTRACTUAL AVOIDANCE OF REGULATION

Until now, we have focused our attention on termination restrictions alone. However, as discussed in Part 3, a potentially significant factor relating to the effect of the statutes is whether they allow avoidance through waiver, choice-of-law, and choice-of-forum provisions. As evident in Table 4, there is significant heterogeneity in the state laws in this regard that may allow us to test for a kind of "dosage" effect of statutes that have varying levels of mandatory application. This test is a significant extension of Brickley, Dark & Weisbach (1991), which did not allow for these variations.

We examine this dosage effect in two different specifications in Table 8. First, in column 1, we separately code whether a state has a termination restriction, a waiver

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[28] These relative effects (as well as the statistical significance) are virtually unchanged if we run the regressions on the natural log of the employment share to remove any scaling effects from our data.

[29] For robustness purposes, we also re-ran all of the specifications above limiting the dataset to 1969-1991 (i.e., just before the Iowa franchise termination restriction law was passed). Some commenters have suggested to us that since the Iowa law was more restrictive than those passed previously, it may be driving our employment results for reasons other than those suggested in this paper. If we drop observations for 1992 onward, our results are largely unchanged. We do find that if we enter a separate control for Iowa's termination law, it does appear to generate a slightly larger negative effect on employment than the other termination laws generally.

restriction, a restriction on either COL **or** COF, and whether it has restrictions on both

COL **and** COF. In column 2, we code each state with restrictions into four mutually

exclusive categories: termination restriction only; termination and waiver restriction only;

termination, waiver, and either a COL or a COF restriction only; and states that have all

four restrictions.[30]

In both specifications, we find largely the same thing. Termination restrictions

alone have very little effect on the employment share of franchise industries. In both

specifications, the termination restriction coefficient is quite small and it is not

statistically significant. In both specifications, adding a waiver restriction increases the

negative effect of the termination restriction by a factor of 10. Further, this effect is

statistically significant using robust standard errors (but not standard errors clustered by

state). Adding either a COL or COF restriction[31], in both specifications, doubles the

negative effect generated by the waiver restriction, and this effect is statistically

significant in both specifications using robust standard errors, but it is only statistically

significant using clustered standard errors in the second specification. Lastly, having

both a COL and a COF restriction increases the negative effect on franchise employment

significantly, and this effect is statistically significant in both specifications using robust

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[30] In the absence of prohibitions, the effectiveness of these contractual provisions depends on whether the
court adjudicating the contract will apply forum state law, the chosen law, or the law of some other state.
This, in turn, depends under the choice-of-law rules generally applicable throughout the U.S. on the
contacts between the parties and transaction on the one hand and the chosen jurisdiction on the other,
whether a state with closer contacts seeks to regulate the transaction, and on the nature of this regulation.
See Restatement (Second) of Conflict of Laws, §187 (1971). These tests' flexibility gives forum courts
significant leeway in deciding whether to enforce the COL clause. The parties accordingly can maximize
the likelihood of enforcement of a COL clause by adding a COF clause providing that the dispute will be
decided in a particular court that is likely to enforce the parties' choice-of-law clause. However, a clause
choosing a particular forum does not guarantee that that court will apply local law. It therefore may matter
whether an agreement has both COF and COL clauses or only one of these clauses. For a more complete
discussion, see Ribstein (2003).
[31] We are not able to distinguish between the COL and COF effects because only Minnesota adopted a
COL restriction without also adopting a COF restriction.

standard errors. For the results using clustered standard errors, the effect of having both COL and COF restrictions is statistically significant at the 10 percent level in specification 1 and at the 5 percent level in specification 2.

Table 9 exploits the theoretical differences between locally repeat and non-locally repeat business franchise industries. We re-estimate the specification from Table 8 column 2 allowing for both a general restriction effect (common to all franchising industries) and an additional effect on the employment share of industries that do not generally enjoy locally repeat business. If the restrictions are inhibiting the ability of franchisors to discipline franchisee opportunism, we should find systematically larger negative effects of the restrictions in the non-locally repeat franchising industries.

As for the general effects of restrictions, the story is largely the same as that found in Table 8. We again find a dosage effect. As for the additional effects found in the non-repeat business franchises, we find that these industries experience larger negative effects for each of the restrictions. For many of the restrictions, the additional effect is individually statistically significant using robust standard errors, and the additional effects are jointly significant using both sets of standard errors, at least at the 10 percent level.

The results in Tables 8 and 9 are consistent with the analysis in Part 3 of the effect of choice-of-law and choice-of-forum provisions. As discussed there, permitting enforcement of these provisions increases a franchisor's ability to avoid regulation.[32] Permitting enforcement of a choice-of-forum provision alone may increase a franchisor's avoidance ability and decrease the effect of the statute as compared with enforcing

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[32] In addition to contracting around the laws, the laws themselves may be priced into the other terms of the contract as a "third best" way to mitigate these agency costs. Brickley (2002) provides evidence of this though the identification there is provided just through the cross sectional heterogeneity across states.

neither provision because it helps ensure litigation in a state under whose law the agreement is likely to be enforced. This analysis shows the importance of taking these contractual variations into account when measuring the effect of regulation.[33]

7. CONCLUSION

Franchise relationships have the potential to generate *ex post* opportunism on the part of both franchisors and franchisees. Due to the public good nature of the franchise trademark, franchisees have an incentive to shirk by providing a sub-optimal level of service since they do not bear the full cost of any resulting deterioration of the trademark's value. To limit this problem, franchise contracts often contain termination at will clauses to commit the franchisee not to shirk. As long as the franchisee gains more from future franchise rents than it can get from cheating, the broad termination provision will induce the franchisee not to cheat.

However, such broad termination rights could generate franchisor opportunism, as it seeks to expropriate the franchisee's investments in market discovery and development in markets that turn out to be particularly profitable. To combat this possibility, a number of states have passed laws requiring good cause for the termination of a franchising arrangement.

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[33] We also examined the heterogeneity in state laws regarding whether the termination restrictions applied to decisions not to renew a relationship as well as decisions to terminate the relationship during the contract term. We found that states exempting renewal decisions from the cause requirement did exhibit an up tick in the employment share of franchising industries, but the effect was very small, and it was not statistically significant. Finally, we examined whether or not the statute required a period in which the franchisee could cure the claimed defect. Inclusion of this provision led to a larger employment decline in franchising industries and the effect was statistically significant. Further, we found that the magnitude of the effect was larger in those franchising industries that do not enjoy locally repeat business. These results are available upon request.

We show that these laws induce franchisors to limit their business growth. Using micro data on the number of franchised and franchisor-operated fast food restaurants, we show that passage of these laws leads to a decrease in both franchised and total fast food restaurants in a state.

As a policy matter, this suggests that laws limiting franchisors' and franchisees' freedom of contract might not be beneficial to franchisees as a class or to franchisors. Faced with termination restrictions, franchisors switch to presumably less efficient franchisor operated establishments or simply cut back on business altogether. As documented above, these changes could also have effects on workers in a state.[34] These effects are both statistically significant and large in magnitude and survive a number of robustness checks.

Our analysis, particularly the differential effects on repeat and no-repeat business industries, indicates that the reduction appears to be at least partly a result of the restriction on the franchisor's ability to constrain franchisee opportunism. This suggests that franchisee opportunism is an important problem.

Perhaps more importantly, our analysis sheds light on new methods of testing the effect of regulation. We show how macro-level data on state employment rates can fill gaps in micro-level data on firm effects. Because of this innovation, we are better able to examine heterogeneity in state laws, highlighting the existence of Coasian bargaining. We find that the effect of the laws is larger when states restrict the parties' ability to contract around these restrictions through waiver, choice-of-law and choice-of-forum

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[34] In general, we can infer that these results are negative with respect to workers since they shift workers out of industries they would have chosen in the absence of the regulatory change. However, we draw no conclusions about the global or dynamic efficiency of this shift.

clauses. These results have general implications for empirical research on the effect of

regulation of contracts.

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Table 1
Summary Statistics for Fast Food Franchisors

Firm	Franchised Units Per State		Operated Units Per State		Total Units Per State	
	Mean	SD	Mean	SD	Mean	SD
Burger King	122	130	12	24	134	140
Dunkin Donuts	59	112	0	1	59	113
Domino's Pizza	74	74	16	29	90	93
KFC	64	66	34	47	100	105

Note: All data cover the period 1989-2001 and were collected from UFOC's filed with the Maryland Attorney General's Office.

Table 2
Effect of Iowa Franchise Law on Fast Food Establishments Per Capita
(robust standard errors in parentheses)
[standard errors clustered by state in brackets]

Dependent Variable	Full Sample			Midwest Only		
	Franchised units	Franchisor run units	Total units	Franchised units	Franchisor run units	Total units
Termination Law	-0.365 (0.121)*** [0.087]***	1.606 (0.408)*** [0.324]***	-0.242 (0.084)*** [0.072]***	-0.459 (0.204)** [0.143]***	1.640 (0.746)** [0.592]**	-0.343 (0.165)** [0.141]**
Ln(Income Per Capita)	2.309 (1.247)* [1.615]	-6.521 (4.503) [6.194]	2.500 (1.051)** [1.203]**	5.101 (5.016) [6.568]	-24.419 (13.188)* [11.279]*	0.806 (2.248) [2.464]
Secondary Education (%)	0.040 (0.042) [0.065]	0.068 (0.114) [0.156]	0.046 (0.045) [0.075]	-0.259 (0.160) [0.172]	0.449 (0.394) [0.468]	-0.277 (0.123)** [0.192]
Female Labor Mkt Part. (%)	-0.003 (0.017) [0.018]	-0.132 (0.057)** [0.061]**	-0.005 (0.015) [0.014]	-0.016 (0.030) [0.024]	-0.156 (0.147) [0.112]	-0.038 (0.019)** [0.037]
Age 15-19 (%)	0.198 (0.078)** [0.108]*	-0.917 (0.510)* [0.741]	0.081 (0.110) [0.144]	0.048 (0.211) [0.418]	1.088 (1.526) [1.915]	-0.025 (0.130) [0.303]
Firm-State Effects	Yes	Yes	Yes	Yes	Yes	Yes
Firm-Year Effects	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.922	0.918	0.946	0.884	0.909	0.963

Note: Analysis performed on data for the 1989-1995 period. All dependent variables are natural logs, and all specifications use state population weights.
***$p < 0.01$; **$p < 0.05$; *$p < 0.10$ (two-sided test of null hypothesis that coefficient equals 0).

Table 3

Effect of Iowa & DC Franchise Laws on Fast Food Establishments Per Capita

(robust standard errors in parentheses)

[standard errors clustered by state in brackets]

Dependent Variable	Franchised units	Franchisor run units	Total units
Termination Law	-0.325	1.941	-0.197
	(0.121)***	(0.442)***	(0.086)**
	[0.103]***	[0.316]***	[0.087]**
Firm-State Effects	Yes	Yes	Yes
Firm-Year Effects	Yes	Yes	Yes
R^2	0.927	0.910	0.939

Note: Analysis performed on data for the 1989-2001 period. All dependent variables are natural logs, and all specifications use state population weights. Also, all regressions contain all of the covariates used in Table 2 (not reported).

***$p < 0.01$; **$p < 0.05$; *$p < 0.10$ (two-sided test of null hypothesis that coefficient equals 0).

Table 4
State Law Restrictions on Franchise Contracts

State	Termination Restriction	Waiver Restriction	Choice of Law (COL) Restriction	Choice of Forum (COF) Restriction
Arkansas	1977*	1977	--	--
California	1980*	1981	--	1994
Connecticut	1972	1981	--	--
Delaware	1971	--	--	--
DC	1989, **1998**	--	--	--
Hawaii	1974*	1974	--	--
Illinois	1980*	1988	--	1988
Indiana	1976	1976	--	--
Iowa	1992*	1992	1992	1992
Michigan	1974*	1974	--	1988
Minnesota	1973*	1973	1989	--
Nebraska	1978	1978	--	--
New Jersey	1971	1971	--	--
Tennessee	1989*	1989	--	1989
Virginia	1972	1972	--	--
Washington	1971*	1971	1991	1991
Wisconsin	1974*	1977	--	--
Gas Stations	1978	1978	1978	--

Note: Gas Stations (SIC 624) are covered by the federal PMPA (15 U.S.C. §2801-2806). Washington, DC's franchise termination law was repealed by the US Congress in 1998. Termination Restrictions noted with an asterisk (*) indicate that the state also included a requirement that franchisees be given a period to cure any problem raised by the franchisor as grounds for termination of the relationship.

Table 5
Descriptive Statistics for Percent of State Workforce in Each Industry

SIC Industry	Classification	Mean	SD
Contractors	Non-Franchising	0.014	0.004
Lumber Products	Non-Franchising	0.009	0.010
Textiles	Non-Franchising	0.008	0.009
Depository Institutions	Non-Franchising	0.017	0.005
Auto Dealers	Franchising (Repeat)	0.020	0.005
Eating & Drinking	Franchising (Non-Repeat)	0.046	0.009
Hotels	Franchising (Non-Repeat)	0.016	0.022
Auto Repairs	Franchising (Repeat)	0.009	0.002

Note: Data collected from Bureau of Economic Analysis and cover years 1969-2000.

Table 6
Effect of Termination Laws on Employment in Franchise Industries
(robust standard errors in parentheses)
[standard errors clustered by state in brackets]

	Franchise Industries Only	Non-Franchising Industries as Control
Termination Law	-0.0003 (0.0001)* [0.0004]	-0.0013 (0.0002)*** [0.0007]*
Industry-Specific Year Effects	Yes	Yes
Industry-Specific State Effects	Yes	Yes
State-Specific Year Effects	No	Yes
R^2	0.988	0.979

Note: Weighted least squares regressions are presented; each observation is weighted by total state employment.
***$p < 0.01$; **$p < 0.05$; *$p < 0.10$ (two-sided test of null hypothesis that coefficient equals 0).

Table 7
Effect of Termination Laws on Employment in Franchise Industries
with Non-Repeat Business
(robust standard errors in parentheses)
[standard errors clustered by state in brackets]

	Franchise Industries Only (repeat business industries as control)	Non-Franchising Industries as Control
Termination Law for Non-Repeat Franchising Industries Only	-0.00055 (0.00026)** [0.00093]	-0.00074 (0.00027)*** [0.00077]
Termination Law for All Franchising Industries	--	-0.00085 (0.00017)*** [0.00036]**
Industry-Specific Year Effects	Yes	Yes
Industry-Specific State Effects	Yes	Yes
State-Specific Year Effects	No	Yes
R^2	0.991	0.979

Note: Weighted least squares regressions are presented; each observation is weighted by total state employment.
***$p < 0.01$; **$p < 0.05$; *$p < 0.10$ (two-sided test of null hypothesis that coefficient equals 0).

Table 8

Effect of Restrictions on Franchise Contracts on Employment

in Franchising Industries

(robust standard errors in parentheses)

[standard errors clustered by state in brackets]

	Incremental Effects of Additional Restriction	Effect of Package of Restrictions
Termination Restriction	-0.00012 (0.00027) [0.00090]	--
Waiver Restriction	-0.00095 (0.00027)*** [0.00081]	--
COL or COF Restriction	-0.00097 (0.00025)*** [0.00067]	--
COL and COF Restriction	-0.00102 (0.00023)*** [0.00058]*	--
Termination Restriction Only	--	-0.00012 (0.00027) [0.00090]
Termination and Waiver Restriction Only	--	-0.00107 (0.00023)*** [0.00071]
Termination, Waiver, and either COL **or** COF Restriction	--	-0.00204 (0.00028)*** [0.00101]**
Termination, Waiver, and COL **and** COF Restriction	--	-0.00306 (0.00042)*** [0.00132]**
Industry-Specific Year Effects	Yes	Yes
Industry-Specific State Effects	Yes	Yes
State-Specific Year Effects	Yes	Yes
R^2	0.980	0.980

Note: Weighted least squares regressions are presented; each observation is weighted by total state employment.

***$p < 0.01$; **$p < 0.05$; *$p < 0.10$ (two-sided test of null hypothesis that coefficient equals 0).

Table 9
Effect of Restrictions on Franchise Contracts on Employment
in Non-Repeat Business Franchising Industries
(robust standard errors in parentheses)
[standard errors clustered by state in brackets]

	General Effect on Franchising SICs	Additional Effect in Non-Repeat Franchising SICs
Termination Restriction Only	-0.00012 (0.00024) [0.00036]	-0.00002 (0.00037) [0.00108]
Termination and Waiver Restriction Only	-0.00092 (0.00019)*** [0.00041]**	-0.00027 (0.00029) [0.00066]
Termination, Waiver, and either COL **or** COF Restriction	-0.00100 (0.00023)*** [0.00050]**	-0.00159 (0.00032)*** [0.00113]
Termination, Waiver, and COL **and** COF Restriction	-0.00203 (0.00041)*** [0.00097]**	-0.00154 (0.00050)*** [0.00120]
Industry-Specific Year Effects	Yes	
Industry-Specific State Effects	Yes	
State-Specific Year Effects	Yes	
R^2	0.980	
F Test for Joint Significance of Non-Repeat Effects	Robust Standard Errors: 10.46*** Standard Errors Clustered by State: 2.45*	

Note: Weighted least squares regressions are presented; each observation is weighted by total state employment.
***$p < 0.01$; **$p < 0.05$; *$p < 0.10$ (two-sided test of null hypothesis that coefficient equals 0).